Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441
Telephone: 305.481.2800
Facsimile: 305.480.9352

RECEIVED
APR 25 1996
BUREAU OF
AIR REGULATION

CERTIFIED MAIL - RRR
Z 784 757 196

15 April 1996

Air Section
Metro-Dade Environmental Resources Management
33 SW 2nd Avenue - Suite 900
Miami, Florida 33130-1540

RE: **Pennsuco Cement Plant – Slag Dryer**
Dade County - AP
AC13-273887/PSD-FL-230

Dear Madam/Sir:

Please be advised that the second of three stack emission tests under the test plan protocol of the referenced facility permit is scheduled for April 30 at 7:30 AM. The test will consist of PM10 - EPA Methods 1, 2, 3, 4, and 5 along with a concurrent EPA Method 9 visible emission observation. The PM10 test will be conducted by Air Consulting and Engineering, Inc. Should you have any questions or need further information please contact me at (954) 425-4165.

Sincerely,

Scott Quaas
Environmental Manager
Technical Services–Florida Region

cc: R. Pluta
A. Townsend
H. Johnson
FDEP-Tallahassee

Department of Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

November 15, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Albert Townsend
Director of Technical Services
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

Dear Mr. Townsend:

Re: Permit No. AC 13-273887/PSD-FL-230

The Department has reviewed and is approving the proposed test plan to establish the particulate matter emission limit for your slag dryer that was described in KBN Engineering and Applied Science, Inc.'s November 6, 1995 letter. To allow the time needed to collect and evaluate the data, Specific Condition No. 15 of the referenced permit is amended:

From:

The permittee shall submit a test plan and methodology for establishing the PM/PM_{10} emission limit for the slag dryer to the Department's Southeast District and the Dade County Department of Environmental Resources Management within 15 days after issuance of this permit. Source testing shall be completed within 60 days after Department approval of the plan. Results shall be submitted within 45 days of completion of the source tests. The Department will specify the PM/PM_{10} emission limit and revise the permit based on the test results determined under the approved test plan. Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit and annually thereafter. Except for the initial compliance tests and every 5 years thereafter, the PM_{10} test is waived if visible emissions from the baghouses do not exceed 5 percent opacity. The following referenced methods as specified in 40 CFR 60, Appendix A (July 1, 1994), or by other test methods with prior Department approval, shall be used to determine compliance with the emissions limits in this permit.

A. PM10 - EPA Methods 1, 2, 3, 4, and 5 (assuming all PM is PM10).

B. Visible Emissions - EPA Method 9. The visible emissions test shall be conducted concurrently with any required PM test on the facility.

To:

The permittee shall conduct particulate matter tests of the emission from the baghouse serving the slag dryer by the plan and schedule described in KBN Engineering and Applied Sciences, Inc.'s letter dated November 6, 1995.

The Department will specify the PM/PM_{10} emission limit and revise the permit based on the test results determined under the approved test plan. Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit. Except for the initial compliance tests and every 5 years thereafter, the PM_{10} test is waived if visible emissions from the baghouses do not exceed 5 percent opacity. The following referenced methods as specified in 40 CFR 60, Appendix A (July 1, 1994), or by other test methods with prior Department approval, shall be used to determine compliance with the emissions limits in this permit.

A. PM10 - EPA Methods 1, 2, 3, 4, and 5 (assuming all PM is PM10).

B. Visible Emissions - EPA Method 9. The visible emissions test shall be conducted concurrently with any required PM test on the facility.

A person whose substantial interests are affected by the Department's permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). 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 applicant of the amendment request/application and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other persons must be filed within 14 days of their receipt of this amendment. 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, F.S.

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 the 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 amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the amendment request/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 amendment 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, Florida Administrative Code.

A copy of this amendment letter shall be attached to and will become a part of Air Construction Permit AC 13-273887/PSD-FL-230.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes
Howard L. Rhodes, Director
Division of Air Resources Management

HLR/wh/t

Enclosures: KBN November 6, 1995, letter

cc: D. Buff, KBN
I. Goldman, SED
P. Wong, DERM
J. Bunyak, NPS
J. Harper, EPA

CERTIFICATE OF SERVICE

This is to certify that this **Permit Amendment** and all copies were mailed to the listed persons before the close of business on 11-20-95.

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

11-20-95
(Clerk) (Date)

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend, Director
Jarrac, Fla, Inc
455 Fairway Dr.
Deerfield Bch, Fl
33441

4a. Article Number
Z 127 632 576

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

7. Date of Delivery
11-23-95

5. Signature (Addressee)

6. Signature (Agent)

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

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 576

UNITED STATES POSTAL SERVICE

Receipt for Certified Mail

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

Sent to Albert Townsend	
Street and No. Jarrac Fla	
P.O., State and ZIP Code Deerfield Bch, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 11-20-95	

AC13-273887/130-Fl-230

PS Form 3800, March 1993

Florida Department of
Environmental Protection

Memorandum

TO: Howard L. Rhodes

THRU: Clair Fancy
A. A. Linero

FROM: Willard Hanks

DATE: November 15, 1995

SUBJ: Tarmac Florida, Inc.
Amendment of Permit

Attached for your approval and signature is a letter that will amend the construction permit recently issued to Tarmac Florida, Inc., of Medley, Dade County, Florida, for a new blast furnace slag processing operation.

The construction permit included a condition saying that the particulate matter emission standard for the slag dryer would be based on actual data collected by an approved test plan on the baghouse serving the dryer. This amendment approves the test plan and schedule submitted by the permittee's engineer.

I recommend your approval of the amendment.

WH/t

attachment

BEST AVAILABLE COPY

November 6, 1995

RECEIVED
NOV 07 1995
BUREAU OF
AIR REGULATION

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

Tarmac Florida, Inc. was recently issued the above referenced air construction permit for a slag dryer. Specific Condition 15 of the permit requires that Tarmac submit a test plan and methodology for establishing the PM/PM10 emission limit for the slag dryer. The plan is to be submitted to the Department within 15 days after issuance of the permit (i.e., by November 12, 1995). Source testing is be completed within 60 days after acceptance of a test plan by the Department. The permittee is to submit the test report and results to the Department within 45 days of completion of the source tests. The Department will revise the PM/PM10 emission limits, if appropriate, based upon the test plan and source test data.

The purpose of this correspondence is to present the proposed test plan and methodology for establishing the PM/PM10 emission limit for the slag dryer:

PROPOSED TEST PLAN AND METHODOLOGY FOR PM/PM10

1. TEST PLAN
   A. A series of three (3) particulate matter (PM) tests will be conducted on the outlet of the slag dryer baghouse. Each test will be conducted approximately 60 days apart, with the first test being conducted at the middle of November 1995, the second around the middle of January 1996, and the third around the middle of March 1996. This interval testing will provide test results reflecting variability in raw materials and climatic conditions, and thereby provide a more representative sample set.

   B. Each test will consist of three (3) individual test runs for PM. The test runs will be performed using EPA Method 5. Concurrent visible emissions test will be conducted along with the PM tests. The data set upon which to base a PM/PM10 emission limit will therefore consist of a total of nine (9) individual test runs for PM and visible emissions.

2. METHODOLOGY FOR ESTABLISHING PM/PM10 EMISSION LIMIT
   The PM test data will be summarized in tabular form for evaluation. The average, standard deviation, and 95 percent confidence interval will be calculated based on the nine test runs. The 95 percent confidence interval will be used as a guideline in proposing a PM/PM10 emission limit. Other factors will also be considered in recommending the emission limit, i.e., variability of data, representativeness

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 350, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

EQUAL EMPLOYMENT OPPORTUNITY
AN AFFIRMATIVE ACTION EMPLOYER

of data, process conditions, and climatic conditions. Tarmac will submit the recommended PM/PM10 emission limit to the Department for consideration.

The above plan as proposed will require an amendment of Specific Condition 15 to allow source testing to be completed within 180 days of issuance of the permit. We feel this is necessary to obtain a representative data set which reflects varying raw material characteristics and climatic conditions. However, this will not affect the permit expiration date of July 1, 1996.

Thank you for consideration of this plan, and please call if you have any questions concerning this information. We look forward to receiving written confirmation of the acceptability of the test plan.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P.E. #19011

DB/arz

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

CC: Dade Co.
SED
EPA
NPS

State of Florida
Department of Environmental Protection
Notice of Permit

In the matter of an
Application for Permit by:

Mr. Albert Townsend
Director of Technical Services
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

DEP File No. AC 13-273887
PSD-FL-230
Dade County

Enclosed is Permit Number AC 13-273887 (PSD-FL-230) and a Best Available Control Technology (BACT) determination for the construction of a Blast Furnace Slag Processing Operation at the existing Pennsuco Cement Plant located at 11000 N.W. 121 Way, Medley, Dade County, Florida 33178. This permit is issued pursuant to Section 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 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 14 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **NOTICE OF PERMIT** and all copies were mailed by certified mail before the close of business on 10-27-95 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 10-27-95
Date

Copies furnished to:
I. Goldman, SED
P. Wong, DERM
J. Harper, EPA
J. Bunyak, NPS
D. Buff, KBN

Final Determination

Tarmac Florida, Inc.
Pennsuco Cement Plant
Medley, Florida
Dade County

Blast Furnace Slag Processing Operation

Department Permit No. AC 13-273887
PSD-FL-230

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

October 27, 1995

FINAL DETERMINATION

Tarmac Florida, Inc.
AC 13-273887/PSD-FL-230

The Intent to Issue an air construction permit to Tarmac Florida, Inc. for a Blast Furnace Slag Processing Operation at the Pennsuco Cement Plant located at 11000 N.W. 121 Way, Medley, Dade County, Florida 33178, was distributed on September 13, 1995. The Notice of Intent to Issue was published in the Miami Herald on September 18, 1995. Copies of the evaluation were available for public inspection at the Dade County Department of Environmental Resources Management office in Miami and the Department offices in West Palm Beach and Tallahassee.

Written comments on the Department's Intent were submitted by the applicant's engineer in a letter dated October 19, 1995. A summary of the applicant's comments and the Department's responses follows.

1. As there is no data on air emissions from the drying of blast furnace slag, the applicant requested the particulate matter emission standard be established by stack tests. The maximum emission standard would not exceed 0.04 grains per dry standard cubic foot (gr/dscf) which is equivalent to 4.2 lbs/hr and 6.15 TPY. The applicant also requested that the visible emissions standard be set at 10 percent opacity and the annual PM/PM10 test be waived for the dryer and grinder baghouses if the visible emissions were no greater than 5 percent opacity. These requests are acceptable to the Department and the Best Available Control Technology (BACT) determination and Specific Conditions Nos. 5 and 15 are modified to incorporate these changes.

2. The applicant requested that use of a power washer or sweeper be allowed to control fugitive dust emissions from the yard. They also requested that "yard", which was vague, be replaced with slag storage area. These requests are acceptable to the Department and Specific Conditions Nos. 8A and 8D have been reworded to incorporate the requested changes.

3. The applicant noted that the current visible emissions standard for the cement silos is 20 percent opacity but they are willing to accept the 5 percent opacity standard specified in Specific Condition No. 9. No change was made to Specific Condition No. 9.

4. The applicant requested that the particulate matter emission standard for the grinder baghouse of 0.02 gr/dscf be changed to 0.01 gr/actual cubic foot (acf). The emissions in lbs/hr and TPY is not changed by this request. This change is acceptable to the Department and Specific condition No. 7 is revised as requested.

The final action of the Department will be to issue the construction permit and BACT as proposed except for the changes noted above.

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend DDS P.S.
Larnac Florida
455 Fairway Dr
Deerfield Bch. Fl
33441

4a. Article Number
Z 127 632 561

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

7. Date of Delivery
10/30/95

5. Signature (Addressee)

6. Signature (Agent)

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

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ★U.S. GPO: 1993—352-714 DOMESTIC RETURN RECEIPT

Z 127 632 561

UNITED STATES POSTAL SERVICE

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

Sent to
Albert Townsend
Street and No.
Larnac Fla
P.O. State and ZIP Code
Deerfield Bch, Fl

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	10-27-95

AC13-27366 7
PSO-FI-230

PS Form 3800, March 1993

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

Permittee:
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441

Permit Number: AC 13-273887
(PSD-FL-230)
Expiration Date: 07/01/96
Latitude/Longitude: 25°52'26"
80°22'27"
Project: Blast Furnace Slag Processing Operation

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construct a Blast Furnace Slag Processing Operation at the existing Pennsuco Cement Plant located at 11000 N.W. 121 Way, Medley, Dade County, Florida 33178. The UTM coordinates of this site are Zone 17, 562.8 km E and 2861.7 km N.

Major components of the proposed blast furnace slag processing operation are a new 10,000 gallon fuel storage tank and a used 150 ton per hour (TPH) asphalt dryer with a baghouse. The slag processing operation will use the Portland cement plant's existing Clinker Silos (Nos. 21, 22, 23, 26, 27, and 28 for dried slag storage), Cement Silos (Nos. 7, 8, and 9 for the ground slag storage), No. 4 Finish Mill, and Bulk Cement Loadout Units Nos. 1 and 2.

The emission units shall be constructed and operated 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 July 10, 1995.
2. DEP letter dated July 24, 1995.
3. KBN letter dated August 11, 1995.
4. KBN letter dated October 19, 1995.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

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, F.S. 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), F.S., 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 this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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 F.S. and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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

GENERAL CONDITIONS:

credentials or other documents as may be required by law and at reasonable times, 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 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.

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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, 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. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

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;
- the results of such analyses.

SPECIFIC CONDITIONS:

General

1. This permit incorporates all requirement of permit No. AO 13-238048 that are applicable to the No. 4 Finishing Mill; Clinker Silos Nos. 21, 22, 23, 26, 27, and 28; Cement Silos Nos. 7, 8, and 9; Bulk Cement Loadout Units 1 and 2, and all requirements of permit No. AC 13-234568 that are applicable to the conveyer systems handling the slag except as otherwise noted in any specific condition of this permit.

Construction

2. The No. 2 fuel oil storage tanks shall be constructed so that its maximum storage capacity is less than 40 cubic meters (10,568 gallons).

3. The blast furnace slag dryer stack shall have a minimum height of 20 feet and a cross sectional area of approximately 4 square feet. The stack shall be equipped with sampling facilities that comply with the requirements of Rule 62-297.345, F.A.C.

Federal Requirements

4. The permittee shall construct and operate the blast furnace slag processing operation so that it complies with the requirements of 40 CFR 52.21, F.A.C., Prevention of Significant Deterioration of Air Quality.

Emission Limits

5. The particulate matter emissions standard (total PM and PM10) for the baghouse serving the slag dryer will be established based on actual test data on the unit obtained by the permittee using a test plan and methodology acceptable to the Department. The allowable particulate matter emissions shall not exceed 0.04 gr/dscf, 4.2 lbs/hr, and 6.2 TPY or 10 percent opacity.

6. Except for the No. 4 Finishing Mill, PM emissions from the other processing equipment handling blast furnace slag shall not exceed the quantities listed in Table 3-4 of the application (attached).

7. Particulate matter emissions from the No. 4 Finishing Mill shall not exceed 0.01 gr/acf, 2.57 lbs/hr, 11.26 TPY, or 5 percent opacity.

8. Unconfined PM emissions from the yard shall be minimized by applying the following reasonable precautions:

A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Power washers and/or

SPECIFIC CONDITIONS:

vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5% opacity.

B. Water sprinklers shall be used when necessary to control unconfined particulate matter emissions from unpaved roads and work areas.

C. Bulk Cement (railcar/truck) Loadout Unit 1, Bulk Cement (truck) Loadout Unit 2 and Transfer Pump Hopper (under Silos 10-12), equipped with Baghouses B-110, B-210, and B-323 respectively, exhaust particulate emissions to the interior of enclosed areas. Fugitive emissions shall be contained in this manner so as not to exceed 5% opacity from the vents, doors, etc.

D. Wind breaks, enclosures, or covers shall be used to control unconfined PM emissions from handling the dried slag in the slag storage area.

9. Visible emissions from the blast furnace slag processing operation shall not exceed any of the following:

A.	Yard Storage/Handling	20% opacity
B.	Each Clinker/Cement silo	5% opacity
C.	Each Conveyer Transfer Point	10% opacity
D.	No. 4 Finish Mill	5% opacity
E.	Bulk Cement Loadout Units 1&2	10% opacity

Operation Limitations

10. The maximum wet blast furnace slag input rate to the dryer shall not exceed 150 TPH. The permittee shall have the means to determine the process rate of the dryer and shall maintain records on the quantity of slag processed each day.

11. The facility shall not process more than 300,000 tons of blast furnace slag during any calendar year.

13. Only low sulfur No. 2 fuel oil shall be burned in the blast furnace slag dryer. The maximum heat input to the dryer shall not exceed 52 MMBtu/hr (approximately 371 GPH). The maximum fuel consumption shall not exceed 1,114,286 GPY. The permittee shall keep a log on the daily and annual fuel consumption of the dryer.

14. The dryer shall not operate more than 3,000 hours per calendar year. The permittee shall maintain a record of the time the dryer operates daily.

SPECIFIC CONDITIONS:

Compliance Determination

15. The permittee shall submit a test plan and methodology for establishing the PM/PM_{10} emission limit for the slag dryer to the Department's Southeast District and the Dade County Department of Environmental Resources Management within 15 days after issuance of this permit. Source testing shall be completed within 60 days after Department approval of the plan. Results shall be submitted within 45 days of completion of the source tests. The Department will specify the PM/PM_{10} emission limit and revise the permit based on the test results determined under the approved test plan. Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit and annually thereafter. Except for the initial compliance tests and every 5 years thereafter, the PM_{10} test is waived if visible emissions from the baghouses do not exceed 5 percent opacity. The following referenced methods as specified in 40 CFR 60, Appendix A (July 1, 1994), or by other test methods with prior Department approval, shall be used to determine compliance with the emissions limit this permit.

A. PM10 - EPA Methods 1, 2, 3, 4, and 5 (assuming all PM is PM10).

B. Visible Emissions - EPA Method 9. The visible emissions test shall be conducted concurrently with any required PM test on the facility.

16. Compliance tests on the blast furnace slag dryer shall be conducted at a minimum rate of 135 TPH. If testing is performed at a rate less than specified in this specific condition, operation shall be limited to a maximum of 110 percent of the tested capacity until such time as an acceptable test is performed at a minimum of the production rate specified in this specific condition. When operation is restricted to a lower capacity because of the testing at such level, the Dade County Department of Environmental Resources Management (DERM), upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.

17. The permittee shall notify DERM at least fifteen (15) days prior to any compliance testing required by this permit or other regulations in accordance with Rule 62-297.340(1)(i), F.A.C.

18. Copies of the test report(s) shall be submitted to DERM within forty-five (45) days of completion of testing in accordance with Rule 62-297.450(3)(b), F.A.C.

SPECIFIC CONDITIONS:

Record Keeping and Reporting Requirements

19. The permittee shall maintain a daily log on the quantity of slag processed and fuel consumed by the slag dryer.

20. An annual operation report shall be submitted to DERM by March 1 of each year pursuant to Rule 62-210.370(2), F.A.C.

21. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

22. A timely application for a Title V operation permit must be submitted to DERM by the date required in Rule 62-213.420, F.A.C.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes, Director
Division of Air Resources Management

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION

Tarmac Florida, Inc.
Medley, Dade County, Florida
AC 13-273887/PSD-FL-230

Tarmac Florida, Inc. proposes to construct a Blast Furnace Slag Processing Operation at the Pennsuco Cement Plant in Medley, Dade County, Florida. Major components of the proposed slag processing operation are a fuel storage tank and an existing 150 TPH asphalt plant dryer with a baghouse. The slag processing facility will used the existing Clinker and Cement Silos, No. 4 Finishing Mill, and Bulk Cement Loadout Units Nos. 1 and 2. The slag processing operation will emit particulate matter (PM and PM10) and the product of combustion of No. 2 fuel oil. The emission limits requested for the facility would result in a net emissions increase of 36.2 TPY for PM, 31.0 TPY for PM10, 39.6 TPY for SO_2, 11.1 TPY for NOx, and smaller quantities (less than the significant emissions rates) for CO, VOC, sulfuric acid mist, total reduce sulfur, lead, mercury, fluorides, asbestos, and vinyl chloride. The requested increase in allowable emissions of PM and PM10 are above the significant emissions rates of 25 and 15 TPY, respectively. The proposed slag processing operation is subject to the Prevention of Significant Deterioration (PSD) regulations and the allowable emissions of PM and PM10 for the slag dryer are set by a BACT determination. The existing Portland cement processing equipment (Clinker and Cement Silos, Conveyers, Finishing Mill and Bulk Loadout Units) are not subject to this BACT determination because the equipment was capable of accommodating blast furnace slag without a capital expenditure.

DATE OF RECEIPT OF A BACT APPLICATION

July 10, 1995

BACT REQUESTED BY THE APPLICANT

The applicant proposed the use of a Flex-Kleen baghouse with a 6.48:1 air/cloth ratio to control the emissions from the slag dryer. The requested PM emission standard is 0.04 gr/dscf.

BACT DETERMINATION PROCEDURE

In accordance with Rule 62-212.410, Florida Administrative Code, Best Available Control Technology Determination, Stationary Source-Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of BACT pursuant to 40 CFR 52.21, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission unit in question the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically infeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT DETERMINED BY THE DEPARTMENT

The dryer is a source of particulate matter emissions. The emissions of particulate matter will be controlled by a baghouse. The Department considers a baghouse appropriate air pollution controls for this source. The BACT Clearinghouse Document did not list a BACT determination for particulate matter emissions from a blast furnace slag dryer. The actual particulate matter emission standard for the baghouse controlling the dryer will be established from stack test data obtained during initial operation of this unit. The standard shall not exceed 0.04 gr/dscf.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Willard Hanks, Review Engineer
A. A. Linero, P.E., Administrator
Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECOMMENDED BY:

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

10-26, 1995
Date

APPROVED BY:

Howard L. Rhodes
Howard L. Rhodes, Director
Division of Air Resources Management

10/26, 1995
Date

Florida Department of
Environmental Protection

Memorandum

To: Howard Rhodes

Thru: Clair Fancy ack for CHF
Al Linero

From: Willard Hanks wmh

Date: October 27, 1995

Subject: Approval of a Construction Permit
Tarmac Florida, Inc.

Attached for your approval and signature is a Best Available Control Technology determination and an air pollution source construction permit for Tarmac Florida, Inc. to build a blast furnace slag processing unit at the Pennsuco Portland cement plant located in Medley, Dade County, Florida.

The slag processing unit consists of a new 10,000 gallon No. 2 fuel oil storage tank, a used 150 TPH asphalt dryer, and will use existing clinker and cement silos, finishing mill, and bulk cement loadout units. The blast furnace slag is not introduced into the existing cement kilns or clinker coolers. The proposed operation operates independently from the rest of the Portland cement production at this facility. The project was subject to the PSD regulations because the PM and PM10 emissions increase requested by the applicant were above the significant emission rates. Emissions from the dryer, grinder and storage silos will be controlled by baghouses. Fugitive emissions will be minimized by various reasonable precautions.

The only comments submitted on the Preliminary Determination were from the applicant. Their main request, which the Bureau accepted, was to have the particulate matter standard for the slag dryer based on actual test data collected after the unit begins operation. The emission standard will not be allowed to exceed 0.04 gr/dscf. Other minor changes to the draft permit are discussed in the Final Determination.

I recommend your approval and distribution of the determination.

WH/t

Attachment

RECEIVED
NOV 02 1995
BUREAU OF
AIR REGULATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

TARMAC FLORIDA, INC.,

Petitioner,

vs. OGC CASE NO. 95-2301

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION,

Respondent.

_____/

ORDER GRANTING REQUEST FOR EXTENSION OF TIME TO FILE PETITION FOR HEARING

This cause has come before the Florida Department of Environmental Protection (Department) on receipt of a request made by Petitioner TARMAC FLORIDA, INC. under rule 62-103.070 of the Florida Administrative Code to grant an extension of time to file a petition for an administrative hearing on Application No. AC13-273887, PSD-FL-230. See Exhibit 1.

Counsel for Petitioner has discussed this request with counsel for the Respondent State of Florida Department of Environmental Protection, which has no objection to it. Therefore,

IT IS ORDERED:

The request for an extension of time to file a petition for administrative proceeding is granted. Petitioner shall have until November 15, 1995, to file a petition in this matter. Filing shall be complete on receipt by the Office of General Counsel, Department of Environmental Protection,

3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000.

DONE AND ORDERED on this 30th day of October, 1995 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

W.H. Clark

KENNETH J. PLANTE
General Counsel

Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (904) 488-9314

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

James S. Alves, Esquire
Gary V. Perko, Esquire
HOPPING GREEN SAMS & SMITH, P.A.
Post Office Box 6526
123 South Calhoun Street
Tallahassee, Florida 32314

on this 1st day of ~~October~~ November, 1995.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

John M. Braswell

JEFFERSON M. BRASWELL
Assistant General Counsel
Florida Bar No. 800996

3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (904) 488-9730

RECEIVED
SEP 27 1995
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
OFFICE OF GENERAL COUNSEL

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter ofan
Application for Permit by:

Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

DEP File No. AC 13-273887
PSD-FL-230
Dade Conty

OGC Case No. 95-2301

_____/

REQUEST FOR EXTENSION OF TIME

Tarmac Florida, Inc. ("Tarmac"), by and through undersigned counsel, hereby requests an extension of time, through November 15, 1995, to file a petition for formal administrative proceedings in accordance with Section 120.57(1), Florida Statutes, regarding a proposed air construction permit for a blast furnace slag processing operation at the Pennsuco Cement Plant in Medley, Dade County, Florida [DEP File No. AC 13-273887/PSD-FL-230]. This request for an extension of time is filed pursuant to Rule 62-103.070, Florida Administrative Code. In support of the request, Tarmac states:

1. On September 15, 1995, Tarmac received the Department's Notice of Intent to Issue the above-referenced permit [DEP File No. AC 13-273887/PSD-FL-230]. Under the terms of the notice, Tarmac has until October 2, 1995, to file a petition for administrative proceedings on the proposed permit.

2. The proposed permit contains twenty-one specific conditions, some of which appear to warrant clarification, revision, or other change.

3. Representatives of Tarmac have been or will be conferring with representatives of the Department in an attempt to reach agreement on mutually acceptable permit language. However, additional time is needed to reach such an agreement.

EXHIBIT 1

4. This request is filed simply as a protective measure to avoid waiver of Tarmac's right to challenge objectionable conditions in the proposed permit. Grant of this request will not prejudice either party, but will further their mutual interest and likely avoid the need to initiate formal administrative proceedings.

5. I hereby certify that I have attempted to confer with Jefferson M. Braswell, Esq., of the Department's Office of General Counsel, but was not able to reach Mr. Braswell to determine the Department's position on the requested extension.

WHEREFORE, Tarmac respectfully requests that the Department enter an order granting it through and until November 15, 1995, to file a petition for formal administrative proceedings regarding the proposed air construction permit [DEP File No. AC 13-273887/PSD-FL-230] for a blast furnace slag processing operation at the Pennsuco Cement Plant in Medley, Dade County, Florida.

Respectfully submitted this 27th day of September, 1995.

HOPPING GREEN SAMS & SMITH, P.A.

By: _____

James S. Alves
Gary V. Perko
Post Office Box 6526
123 South Calhoun Street
Tallahassee, Florida 32314
(904) 222-7500

Attorneys for TARMAC FLORIDA, INC.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the original and one true and correct copy of the foregoing motion was hand-delivered to Kathy Carter, Clerk, Department of Environmental Protection, 3900 Commonwealth Blvd., Tallahassee, FL 32399-2400, and a true and correct copy was sent to the following this 27th day of September, 1995.

BY HAND-DELIVERY

Jefferson M. Braswell, Esquire
Office of General Counsel
Department of Environmental Protection
3900 Commonwealth Blvd., Room 353-3
Tallahassee, Florida 32399-3000

Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Department of Environmental Protection
111 South Magnolia, Suite 4
Tallahassee, FL 32301

Attorney

cc: W. Hanks
C. Holladay

October 19, 1995

RECEIVED
OCT 23 1995
BUREAU OF
AIR REGULATION

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

The purpose of this correspondence is to present additional comments to the Department regarding the Technical Evaluation and Preliminary Determination (TE&PD) dated September 13, 1995, concerning the above referenced air construction permit for Tarmac Florida, Inc. These comments are in response to further conversations with the Department's air permitting engineer (Willard Hanks) concerning KBN's comment letter dated October 6, 1995.

Best Available Control Technology Evaluation

In our previous comment letter, concern was expressed over the uncertainty of meeting the Department's proposed BACT PM emission limit of 0.02 gr/dscf, primarily on the basis of a lack of any available comparative data from an operating slag dryer. Based on these concerns, it was requested that the BACT determination and PM emission limit be reworded to allow the BACT to be revised if the initial stack testing indicates that an 0.02 gr/dscf outlet grain loading is not achievable. The Department may be agreeable to testing to set the BACT emission limit, provided the Department signs off on the test plan and methodology for setting the limit. Suggested wording to this affect is provided below in the specific conditions.

Specific Condition 5

Concern was expressed over the Department's proposed visible emission limit of 5 percent opacity for the slag dryer. Tarmac requested a visible emission limit of 10 percent opacity. This would allow a slight visible emission during normal operation. This requested limit and the wording of Specific Condition 5 to allow setting the BACT emission limit through testing is provided below:

> The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.04 gr/dscf, 4.1 lbs/hr, and 6.15 TPY. The visible emissions from the baghouse shall not exceed 10 percent opacity. Based on source testing following initial startup of the slag dryer, these emission limits may be revised downwards. The permittee shall submit a test plan and methodology for establishing a BACT emission limit to the Department within 15 days after issuance of this permit. Source testing shall be completed within 60 days after acceptance of a test plan by the Department. The permittee shall submit the test report and results to the Department within 45 days of completion of the

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 350, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

EQUAL EMPLOYMENT OPPORTUNITY
AN AFFIRMATIVE ACTION EMPLOYER

source tests. The Department will revise the PM/PM10 emission limits, if appropriate, based upon the test plan and source test data.

Specific Condition 7

In the application, the PM emissions for the No. 4 Finish Mill was stated as 0.01 gr/acf. This should be reflected in Specific Condition 7. The draft permit specifies an emission limit of 0.02 gr/dscf, which would result in mass emissions greater than 2.57 lb/hr, as shown below:

30,000 acfm @ 90°F and 5 percent moisture = 27,360 dscfm

27,360 dscfm x 0.02 gr/dscf / 7000 gr/lb x 60 min/hr = 4.69 lb/hr

Therefore, please revise Specific Condition 7 to read "0.01 gr/acf."

Specific Condition 8

Tarmac previously submitted revised wording for this condition in order to clarify the methods for fugitive dust control. Based on our further discussions with the Department, the following wording is offered:

8. Unconfined PM emissions from the slag storage and handling shall be minimized by applying the following reasonable precautions:

   A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Power washers and/or vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5 percent opacity.

   B [no change]

   C. [no change]

   D. Wind breaks, enclosures or covers shall be used to control unconfined PM emissions from handling the dried slag in the slag storage area.

Specific Condition 9

Although the current visible emission limit for Cement Storage Silos 1-9 is 20 percent, Tarmac is willing to voluntarily accept a 5 percent opacity limit for Silos 1-9. This limit will insure that the baghouses serving the silos are well operated and maintained.

Specific Condition 15

Consistent with our previous requested, it is requested that in accordance with Rule 62-297.620(4), the annual compliance tests for PM be waived if visible emissions from the slag dryer do not exceed 5 percent opacity.

Thank you for consideration of these comments, and please call if you have any questions concerning this information. We look forward to receiving the final construction permit for the slag dryer in the near future.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P. E. #19011

DB/ehj

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

CC: W. Hanks, BAR
D. Knowles, SED
NPS
EPA
E. Anderson, DERM

BEST AVAILABLE COPY

xtra

KBN

RECEIVED
OCT 23 1995
BUREAU OF
AIR REGULATION

October 19, 1995

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

The purpose of this correspondence is to present additional comments to the Department regarding the Technical Evaluation and Preliminary Determination (TE&PD) dated September 13, 1995, concerning the above referenced air construction permit for Tarmac Florida, Inc. These comments are in response to further conversations with the Department's air permitting engineer (Willard Hanks) concerning KBN's comment letter dated October 6, 1995.

Best Available Control Technology Evaluation

In our previous comment letter, concern was expressed over the uncertainty of meeting the Department's proposed BACT PM emission limit of 0.02 gr/dscf, primarily on the basis of a lack of any available comparative data from an operating slag dryer. Based on these concerns, it was requested that the BACT determination and PM emission limit be reworded to allow the BACT to be revised if the initial stack testing indicates that an 0.02 gr/dscf outlet grain loading is not achievable. The Department may be agreeable to testing to set the BACT emission limit, provided the Department signs off on the test plan and methodology for setting the limit. Suggested wording to this affect is provided below in the specific conditions.

Specific Condition 5

Concern was expressed over the Department's proposed visible emission limit of 5 percent opacity for the slag dryer. Tarmac requested a visible emission limit of 10 percent opacity. This would allow a slight visible emission during normal operation. This requested limit and the wording of Specific Condition 5 to allow setting the BACT emission limit through testing is provided below:

> The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.04 gr/dscf, 4.1 lbs/hr, and 6.15 TPY. The visible emissions from the baghouse shall not exceed 10 percent opacity. Based on source testing following initial startup of the slag dryer, these emission limits may be revised downwards. The permittee shall submit a test plan and methodology for establishing a BACT emission limit to the Department within 15 days after issuance of this permit. Source testing shall be completed within 60 days after acceptance of a test plan by the Department. The permittee shall submit the test report and results to the Department within 45 days of completion of the

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1601 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 350, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

source tests. The Department will revise the PM/PM10 emission limits, if appropriate, based upon the test plan and source test data.

Specific Condition 7

In the application, the PM emissions for the No. 4 Finish Mill was stated as 0.01 gr/acf. This should be reflected in Specific Condition 7. The draft permit specifies an emission limit of 0.02 gr/dscf, which would result in mass emissions greater than 2.57 lb/hr, as shown below:

30,000 acfm @ 90°F and 5 percent moisture = 27,360 dscfm

27,360 dscfm x 0.02 gr/dscf / 7000 gr/lb x 60 min/hr = 4.69 lb/hr

Therefore, please revise Specific Condition 7 to read "0.01 gr/acf."

Specific Condition 8

Tarmac previously submitted revised wording for this condition in order to clarify the methods for fugitive dust control. Based on our further discussions with the Department, the following wording is offered:

8. Unconfined PM emissions from the slag storage and handling shall be minimized by applying the following reasonable precautions:

   A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Power washers and/or vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5 percent opacity.

   B [no change]

   C. [no change]

   D. Wind breaks, enclosures or covers shall be used to control unconfined PM emissions from handling the dried slag in the slag storage area.

Specific Condition 9

Although the current visible emission limit for Cement Storage Silos 1-9 is 20 percent, Tarmac is willing to voluntarily accept a 5 percent opacity limit for Silos 1-9. This limit will insure that the baghouses serving the silos are well operated and maintained.

Specific Condition 15

Consistent with our previous requested, it is requested that in accordance with Rule 62-297.620(4), the annual compliance tests for PM be waived if visible emissions from the slag dryer do not exceed 5 percent opacity.

Thank you for consideration of these comments, and please call if you have any questions concerning this information. We look forward to receiving the final construction permit for the slag dryer in the near future.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P. E. #19011

S E A L

DB/ehj

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

CC: W. Hanks, BAR
D. Knowles, SED
NPS
EPA
E. Anderson, DERM

BEST AVAILABLE COPY

xtra

KBN

Rec'd 10/23

October 19, 1995

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

The purpose of this correspondence is to present additional comments to the Department regarding the Technical Evaluation and Preliminary Determination (TE&PD) dated September 13, 1995, concerning the above referenced air construction permit for Tarmac Florida, Inc. These comments are in response to further conversations with the Department's air permitting engineer (Willard Hanks) concerning KBN's comment letter dated October 6, 1995.

Best Available Control Technology Evaluation

In our previous comment letter, concern was expressed over the uncertainty of meeting the Department's proposed BACT PM emission limit of 0.02 gr/dscf, primarily on the basis of a lack of any available comparative data from an operating slag dryer. Based on these concerns, it was requested that the BACT determination and PM emission limit be reworded to allow the BACT to be revised if the initial stack testing indicates that an 0.02 gr/dscf outlet grain loading is not achievable. The Department may be agreeable to testing to set the BACT emission limit, provided the Department signs off on the test plan and methodology for setting the limit. Suggested wording to this affect is provided below in the specific conditions.

Specific Condition 5

Concern was expressed over the Department's proposed visible emission limit of 5 percent opacity for the slag dryer. Tarmac requested a visible emission limit of 10 percent opacity. This would allow a slight visible emission during normal operation. This requested limit and the wording of Specific Condition 5 to allow setting the BACT emission limit through testing is provided below:

> The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.04 gr/dscf, 4.1 lbs/hr, and 6.15 TPY. The visible emissions from the baghouse shall not exceed 10 percent opacity. Based on source testing following initial startup of the slag dryer, these emission limits may be revised downwards. The permittee shall submit a test plan and methodology for establishing a BACT emission limit to the Department within 15 days after issuance of this permit. Source testing shall be completed within 60 days after acceptance of a test plan by the Department. The permittee shall submit the test report and results to the Department within 45 days of completion of the

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600, FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717, FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600, FAX 904-739-7777
1615 'P' Street N.W., Suite 350, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

AN AFFIRMATIVE ACTION EMPLOYER

source tests. The Department will revise the PM/PM10 emission limits, if appropriate, based upon the test plan and source test data.

Specific Condition 7

In the application, the PM emissions for the No. 4 Finish Mill was stated as 0.01 gr/acf. This should be reflected in Specific Condition 7. The draft permit specifies an emission limit of 0.02 gr/dscf, which would result in mass emissions greater than 2.57 lb/hr, as shown below:

30,000 acfm @ 90°F and 5 percent moisture = 27,360 dscfm

27,360 dscfm x 0.02 gr/dscf / 7000 gr/lb x 60 min/hr = 4.69 lb/hr

Therefore, please revise Specific Condition 7 to read "0.01 gr/acf."

Specific Condition 8

Tarmac previously submitted revised wording for this condition in order to clarify the methods for fugitive dust control. Based on our further discussions with the Department, the following wording is offered:

8. Unconfined PM emissions from the slag storage and handling shall be minimized by applying the following reasonable precautions:

   A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Power washers and/or vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5 percent opacity.

   B [no change]

   C. [no change]

   D. Wind breaks, enclosures or covers shall be used to control unconfined PM emissions from handling the dried slag in the slag storage area.

Specific Condition 9

Although the current visible emission limit for Cement Storage Silos 1-9 is 20 percent, Tarmac is willing to voluntarily accept a 5 percent opacity limit for Silos 1-9. This limit will insure that the baghouses serving the silos are well operated and maintained.

Specific Condition 15

Consistent with our previous requested, it is requested that in accordance with Rule 62-297.620(4), the annual compliance tests for PM be waived if visible emissions from the slag dryer do not exceed 5 percent opacity.

Thank you for consideration of these comments, and please call if you have any questions concerning this information. We look forward to receiving the final construction permit for the slag dryer in the near future.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P. E. #19011

S E A L

DB/ehj

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441
Telephone: 305.481.2800
Facsimile: 305.480.9352

CERTIFIED MAIL - RRR
Z 056 630 850

RECEIVED
OCT 23 1995
BUREAU OF
AIR REGULATION

18 October 1995

Mr. A. A. Linero, P. E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

RE: **Pennsuco Cement Plant**
Dade County - AP
File No. AC13-273887 [PSD-FL-230]

Dear Mr. Linero:

Please find enclosed the affidavit of publication for the *Notice of Intent to Issue Permit* for the blast furnace at the above named facility. Scott Quaas will await permit issuance subsequent to the required public comment period.

Sincerely,

Regina Peklenk
Administrator Environmental/Real Estate
Technical Services, Florida Region

RP/ad

Enclosure

CC: W. Hanks, BAR
C. Holladay, BAR
~~S. Brooks~~, SED
D. Knowles

E. Anderson, DERM
D. Buff, KBN
NPS
EPA

PUBLISHED DAILY
MIAMI-DADE-FLORIDA

STATE OF FLORIDA
COUNTY OF DADE

MHPC
The Miami Herald Publishing Company

Before the undersigned authority personally appeared:

OLGA L. ARCIA

who on oath says that he/she is:

CUSTODIAN OF RECORDS

of The Miami Herald, a daily newspaper published at Miami in Dade County, Florida; that the attached copy of advertisement was published in said newspaper in the issues of:

SEPTEMBER 18, 1995

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

Olga L. Arcia

Sworn to and subscribed before me this 18th day of September A.D. 1995

OFFICIAL NOTARY SEAL
VIRGINIA J GALLON
NOTARY PUBLIC STATE OF FLORIDA
COMMISSION NO. CC323842
MY COMMISSION EXP. OCT. 17,1997

My Commission expires: Virginia J. Gallon

Virginia J. Gallon
Notary

One Herald Plaza, Miami, Florida 33132-1693 (305) 350-

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT
AC 13-273887/ PSD-FL-230

The Department of Environmental Protection hereby gives notice of its intent to issue an air pollution source construction permit to Termac Florida, Inc. 455 Fairway Drive, Deerfield Beach, Florida 33441. The permit will authorize the construction of a blast furnace slag processing operation at the existing Pennsuco Cement Plant located at 11000 NW 121 Way, Medley, Dade County, Florida 33178.

The proposed facility will increase the emissions of particulate matter (PM10) by 27.9 tons per year (TPY) which is above the significant emission rate. This increase subjects the facility to the Prevention of Significant Deterioration (PSD) regulations. The allowable emissions of PM10 are set by a Best Available Control Technology (BACT) determination. The emissions will not cause or contribute to a violation of any air quality standard or PSD increment.

The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

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 the 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 required reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the 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 receipt 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 28-6.207, Florida Administrative Code.

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 Protection
Bureau of Air Regulation
1115 Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southeast District
1900 S. Congress Avenue
Suite A
West Palm Beach, Florida 33406

Dade County Department of Environmental Resources Management
33 S.W. 2nd Avenue
Suite 9-223
Miami, Florida 33130

Any person may send written comments on the proposed action to Mr. A. A. Linero, P.E., Administrator, New Source Review Section, at the Department of Environmental Protection, Bureau of Air Regulation, Mail Station 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

Further, a public hearing can be requested by any person(s). Such request must be submitted within 30 days of this notice.

RECEIVED
OCT 9 1995
Bureau of
Air Regulation

October 6, 1995

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

The purpose of this correspondence is to present comments to the Department regarding the Technical Evaluation and Preliminary Determination (TE&PD) dated September 13, 1995, concerning the above referenced air construction permit for Tarmac Florida, Inc. The comments are presented below, in the order in which they appear in the TE&PD.

Best Available Control Technology Evaluation

The Department's BACT determination concludes that Tarmac's proposed baghouse control technology represents BACT. However, Tarmac has some concern over the PM emission limit specified by the Department. Tarmac proposed a PM emission limit of 0.04 gr/dscf for the slag dryer, whereas the Department has specified a limit of 0.02 gr/dscf. It is acknowledged that a well designed and operated baghouse can generally meet an outlet grain loading of 0.02 gr/dscf. However, in the case of the slag dryer, there are several unknowns. First, the efficiency of a baghouse is dependent on the particle size of the PM in the gas stream. This is an unknown at present since there is no available comparative data from an operating slag dryer. Secondly, the baghouse unit is a pre-NSPS unit designed to control PM emissions from an asphalt concrete plant. The NSPS which were subsequently promulgated for asphalt plants specified a PM limit of 0.04 gr/dscf.

The Department makes the observation in the BACT discussion that the PM emissions for the No. 4 Finish Mill are approximately 0.02 gr/dscf, therefore the slag dryer should be able to meet a similar limit. However, the air to cloth ratio for the No. 4 Finish Mill is 5:1 (30,000 acfm and 6,000 sq. ft. cloth area), whereas the ratio for the slag dryer is 6.5:1 (20,000 acfm and 3,400 sq. ft. cloth area). The lower air to cloth ratio for the finish mill would result in lower PM emissions from the finish mill, other factors being equal.

Based on these concerns, it is requested that the BACT determination and PM emission limit be reworded to allow the BACT to be revised if the initial stack testing indicates that the 0.02 gr/dscf outlet loading is not achievable. Of course, the testing would have to be valid, and provided proper operation and maintenance procedures are followed. Suggested wording is provided below in the specific conditions.

Specific Condition 5

The Department has specified a visible emission limit of 5% opacity for the slag dryer. The regulatory basis for this limit is not clear, since it is not discussed in the BACT determination. The DEP rules would limit

KBN ENGINEERING AND APPLIED SCIENCES, INC.

6241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 450, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

EQUAL EMPLOYMENT OPPORTUNITY
AN AFFIRMATIVE ACTION EMPLOYER

the slag dryer to a VE limit of 20% (Rule 62-296.310). A VE limitation of 5% would essentially allow no visible emissions from the dryer at any time, except during startup, shutdown or malfunction. As discussed above, there are several uncertainties associated with the slag dryer and baghouse operation. Therefore, Tarmac requests a visible emission limit of 10% opacity. This would allow a slight visible emission during normal operation.

As discussed above, Tarmac has a concern over the ability of the existing baghouse system to meet a PM emission limit of 0.02 gr/dscf. Tarmac requests that this limit be revisited, if compliance testing indicates that this limit is not achievable. Suggested wording of this condition follows:

> The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.02 gr/dscf, 2.1 lbs/hr, and 3.1 TPY, or 10 percent opacity. If the initial compliance test for PM/PM10 under this permit demonstrates that this limit is not achievable, the Department may revise the emission limit, not to exceed 0.04 gr/dscf, 4.1 lbs/hr, and 6.15 TPY.

Specific Condition 8

The beginning statement in this condition is somewhat vague, in that it refers to the "yard". It is requested that the following wording be used for clarification:

> 8. Unconfined PM emissions from the slag storage area shall be minimized by applying the following reasonable precautions:

Paragraphs A. and D. of this condition are prescriptive and do not allow Tarmac the flexibility to implement the most efficient and cost effective fugitive dust control methods. Paragraph A. requires vacuum sweepers to be used to clean the paved areas. Paragraph D. imposes substantial requirements on the slag storage area by requiring wind breaks, enclosures or covers. Periodic watering or other measures may be sufficient to control fugitive emissions in these areas, depending upon operating conditions and weather.

Based on the above concerns, it is requested that paragraph D. be deleted, and paragraph A. be revised to read as follows:

> A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Vacuum type sweepers, water sprinklers, wind breaks, enclosures or covers shall be used as necessary to control unconfined particulate matter emissions from the paved parking areas and from handling dried slag in the slag storage area. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5% opacity.

Specific Condition 9

It is noted that the current visible emission limit for Cement Storage Silos 1-9 is 20%. The current limit for Clinker Storage Silos 21-23 and 26-28 is 5% opacity.

Specific Condition 15

It is requested that, in accordance with Rule 62-297.620(4), that annual compliance tests for PM be waived if visible emissions from the slag dryer do not exceed 5% opacity.

Thank you for consideration of these comments, and please call if you have any questions concerning this information.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P. E. #19011

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

DB/ehj

cc: J. Brooks, SFD
E. Anderson, DERM
NPS
EPA
D. Buff, KBN

RECEIVED
SEP 27 1995
Bureau of
Air Regulation

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter ofan
Application for Permit by:

Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

DEP File No. AC 13-273887
PSD-FL-230
Dade Conty

OGC Case No. 95-_____

_____/

REQUEST FOR EXTENSION OF TIME

Tarmac Florida, Inc. ("Tarmac"), by and through undersigned counsel, hereby requests an extension of time, through November 15, 1995, to file a petition for formal administrative proceedings in accordance with Section 120.57(1), Florida Statutes, regarding a proposed air construction permit for a blast furnace slag processing operation at the Pennsuco Cement Plant in Medley, Dade County, Florida [DEP File No. AC 13-273887/PSD-FL-230]. This request for an extension of time is filed pursuant to Rule 62-103.070, Florida Administrative Code. In support of the request, Tarmac states:

1. On September 15, 1995, Tarmac received the Department's Notice of Intent to Issue the above-referenced permit [DEP File No. AC 13-273887/PSD-FL-230]. Under the terms of the notice, Tarmac has until October 2, 1995, to file a petition for administrative proceedings on the proposed permit.

2. The proposed permit contains twenty-one specific conditions, some of which appear to warrant clarification, revision, or other change.

3. Representatives of Tarmac have been or will be conferring with representatives of the Department in an attempt to reach agreement on mutually acceptable permit language. However, additional time is needed to reach such an agreement.

4. This request is filed simply as a protective measure to avoid waiver of Tarmac's right to challenge objectionable conditions in the proposed permit. Grant of this request will not prejudice either party, but will further their mutual interest and likely avoid the need to initiate formal administrative proceedings.

5. I hereby certify that I have attempted to confer with Jefferson M. Braswell, Esq., of the Department's Office of General Counsel, but was not able to reach Mr. Braswell to determine the Department's position on the requested extension.

WHEREFORE, Tarmac respectfully requests that the Department enter an order granting it through and until November 15, 1995, to file a petition for formal administrative proceedings regarding the proposed air construction permit [DEP File No. AC 13-273887/PSD-FL-230] for a blast furnace slag processing operation at the Pennsuco Cement Plant in Medley, Dade County, Florida.

Respectfully submitted this 27th day of September, 1995.

HOPPING GREEN SAMS & SMITH, P.A.

By: _____

James S. Alves
Gary V. Perko
Post Office Box 6526
123 South Calhoun Street
Tallahassee, Florida 32314
(904) 222-7500

Attorneys for TARMAC FLORIDA, INC.

Technical Evaluation
and
Preliminary Determination

Tarmac Florida, Inc.
Pennsuco Cement Plant
Medley, Florida
Dade County

Blast Furnace Slag Processing Operation

Department File No. AC 13-273887
PSD-FL-230

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

September 13, 1995

I. GENERAL INFORMATION

A. Applicant

Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

B. Request

On July 10, 1995, Tarmac Florida, Inc. submitted an application for an air construction permit to build a blast furnace slag processing operation at the Pennsuco Cement Plant (SIC 3241) located in Medley, Dade County, Florida. The UTM coordinates of this site are Zone 17, 562.8 km E and 2861.7 km N. The application was complete on August 14, 1995.

C. Project

The applicant proposes to process 300,000 ton per year (TPY) blast furnace slag at an existing Portland cement plant. The proposed slag processing operation will have a new 10,000 gallon fuel oil storage tank and an existing 150 ton per hour (TPH) slag dryer (asphalt plant dryer built in 1972) that uses 52 million British thermal units per hour (MMBtu/hr) heat input from No. 2 fuel oil. The particulate emissions will be controlled by a baghouse. The blast furnace slag processing operation will use the existing Clinker Storage Silos (Nos. 21, 22, 23, 26, 27, and 28), Finishing Mill No. 4, Cement Storage Silos 1, 2, 3, 4, 5, 6, 7, 8, and 9, and Bulk Loadout Units 1 and 2 at the Portland cement plant. The emissions from the silos and mill are controlled with baghouses.

The slag will be brought to the plant in trucks, dried in the asphalt plant dryer, and ground, stored, handled and shipped in the existing finish mill, clinker and cement silos, and loadout units.

The process flow diagram on the following page gives an overview of the proposed process.

D. Emissions

Air pollutants will be emitted from the dryer and during the handling, grinding, and storage of the slag.

The dryer will emit particulate matter (PM and PM10) along with the products of combustion of the No. 2 fuel oil. The applicant requested a particulate matter emission standard of 0.04 grains per dry standard cubic foot (gr/dscf) for the baghouse serving the modified dryer. With the estimated gas flow of 12,000 dscfm and using a maximum of 3,000 hrs/yr operation, the PM emissions at this concentration would be 4.1 lbs/hr and 6.15 TPY.

Based on a fuel consumption of 371.4 gallons per hour (GPH) of No. 2 fuel oil (52 MMBtu/hr heat input) for 3,000 hrs/yr and AP-42 emission factors, the emissions of the products of combustion from the dryer will be 26.4 lbs/hr and 39.6 TPY sulfur dioxide (SO_2), 7.43 lbs/hr and 11.14 TPY nitrogen oxides (NOx), 1.86 lbs/hr and 2.79 TPY carbon monoxide (CO), and smaller quantities of volatile organic compounds (VOC), sulfuric acid mist (SAM), lead, mercury, and beryllium.

Based on the procedures listed in AP-42, fugitive dust emissions from the handling and storage of the slag were estimated to be 7.958 TPY PM and 2.790 TPY PM10. Emissions of particulate matter (PM) from the silos, mill, conveyers, and loadout units were estimated at 31.72 TPY. Tables 3-2 and 3-4 of the application summarize these emission estimates.

The proposed increase in emissions from the facility resulting from the blast furnace slag processing operation (36.2 TPY PM and 31.0 TPY PM10) exceed the significant emissions rates listed in Chapter 212, F.A.C. The increase in emissions of the other air pollutants that will be emitted by the proposed slag processing plant are less that the significant emissions rates. Table 4-1 (revised August 11, 1995) from the application is a summary of the requested increase in emissions from the proposed slag operation.

II. RULE APPLICABILITY

The proposed project, construction of a blast furnace slag processing operation at an existing Portland cement plant (SIC 3241), is subject to the preconstruction requirements under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4 and 62-212, Florida Administrative Code (F.A.C.).

The Portland cement plant is located in Dade County. This air quality area is designated attainment/maintenance for ozone (Rule 62-275.420, F.A.C.) and is attainment for the other criteria pollutants (Rule 62-275.400, F.A.C.).

The Portland cement plant is a major facility. The proposed furnace slag processing operation will increase emissions of particulate matter, both PM and PM10, by more than the significant emission rates. Therefore,the proposed project is subject to the New Source Review (NSR) requirements pursuant to Rule 62-212.400(5), F.A.C., which requires a Best Available Control Technology (BACT) determination for PM and PM10. The net emissions increase of all pollutants due to the proposed slag processing operation is less than 50 TPY. Therefore the project is exempt from the requirements of Rule 62-212.400(5)(d), (e), (f), and (g), F.A.C., which are requirements for ambient impact analysis, additional impact analysis, preconstructioon air quality monitoring analysis, and post construction monitoring (Rule 62-212.400(3)(d), F.A.C.).

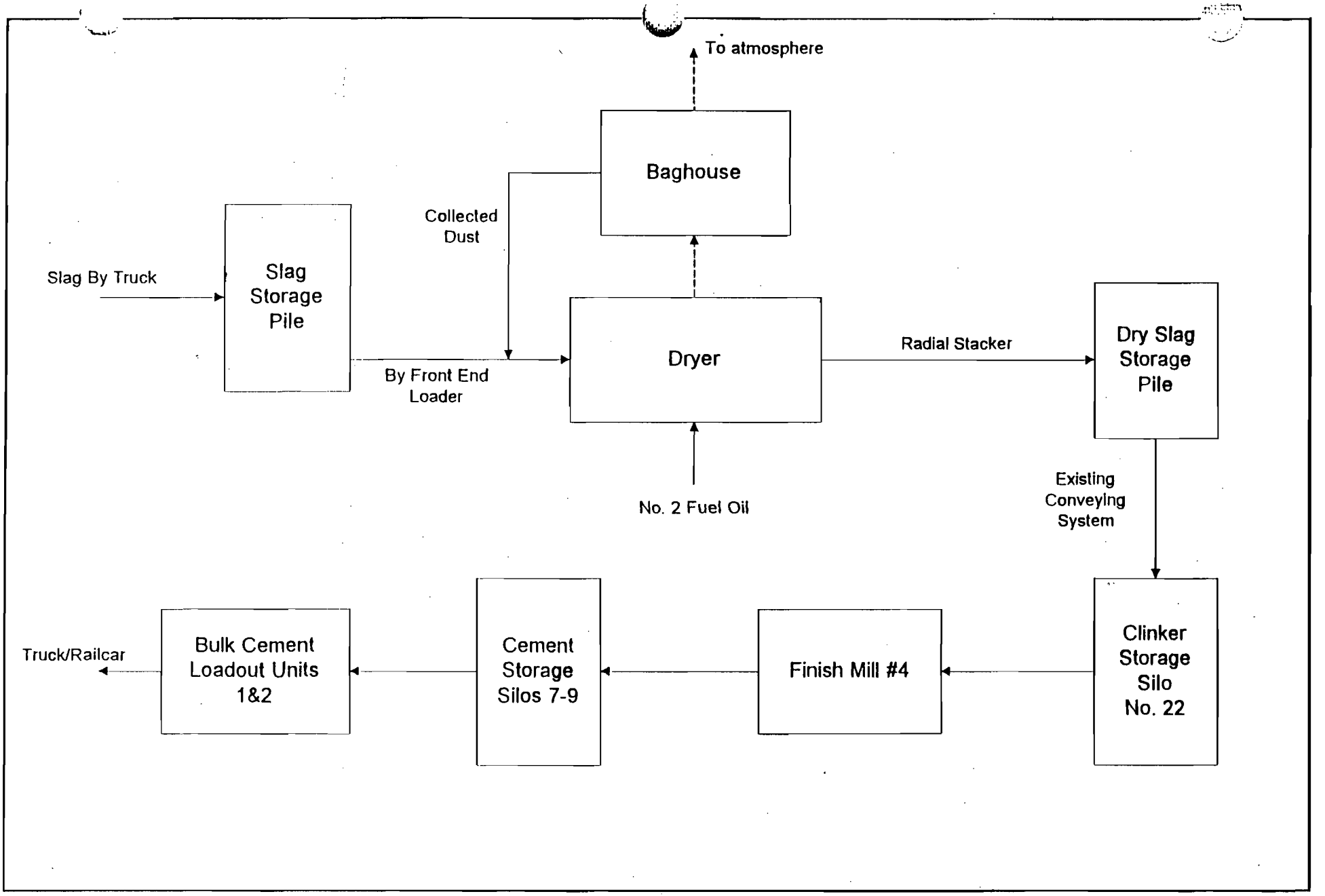


Figure 2-3 Flow Diagram of Slag Processing System, Tarmac Florida

Process Flow Legend:
Gas
Solid/Liquid

Emission Unit:
Process Area:
Filename: TARMAC1.VSD
Latest Revision Date: 6/27/95

KBN Engineering and Applied Sciences, Inc.

15007Y/F1
08/11/95

Table 3-1. Maximum Emissions Due to Fuel Combustion for Slag Dryer, Tarmac Florida

Parameter	No. 2 Fuel Oil
OPERATING DATA	
Operating Time (hr/yr)	3,000
Heat Input Rate (MMBtu/hr)	52.0
Fuel Oil Use (gal/hr)[a]	371.4
Fuel Oil Use (gal/yr)	1,114,286
Maximum Sulfur Content (Wt %)	0.2

Pollutant	Emission Factor [b]		Maximum Emissions lb/hr	Maximum Emissions TPY
EMISSIONS DATA				
SO2:	142*S	lb/Mgal[c]	26.37	39.55
NOx:	20	lb/Mgal	7.43	11.14
CO:	5	lb/Mgal	1.86	2.79
NMVOC:	0.2	lb/Mgal	0.074	0.11
Sulfuric Acid Mist:	0.1225	lb/Mgal	0.046	0.068
Lead-Total:	8.9E-06	lb/MMBtu	4.63E-04	6.94E-04
Mercury:	3.0E-06	lb/MMBtu	1.56E-04	2.34E-04
Beryllium:	2.5E-06	lb/MMBtu	1.30E-04	1.95E-04

Note: NA = not applicable.

[a] Based on 140,000 Btu/gal for 0.5% S oil.
[b] Emission factors based on AP-42.
[c] "S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.5%

The visible emissions standards for these operations will be:

Storage Piles - 20 percent opacity
Belt Conveyer Transfer Points - 10 percent opacity
Finish Mill Baghouse - 5 percent opacity
Silo Baghouses - 5 percent opacity
Bulk Loadout Operation - 10 percent opacity

IV. AIR QUALITY IMPACT ANALYSIS

The increase in emissions from the blast furnace slag processing operation will not cause a violation of any ambient air quality standard.

V. CONCLUSION

On the basis of the information provided by Tarmac Florida, Inc., the Department has reasonable assurance that the proposed blast furnace slag processing operation, as described in this evaluation and subject to the conditions proposed within, will not cause a violation of any air quality standard, PSD increment, or other technical provision of Chapter 62-212 of the Florida Administrative Code.

9/13

Table 3-2. Fugitive Dust Emissions For Slag Project, Tarmac Florida, Inc.

SOURCE	TYPE OF OPERATION	M MOISTURE CONTENT (%)	U WIND SPEED (MPH)	UNCONTROLLED EMISSION FACTOR[a] (LB/TON)	CONTROL	CONTROL EFFICIENCY (%)	CONTROLLED EMISSION FACTOR (LB/TON)	ACTIVITY FACTOR	MAXIMUM ANNUAL PM(TSP) EMISSIONS (TONS/YR)	PM10 SIZE MULT.	MAXIMUM ANNUAL PM10 EMISSIONS (TONS/YR)
TRUCK DUMP	BATCH DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
FRONTEND LOADER-TO-HOPPER	BATCH DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
HOPPER-TO-BELT	CONTINUOUS DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
DRYER-TO-RADIAL STACKER	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
RADIAL STACKER-TO-STORAGE PILE	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
FRONTEND LOADER-TO-HOPPER	BATCH DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
HOPPER-TO-CONVEYOR Y76	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
CONVEYOR Y76-TO-Y75	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y75-TO-Y78	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y78-TO-Y79	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y79-TO-Y102	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y102-TO-CLINKER SILOS	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
SLAG STORAGE PILES (2)	WIND EROSION	--	--	--	NONE	0	--	--	0.027[d]	0.5	0.014
SLAG STORAGE PILES MAINTENANCE	VEHICULAR TRAFFIC	--	--	0.96[b]	WATERING	50	0.93[b]	15,000 VMT[c]	3.470[d]	0.35	1.215
TOTAL									7.958		2.790

Notes/References

[a] Batch Drop and Continuous Drop Emission Factors are computed from AP-42 (USEPA, 1988), Section 11.2.3:
$E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

[b] Pound per Vehicle Mile Travel (lb/VMT), see Appendix for derivation.

[c] Based on vehicle operating 3,000 hrs/yr @ 5 mph.

[d] Refer to Appendix for derivation.

Table 3–4. Future Maximum Particulate Emissions From Cement Production Facilities, Tarmac Florida, Inc.

Emission Unit/Point	Emission Point ID	Control Equipment Type	Maximum Process Rate (TPH)	Air Flow Rate (cfm)	PM Emission Factor	PM Emissions (lb/hr)	PM Emissions (hr/yr)	PM Emissions (TPY)
Clinker Storage Silos								
Clinker silos 21, 22, 23, 26, 27 & 28	K–633	Baghouse	150.0	1,500	0.01 gr/acf	0.13	8,760	0.56
Finish Mill #4								
Ball mill/mill sweep	F–430	Baghouse	150.0	30,000	0.01 gr/acf	2.57	8,760	11.26
Belt conveyor/separator/cement pump	F–432	Baghouse	150.0	17,000	0.01 gr/acf	1.46	8,760	6.38
Clinker/gypsum conveyors	F–603	Baghouse	150.0	8,000	0.01 gr/acf	0.69	8,760	3.00
Clinker/gypsum conveyors	F–604	Baghouse	150.0	8,000	0.01 gr/acf	0.69	8,760	3.00
Clinker/gypsum conveyors	F–605	Baghouse	150.0	4,000	0.01 gr/acf	0.34	8,760	1.50
Cement Storage Silos 1–9								
Cement Silos 7–9	F–512	Baghouse	150.0	10,000	0.01 gr/acf	0.86	8,760	3.75
Bulk Cement Loadout Units 1 & 2								
Railcar/Truck Unit 1	B–110	Baghouse	300.0	3,000	0.01 gr/acf	0.26	8,760	1.13
Truck Unit 2	B–210	Baghouse	300.0	3,000	0.01 gr/acf	0.26	8,760	1.13
					TOTAL =	7.24		31.72

III. TECHNICAL EVALUATION

Up to 300,000 TPY of blast furnace slag will be hauled to the plant by trucks. The slag will contain 6 to 10 percent moisture. The applicant stated that the storage and handling of the slag will not cause a fugitive dust problem. Should a problem develop, the applicant will apply water to the slag or take additional measures to maintain the visible emissions from handling the slag below 20 percent opacity. The additional measures could include the installation of permanent water applicators for the undried slag and the barriers to reduce the wind across the dried slag.

Front-end loaders will transfer the slag to a hopper that discharges to a conveyer that takes the slag to the 150 TPH (design) asphalt plant dryer. The average processing rate is expected to be 100 TPH. No. 2 fuel oil containing a maximum of 0.5 percent sulfur from a new 10,000 gallon (maximum) fuel oil storage tank will be consumed by the dryer at a maximum rate of 52 MMBtu/hr (approximately 371.4 GPH). Maximum annual fuel consumption by this dryer will be 1,114,286 GPY. The estimated emissions of the products of combustion from this fuel are shown in Table 3-1 (revised August 11, 1995) from the application.

Particulate matter (PM) emissions from the dryer will be controlled by a Flex-Kleen baghouse that has a 6.48:1 air to cloth ratio. The applicant proposed an emission limit of 0.04 gr/dscf which is the new source performance standard for asphalt concrete plants. The Department's Best Available Control Technology (BACT) determination set the emission standard for PM at 0.02 gr/dscf. This standard is equivalent to 2.1 lbs/hr and 3.1 TPY PM emission from the proposed dryer. See the attached BACT for more information on this limit.

The slag leaving the dryer, which contains about 5 percent moisture, is placed in open storage piles. The Department will require reasonable precautions to prevent visible emissions from the handling of the dried slag in the yard. These precautions may include wind breaks, enclosures or other means to minimize unconfined emissions.

Front-end loaders transfer the dried slag to the existing conveyer which will deliver it to the existing clinker silos. It is later transferred and ground in Finishing Mill No. 4. The application states that the allowable emissions from the baghouse controlling this mill will be reduced to 0.01 grains per actual cubic foot (gr/acf). The ground slag from the mill will be sent to the existing cement silos and shipped out of the plant by Bulk Loadout Units Nos. 1 and 2.

Table 4-1. Emissions Increase Associated With Slag Project, Tarmac Florida, Inc.

Regulated Pollutant	(A) Slag Dryer Emissions (TPY)	(B) Fugitives From Slag Handling (TPY)	Cement Production Facilities (C) Current Actuals (TPY)	(D) Future Maximums (TPY)	(A+B-C+D) Net Increase In Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate matter (TSP)	6.15	7.96	9.64	31.72	36.2	25	Yes
Particulate matter (PM10)	6.15	2.79	9.64	31.72	31.0	15	Yes
Sulfur dioxide	39.60	--	--	--	39.6	40	No
Nitrogen oxides	11.14	--	--	--	11.1	40	No
Carbon monoxide	2.79	--	--	--	2.8	100	No
Volatile organic compounds	0.11	--	--	--	0.11	40	No
Sulfuric acid mist	0.068	--	--	--	0.07	7	No
Total reduced sulfur	--	--	--	--	--	10	No
Lead	0.0007	--	--	--	0.0007	0.6	No
Mercury	0.0002	--	--	--	0.0002	0.1	No
Beryllium	0.0002	--	--	--	0.0002	0.0004	No
Fluorides	--	--	--	--	--	3	No
Asbestos	--	--	--	--	--	0.007	No
Vinyl Chloride	--	--	--	--	--	1	No

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

AC 13-273887/PSD-FL-230

The Department of Environmental Protection gives notice of its intent to issue an air pollution source construction permit to Tarmac Florida, Inc., 455 Fairway Drive, Deerfield Beach, Florida 33441. The permit will authorize the construction of a blast furnace slag processing operation at the existing Pennsuco Cement Plant located at 11000 NW 121 Way, Medley, Dade County, Florida 33178. The proposed operation will consist of a 150 ton per hour (TPH) blast furnace slag dryer. The dryer will use No. 2 fuel oil from a new 10,000 gallon storage tank. Particulate matter emissions will be controlled with a baghouse. Sebsequent material processing will be accomplished through the use of the existing No. 4 finishing mill, clinker silos, cement silos, and loading system. The operation will process 300,000 tons per year (TPY) blast furnace slag. The product will be shipped for use as a raw material at concrete batch plants.

The proposed facility will increase the emissions of particulate matter (PM10) by 27.9 tons per year (TPY) which is above the significant emission rate. This increase subjects the facility to the Prevention of Significant Deterioration (PSD) regulations. The allowable emissions of PM10 are set by a Best Available Control Technology (BACT) determination. The emissions will not cause or contribute to a violation of any air quality standard or PSD increment.

The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). 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, F.S.

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, Florida Administrative Code.

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 Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southeast District
1900 S. Congress Avenue
Suite A
West Palm Beach, Florida 33406

Tarmac Florida, Inc.
AC 13-273887
PSD-FL-230

Dade County Department of Environmental
Resources Management
33 S.W. 2nd Avenue
Suite 9-223
Miami, Florida 33130

Any person may send written comments on the proposed action to Mr. A. A. Linero, P.E., Administrator, New Source Review Section, at the Department of Environmental Protection, Bureau of Air Regulation, Mail Station 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

Further, a public hearing can be requested by any person(s). Such request must be submitted within 30 days of this notice.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the original and one true and correct copy of the foregoing motion was hand-delivered to Kathy Carter, Clerk, Department of Environmental Protection, 3900 Commonwealth Blvd., Tallahassee, FL 32399-2400, and a true and correct copy was sent to the following this 27th day of September, 1995.

BY HAND-DELIVERY

Jefferson M. Braswell, Esquire
Office of General Counsel
Department of Environmental Protection
3900 Commonwealth Blvd., Room 353-3
Tallahassee, Florida 32399-3000

Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Division of Air Resources Management
Department of Environmental Protection
111 South Magnolia, Suite 4
Tallahassee, FL 32301

Attorney

Department of Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

September 13, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Albert Townsend
Director of Technical Services
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

Dear Mr. Townsend:

Attached is one copy of the Technical Evaluation and Preliminary Determination, proposed Best Available Control Technology (BACT) determination, and draft permit for the construction of a slag processing operation at the Pennsuco Cement Plant in Medley, Dade County, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. A. A. Linero, Administrator, New Source Review Section, at the above address. If you have any questions on this matter, please call Willard Hanks at (904) 488-1344.

Sincerely,

A. A. Linero, P.E. for

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

CHF/wh/t

Enclosure

cc: I. Goldman, SED
P. Wong, DERM
J. Harper, EPA
J. Bunyak, NPS
D. Buff, KBN

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend
Director of Tech. Serv.
Tarmac Fla., Inc
455 Fairway Dr.
Deerfield Bch Fl 33441

4a. Article Number
Z 392 979 040

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

7. Date of Delivery
9/15/95

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form **3811**, December 1991 ★U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 040

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

UNITED STATES POSTAL SERVICE

PS Form **3800**, March 1993

Sent to Albert Townsend	
Street & No. Tarmac Fl	
P.O., State and ZIP Code Deerfield Bch, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date AC13-273887 PSD-FI-230	9-13-95

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the Matter of an Application for Permit by:

DEP File No. AC 13-273887
PSD-FL-230
Dade County

Mr. Albert Townsend
Director of Technical Services
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

_____/

INTENT TO ISSUE

The Department of Environmental Protection 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, Tarmac Florida, Inc., applied on July 10, 1995, to the Department of Environmental Protection for a permit to construct a blast furnace slag processing operation at the Pennsuco Cement Plant located in Medley, Dade County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed action.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 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.

Tarmac Florida Inc.
AC 13-273887
PSD-FL-230

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, F.S. 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, F.S.

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

Tarmac Florida, Inc.
AC 13-273887
PSD-FL-230

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 PROTECTION

A A Linero, P.E. for

C. H. Fancy, 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 9-13-95 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.

Kyra Jobar 9-13-95
Clerk Date

Copies furnished to:

I. Goldman, SED
P. Wong, DERM
J. Harper, EPA
J. Bunyak, NPS
D. Buff, KBN

Department of Environmental Protection

DRAFT

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

Permittee:
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441

Permit Number: AC 13-273887
(PSD-FL-230)
Expiration Date: 07/01/96
Latitude/Longitude: 25°52'26"
80°22'27"
Project: Blast Furnace Slag Processing Operation

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construct a Blast Furnace Slag Processing Operation at the existing Pennsuco Cement Plant located at 11000 N.W. 121 Way, Medley, Dade County, Florida 33178. The UTM coordinates of this site are Zone 17, 562.8 km E and 2861.7 km N.

Major components of the proposed blast furnace slag processing operation are a new 10,000 gallon fuel storage tank and a used 150 ton per hour (TPH) asphalt dryer with a baghouse. The slag processing operation will use the Portland cement plant's existing Clinker Silos (Nos. 21, 22, 23, 26, 27, and 28 for dried slag storage), Cement Silos (Nos. 7, 8, and 9 for the ground slag storage), No. 4 Finish Mill, and Bulk Cement Loadout Units Nos. 1 and 2.

The emission units shall be constructed and operated 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 July 10, 1995.
2. DEP letter dated July 24, 1995.
3. KBN letter dated August 11, 1995.

DRAFT

Permittee:
Tarmac Florida, Inc.

Permit Number: **AC 13-273887**
(PSD-FL-230)
Expiration Date: **07/01/96**

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, F.S. 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), F.S., 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 this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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 F.S. and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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

GENERAL CONDITIONS:

credentials or other documents as may be required by law and at reasonable times, 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 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.

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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, 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. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

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;
- the results of such analyses.

SPECIFIC CONDITIONS:

General

1. This permit incorporates all requirement of permit No. AO 13-238048 that are applicable to the No. 4 Finishing Mill; Clinker Silos Nos. 21, 22, 23, 26, 27, and 28; Cement Silos Nos. 7, 8, and 9; Bulk Cement Loadout Units 1 and 2, and all requirements of permit No. AC 13-234568 that are applicable to the conveyer systems handling the slag except as otherwise noted in any specific condition of this permit.

Construction

2. The No. 2 fuel oil storage tanks shall be constructed so that its maximum storage capacity is less than 40 cubic meters (10,568 gallons).

3. The blast furnace slag dryer stack shall have a minimum height of 20 feet and a cross sectional area of approximately 4 square feet. The stack shall be equipped with sampling facilities that comply with the requirements of Rule 62-297.345, F.A.C.

Federal Requirements

4. The permittee shall construct and operate the blast furnace slag processing operation so that it complies with the requirements of 40 CFR 52.21, F.A.C., Prevention of Significant Deterioration of Air Quality.

Emission Limits

5. The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.02 gr/dscf, 2.1 lbs/hr, and 3.1 TPY or 5 percent opacity.

6. Except for the No. 4 Finishing Mill, PM emissions from the other processing equipment handling blast furnace slag shall not exceed the quantities listed in Table 3-4 of the application (attached).

7. Particulate matter emissions from the No. 4 Finishing Mill shall not exceed 0.02 gr/dscf, 2.57 lbs/hr, 11.26 TPY, or 5 percent opacity.

8. Unconfined PM emissions from the yard shall be minimized by applying the following reasonable precautions:

A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5% opacity.

SPECIFIC CONDITIONS:

B. Water sprinklers shall be used when necessary to control unconfined particulate matter emissions from unpaved roads and work areas.

C. Bulk Cement (railcar/truck) Loadout Unit 1, Bulk Cement (truck) Loadout Unit 2 and Transfer Pump Hopper (under Silos 10-12), equipped with Baghouses B-110, B-210, and B-323 respectively, exhaust particulate emissions to the interior of enclosed areas. Fugitive emissions shall be contained in this manner so as not to exceed 5% opacity from the vents, doors, etc.

D. Wind breaks, enclosures, or covers shall be used to control unconfined PM emissions from handling the dried slag in the yard.

9. Visible emissions from the blast furnace slag processing operation shall not exceed any of the following:

A.	Yard Storage/Handling	20% opacity
B.	Each Clinker/Cement silo	5% opacity
C.	Each Conveyer Transfer Point	10% opacity
D.	No. 4 Finish Mill	5% opacity
E.	Bulk Cement Loadout Units 1&2	10% opacity

Operation Limitations

10. The maximum wet blast furnace slag input rate to the dryer shall not exceed 150 TPH. The permittee shall have the means to determine the process rate of the dryer and shall maintain records on the quantity of slag processed each day.

11. The facility shall not process more than 300,000 tons of blast furnace slag during any calendar year.

13. Only low sulfur No. 2 fuel oil shall be burned in the blast furnace slag dryer. The maximum heat input to the dryer shall not exceed 52 MMBtu/hr (approximately 371 GPH). The maximum fuel consumption shall not exceed 1,114,286 GPY. The permittee shall keep a log on the daily and annual fuel consumption of the dryer.

14. The dryer shall not operate more than 3,000 hours per calendar year. The permittee shall maintain a record of the time the dryer operates daily.

Compliance Determination

15. Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit

SPECIFIC CONDITIONS:

and annually thereafter by the following referenced methods as specified in 40 CFR 60, Appendix A (July 1, 1994), or by other test methods with prior Department approval:

A. PM10 - EPA Methods 1, 2, 3, 4, and 5 (assuming all PM is PM10).

B. Visible Emissions - EPA Method 9. The visible emissions test shall be conducted concurrently with any required PM test on the facility.

16. Compliance tests on the blast furnace slag dryer shall be conducted at a minimum rate of 135 TPH. If testing is performed at a rate less than specified in this specific condition, operation shall be limited to a maximum of 110 percent of the tested capacity until such time as an acceptable test is performed at a minimum of the production rate specified in this specific condition. When operation is restricted to a lower capacity because of the testing at such level, the Dade County Department of Environmental Resources Management (DERM), upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.

17. The permittee shall notify DERM at least fifteen (15) days prior to any compliance testing required by this permit or other regulations in accordance with Rule 62-297.340(1)(i), F.A.C.

18. Copies of the test report(s) shall be submitted to DERM within forty-five (45) days of completion of testing in accordance with Rule 62-297.450(3)(b), F.A.C.

Record Keeping and Reporting Requirements

19. The permittee shall maintain a daily log on the quantity of slag processed and fuel consumed by the slag dryer.

20. An annual operation report shall be submitted to DERM by March 1 of each year pursuant to Rule 62-210.370(2), F.A.C.

21. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

DRAFT

Permittee:
Tarmac Florida, Inc.

Permit Number: **AC 13-273887**
(PSD-FL-230)
Expiration Date: **07/01/96**

SPECIFIC CONDITIONS:

22. A timely application for a Title V operation permit must be submitted to DERM by the date required in Rule 62-213.420, F.A.C.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell, Secretary

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION

Tarmac Florida, Inc.
Medley, Dade County, Florida
AC 13-273887/PSD-FL-230

Tarmac Florida, Inc. proposes to construct a Blast Furnace Slag Processing Operation at the Pennsuco Cement Plant in Medley, Dade County, Florida. Major components of the proposed slag processing operation are a fuel storage tank and an existing 150 TPH asphalt plant dryer with a baghouse. The slag processing facility will used the existing Clinker and Cement Silos, No. 4 Finishing Mill, and Bulk Cement Loadout Units Nos. 1 and 2. The slag processing operation will emit particulate matter (PM and PM10) and the product of combustion of No. 2 fuel oil. The emission limits requested for the facility would result in a net emissions increase of 36.2 TPY for PM, 31.0 TPY for PM10, 39.6 TPY for SO_2, 11.1 TPY for NOx, and smaller quantities (less than the significant emissions rates) for CO, VOC, sulfuric acid mist, total reduce sulfur, lead, mercury, fluorides, asbestos, and vinyl chloride. The requested increase in allowable emissions of PM and PM10 are above the significant emissions rates of 25 and 15 TPY, respectively. The proposed slag processing operation is subject to the Prevention of Significant Deterioration (PSD) regulations and the allowable emissions of PM and PM10 for the slag dryer are set by a BACT determination. The existing Portland cement processing equipment (Clinker and Cement Silos, Conveyers,Finishing Mill and Bulk Loadout Units) are not subject to this BACT determination because the equipment was capable of accommodating blast furnace slag without a capital expenditure.

DATE OF RECEIPT OF A BACT APPLICATION

July 10, 1995

BACT REQUESTED BY THE APPLICANT

The applicant proposed the use of a Flex-Kleen baghouse with a 6.48:1 air/cloth ratio to control the emissions from the slag dryer. The requested PM emission standard is 0.04 gr/dscf.

BACT DETERMINATION PROCEDURE

In accordance with Rule 62-212.410, Florida Administrative Code, Best Available Control Technology Determination, Stationary Source-Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of BACT pursuant to 40 CFR 52.21, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determinations of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission unit in question the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically infeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT DETERMINED BY THE DEPARTMENT

The dryer is a source of particulate matter emissions. The emissions of particulate matter will be controlled by a baghouse. The Department considers a baghouse appropriate air pollution controls for this source. The BACT Clearinghouse Document did not list a BACT determination for particulate matter emissions from a blast furnace slag dryer. The Department notes that baghouses controlling other sources handling similar inert solid material (phosphate rock, limestone, etc.) are able to meet a particulate matter emission limit of 0.02 grains per dry standard cubic foot (gr/dscf). The Department also notes that the application stated that the particulate matter emissions from the No. 4 Finish Mill would be 0.01 grains per actual cubic foot. Allowing for the temperature and moisture content of the air leaving the finishing mill, the 0.01 gr/acf is approximately equal to 0.02 gr/dscf. The Department has determined that BACT for the blast furnace slag dryer is use of a baghouse that meets a PM emission standard of 0.02 gr/dscf.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Willard Hanks, Review Engineer
A. A. Linero, P.E., Administrator
Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECOMMENDED BY:

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

_____, 1995
Date

APPROVED BY:

Virginia B. Wetherell, Secretary
Dept. of Environmental Protection

_____, 1995
Date

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

Permittee:
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441

Permit Number: AC 13-273887
(PSD-FL-230)
Expiration Date: 07/01/96
Latitude/Longitude: 25°52'26"
80°22'27"
Project: Blast Furnace Slag Processing Operation

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construct a Blast Furnace Slag Processing Operation at the existing Pennsuco Cement Plant located at 11000 N.W. 121 Way, Medley, Dade County, Florida 33178. The UTM coordinates of this site are Zone 17, 562.8 km E and 2861.7 km N.

Major components of the proposed blast furnace slag processing operation are a new 10,000 gallon fuel storage tank and a used 150 ton per hour (TPH) asphalt dryer with a baghouse. The slag processing operation will use the Portland cement plant's existing Clinker Silos (Nos. 21, 22, 23, 26, 27, and 28 for dried slag storage), Cement Silos (Nos. 7, 8, and 9 for the ground slag storage), No. 4 Finish Mill, and Bulk Cement Loadout Units Nos. 1 and 2.

The emission units shall be constructed and operated 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 July 10, 1995.
2. DEP letter dated July 24, 1995.
3. KBN letter dated August 11, 1995.

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, F.S. 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), F.S., 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 this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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 F.S. and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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

GENERAL CONDITIONS:

credentials or other documents as may be required by law and at reasonable times, 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 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.

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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, 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. This permit also constitutes:

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

14. The permittee shall comply with the following:

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

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

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;
- the results of such analyses.

SPECIFIC CONDITIONS:

General

1. This permit incorporates all requirement of permit No. AO 13-238048 that are applicable to the No. 4 Finishing Mill; Clinker Silos Nos. 21, 22, 23, 26, 27, and 28; Cement Silos Nos. 7, 8, and 9; Bulk Cement Loadout Units 1 and 2, and all requirements of permit No. AC 13-234568 that are applicable to the conveyer systems handling the slag except as otherwise noted in any specific condition of this permit.

Construction

2. The No. 2 fuel oil storage tanks shall be constructed so that its maximum storage capacity is less than 40 cubic meters (10,568 gallons).

3. The blast furnace slag dryer stack shall have a minimum height of 20 feet and a cross sectional area of approximately 4 square feet. The stack shall be equipped with sampling facilities that comply with the requirements of Rule 62-297.345, F.A.C.

Federal Requirements

4. The permittee shall construct and operate the blast furnace slag processing operation so that it complies with the requirements of 40 CFR 52.21, F.A.C., Prevention of Significant Deterioration of Air Quality.

Emission Limits

5. The particulate matter emissions (total PM and PM10) from the baghouse serving the slag dryer shall not exceed 0.02 gr/dscf, 2.1 lbs/hr, and 3.1 TPY or 5 percent opacity.

6. Except for the No. 4 Finishing Mill, PM emissions from the other processing equipment handling blast furnace slag shall not exceed the quantities listed in Table 3-4 of the application (attached).

7. Particulate matter emissions from the No. 4 Finishing Mill shall not exceed 0.02 gr/dscf, 2.57 lbs/hr, 11.26 TPY, or 5 percent opacity.

8. Unconfined PM emissions from the yard shall be minimized by applying the following reasonable precautions:

A. Paved parking and traffic areas shall be well maintained and kept free of particulate matter build-up. Vacuum type sweeper(s) shall be used to clean the paved areas. Sweeper(s) shall be maintained and operated such that visible emissions from the sweeper(s) do not exceed 5% opacity.

SPECIFIC CONDITIONS:

B. Water sprinklers shall be used when necessary to control unconfined particulate matter emissions from unpaved roads and work areas.

C. Bulk Cement (railcar/truck) Loadout Unit 1, Bulk Cement (truck) Loadout Unit 2 and Transfer Pump Hopper (under Silos 10-12), equipped with Baghouses B-110, B-210, and B-323 respectively, exhaust particulate emissions to the interior of enclosed areas. Fugitive emissions shall be contained in this manner so as not to exceed 5% opacity from the vents, doors, etc.

D. Wind breaks, enclosures, or covers shall be used to control unconfined PM emissions from handling the dried slag in the yard.

9. Visible emissions from the blast furnace slag processing operation shall not exceed any of the following:

A.	Yard Storage/Handling	20% opacity
B.	Each Clinker/Cement silo	5% opacity
C.	Each Conveyer Transfer Point	10% opacity
D.	No. 4 Finish Mill	5% opacity
E.	Bulk Cement Loadout Units 1&2	10% opacity

Operation Limitations

10. The maximum wet blast furnace slag input rate to the dryer shall not exceed 150 TPH. The permittee shall have the means to determine the process rate of the dryer and shall maintain records on the quantity of slag processed each day.

11. The facility shall not process more than 300,000 tons of blast furnace slag during any calendar year.

13. Only low sulfur No. 2 fuel oil shall be burned in the blast furnace slag dryer. The maximum heat input to the dryer shall not exceed 52 MMBtu/hr (approximately 371 GPH). The maximum fuel consumption shall not exceed 1,114,286 GPY. The permittee shall keep a log on the daily and annual fuel consumption of the dryer.

14. The dryer shall not operate more than 3,000 hours per calendar year. The permittee shall maintain a record of the time the dryer operates daily.

Compliance Determination

15. Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit

SPECIFIC CONDITIONS:

and annually thereafter by the following referenced methods as specified in 40 CFR 60, Appendix A (July 1, 1994), or by other test methods with prior Department approval:

A. PM10 - EPA Methods 1, 2, 3, 4, and 5 (assuming all PM is PM10).

B. Visible Emissions - EPA Method 9. The visible emissions test shall be conducted concurrently with any required PM test on the facility.

16. Compliance tests on the blast furnace slag dryer shall be conducted at a minimum rate of 135 TPH. If testing is performed at a rate less than specified in this specific condition, operation shall be limited to a maximum of 110 percent of the tested capacity until such time as an acceptable test is performed at a minimum of the production rate specified in this specific condition. When operation is restricted to a lower capacity because of the testing at such level, the Dade County Department of Environmental Resources Management (DERM), upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.

17. The permittee shall notify DERM at least fifteen (15) days prior to any compliance testing required by this permit or other regulations in accordance with Rule 62-297.340(1)(i), F.A.C.

18. Copies of the test report(s) shall be submitted to DERM within forty-five (45) days of completion of testing in accordance with Rule 62-297.450(3)(b), F.A.C.

Record Keeping and Reporting Requirements

19. The permittee shall maintain a daily log on the quantity of slag processed and fuel consumed by the slag dryer.

20. An annual operation report shall be submitted to DERM by March 1 of each year pursuant to Rule 62-210.370(2), F.A.C.

21. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

SPECIFIC CONDITIONS:

22. A timely application for a Title V operation permit must be submitted to DERM by the date required in Rule 62-213.420, F.A.C.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell, Secretary

Memorandum

Florida Department of
Environmental Protection

To: Clair Fancy

From: A. A. Linero

Date: September 13, 1995

Subject: Intent to Issue Permit
Tarmac Florida, Inc.

Attached for your approval and signature is a preliminary determination, proposed BACT, and draft permit for Tarmac Florida, Inc. to construct a blast furnace slag processing operation at the Pennsuco Portland cement plant located in Medley, Dade County, Florida.

The slag processing operation will contain a new 10,000 gallon No. 2 fuel oil storage tank and a used 150 TPH asphalt dryer. It will use existing clinker and cement silos, finishing mill, and bulk cement loadout units.

The blast furnace slag is not introduced into the existing cement kilns or clinker coolers. The proposed operation operates independently from the rest of the Portland cement production at this facility. Therefore, the kilns and clinker coolers were not subject to review under this application.

The project was subject to the PSD regulations because the PM and PM10 emissions increase requested by the applicant were above the significant emission rates. The BACT addressees only the slag dryer. The PM emission standard for the dryer was reduced from the requested 0.04 grains/dscf to an allowable 0.02 grains/dscf by the BACT determination.

The application was complete on August 14, 1995. I recommend your approval and distribution of the determination.

AAl/wh/t

BEST AVAILABLE COPY

August 11, 1995

RECEIVED
AUG 14 1995
Bureau of
Air Regulation

Mr. A. A. Linero, P.E.
Administrator, New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Tarmac Florida, Inc.
Slag Dryer
AC13-273887; PSD-FL-230

Dear Mr. Linero:

This correspondence is in response to the Department's letter dated July 24, 1995, concerning the above referenced air construction permit for Tarmac Florida, Inc. Each of the Department's comments are addressed below, in the order in which they appear in the subject letter.

Comment 1
Tarmac has reviewed the potentially applicable federal new source performance standards (NSPS) contained in 40 CFR 60, and has concluded that none of them apply. Each potentially applicable NSPS, and the rationale for non-applicability, is discussed below. In this discussion, the concept of "modification" as defined by the NSPS is referred to. Modification is defined as any physical or operational change to an existing facility which increases emissions of the NSPS-regulated pollutant on a lb/hr basis. However, the following by themselves are not considered to be modifications:

1. An increase in the production rate, if that increase can be accomplished without a capital expenditure on the facility.

2. An increase in the hours of operation.

3. Use of alternative raw material, if the facility was designed to accommodate that alternative use prior to the applicability date.

Subpart F - Portland Cement Plants:
This subpart applies to affected facilities in Portland cement plants, including finish mill systems, finished product storage, conveyor transfer points, and bulk loading systems. These facilities are the potentially affected facilities within the Tarmac cement plant in regards to the slag dryer project.

In regard to the existing conveying system which conveys cement plant blend material to the cement plant, the processing of slag could potentially increase the particulate matter (PM) emissions on a lb/hr basis. However, no capital expenditure on the conveying system is necessary to accommodate the slag, and the slag is a raw material that the facility was designed to accommodate as of August 17, 1971 (the cement plant raw material conveying system was built prior to August 17, 1971).

In regard to the existing finish mill, finished product storage and conveying, and bulk loading and conveying systems, the processing of slag would not result in any increase in PM emissions on a lb/hr basis, since finished Portland cement and the slag will have similar particle size and moisture characteristics. Hourly production rates will not increase above current rates, no capital expenditure on the systems are necessary to accommodate the slag, and the slag is a material that the facility was designed to accommodate as of August 17, 1971 (the cement plant raw material conveying system was built prior to August 17, 1971). It is noted that Clinker Silos 21-23 & 26-28, Finish Mill 4, and Bulk Cement Loadout Units 1-2 are already subject to Subpart F.

In conclusion, the slag project will not change the current Subpart F designations for the Tarmac cement plant.

Subpart Kb - Volatile Organic Liquid Storage Vessels

Tarmac will be constructing a 10,000 gallon fuel oil storage tank (Note: the application stated a 7,000 gal tank; this has been revised to a 10,000 gal tank). The minimum size tank covered by Subpart Kb is 40 m^3, which is 10,568 gallons. Therefore, the Tarmac tank will be below the applicable size threshold.

Subpart UUU - Calciners and Dryers in Mineral Industries

This subpart applies to dryers at mineral processing plants. Mineral processing plants are facilities that produce or process any of the following minerals, their concentrates, or any mixture the majority (>50%) of which is any of the following materials, or a combination of these materials. For clarification, a description of each material is provided, taken from the Background Information Document (BID) on the proposed standards:

Alumina- material chemically extracted from bauxite
Ball clay- material composed primarily of kaolinite and quartz
Bentonite- clay consisting primarily of smectite materials
Diatomite- Chalky, sedimentary rock formed by diatoms
Feldspar- Ingenous rocks consisting mainly of aluminum silicates
Fire Clay- Composed of hydrous silicates of aluminum
Fuller's earth- Composed mainly of nonplastic clay or clay like materials
Gypsum- Calcium sulfate dihydrate (occurring naturally)
Industrial sand- Naturally occurring rock particles, 4.8 mm to 74 μm in size
Kaolin- Clay composed primarily of kaolinite
Lightweight aggregate- Calcined clay, shale or slate
Magnesium compounds- From natural brine solutions, magnesite deposits
Perlite- Volcanic rock
Roofing granules- Rock of fired clay used in making roofing shingles
Talc- A hydrous magnesium silicate material
Titanium dioxide- Pigments produced by the chloride or sulfate process
Vermiculite- Aluminum-iron-magnesium silicates that resemble mica

Nearly all of these materials are naturally occurring and are obtained through mining operations.

Tarmac will not process any of these materials in the slag dryer. In the case of the lightweight aggregate category, some clarification is warranted. The BID states that the lightweight aggregate (LWA) industry encompasses the processing of clay-like materials into low density product (see attached excerpt from the BID). LWA is produced by calcining clay, shale or slate. The BID mentions that substitutes for the more common raw materials in the production of LWA products are natural pumice and blast furnace slag. However, the BID only addresses calciners used to produce LWA, and does not address dryers used to only dry LWA, nor does it address processing of the alternative raw materials.

Another aspect of this NSPS is that the applicability date is April 23, 1986. The proposed dryer was constructed well before this date (i.e, 1972). Therefore, NSPS would be triggered under Subpart UUU only if an increase in emissions occurs (on a lb/hr basis) due to the modification. The previous use of this dryer was for the drying of asphaltic concrete. Asphaltic concrete is typically dried to 2 to 3 percent moisture, whereas the slag will be dried to approximately 5 percent moisture. Although the particle size of the slag is expected to be smaller than asphaltic concrete, considering the above factors and the baghouse control, no increase in particulate matter (PM) emissions would be expected from the dryer in switching from asphaltic concrete to slag drying. Additionally, the dryer was capable of accommodating the slag prior to April, 1986. No modifications to the dryer are needed in order to process the slag material.

Considering the above aspects, it is concluded that Subpart UUU does not apply to the proposed Tarmac slag dryer.

Subpart OOO - Nonmetallic Mineral Processing Plants

This subpart applies to certain processing operations at nonmetallic mineral processing plants. Nonmetallic mineral processing plants are facilities that crush or grind any nonmetallic mineral, wherever located, including at Portland cement plants. Tarmac operates a nonmetallic mineral processing plant adjacent to the existing cement plant. Portions of this plant are already subject to the Subpart OOO standards. Included in Subpart OOO is a list of covered nonmetallic minerals. This list is similar to the minerals listed under Subpart UUU. Blast furnace slag is not included in this list (nor is lightweight aggregate). As a result, it is concluded that Subpart UUU does not apply to the proposed Tarmac slag dryer.

Comment 2

Tarmac will employ reasonable precautions to prevent fugitive dust emissions in regards to the slag drying operation. Because Tarmac believes that fugitive dust will not be a problem with the operation, no new control systems will be implemented initially. However, watering will be performed as necessary to minimize dust emissions. Tarmac will use the visible emissions standard of 20% as a guide in determining when to employ watering to the storage pile, slag loading hopper, and conveyors/transfer points.

After startup of the operation, if these measures are not sufficient to maintain visible emissions below 20%, additional measures will be employed. These measures may include, but may not be limited to, installation of a permanent water application system and additional enclosures to reduce wind.

Comment 3

The expected particle size analysis of the dried slag is presented below:

Particle size	Percent less than
0.75 inches (19.0 mm)	100.00
0.50 inches (12.5 mm)	99.18
0.375 inches (9.5 mm)	98.72
0.19 inches (4.75 mm)	95.77
0.094 inches (2.36 mm)	85.32

Comment 4
Since 0.05% sulfur No. 2 fuel oil has become available, Tarmac could theoretically use this fuel. However, there is no regulatory requirement to use such fuel. The application stated that Tarmac will use No. 2 fuel oil with a maximum of 0.2% sulfur. Tarmac is amending this request to utilize No. 2 fuel oil with up to 0.5% sulfur. The resulting SO_2 emissions, shown in the revised application pages attached, are 39.6 TPY, which is still below the PSD significant emission rate of 40 TPY. Therefore, this change does not trigger PSD review.

Comment 5
Copies of the requested permits are attached.

Comment 6
Low NO_x burners are not being used on the dryer. The dryer is not being modified from its original design in 1972. Low NO_x burners were not employed at that time. However, there is no known requirement to use low NO_x burners, since the modification is not subject to PSD for NO_x emissions.

Thank you for consideration of these comments, and please call if you have any questions concerning this information.

Sincerely,

David A. Buff

David A. Buff, P.E.
Florida P. E. #19011

DAVID A. BUFF ... REGISTERED ENGINEER ... SEAL

DB/mk

cc: Al Townsend
Scott Quass
Jim Alves
File (2)

REVISED PAGES OF PERMIT APPLICATION

Segment Description and Rate Information: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Process Heaters**	
2. Source Classification Code (SCC): **30590001**	
3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.3714**	5. Maximum Annual Rate: **1,114**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.5**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **140**	
10. Segment Comment: **No. 2 fuel oil burning in slag dryer.**	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 3 of 5

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Primary Control Device Code:
4. Secondary Control Device Code:
5. Potential Emissions: **26.4** lbs/hr **39.6** tons/yr
6. Synthetically Limited? [**X**] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **142 (S) lb/1000 gal** Reference: **AP-42**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: **371.4 gal/hr x 142(0.5) lb/1000 gal = 26.37 lb/hr; 26.37 lb/hr x 3000 hr/yr x ton/2000 lb = 39.55 TPY**
11. Pollutant Potential/Estimated Emissions Comment:

15007Y/F1
08/11/95

Table 3-1. Maximum Emissions Due to Fuel Combustion for Slag Dryer, Tarmac Florida

Parameter	No. 2 Fuel Oil
OPERATING DATA	
Operating Time (hr/yr)	3,000
Heat Input Rate (MMBtu/hr)	52.0
Fuel Oil Use (gal/hr)[a]	371.4
Fuel Oil Use (gal/yr)	1,114,286
Maximum Sulfur Content (Wt %)	0.2

Pollutant	Emission Factor [b]	Maximum Emissions lb/hr	Maximum Emissions TPY
EMISSIONS DATA			
SO2:	142*S lb/Mgal[c]	26.37	39.55
NOx:	20 lb/Mgal	7.43	11.14
CO:	5 lb/Mgal	1.86	2.79
NMVOC:	0.2 lb/Mgal	0.074	0.11
Sulfuric Acid Mist:	0.1225 lb/Mgal	0.046	0.068
Lead-Total:	8.9E-06 lb/MMBtu	4.63E-04	6.94E-04
Mercury:	3.0E-06 lb/MMBtu	1.56E-04	2.34E-04
Beryllium:	2.5E-06 lb/MMBtu	1.30E-04	1.95E-04

Note: NA = not applicable.

[a] Based on 140,000 Btu/gal for 0.5% S oil.
[b] Emission factors based on AP-42.
[c] "S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.5%

Table 4-1. Emissions Increase Associated With Slag Project, Tarmac Florida, Inc.

Regulated Pollutant	(A) Slag Dryer Emissions (TPY)	(B) Fugitives From Slag Handling (TPY)	Cement Production Facilities (C) Current Actuals (TPY)	Cement Production Facilities (D) Future Maximums (TPY)	(A+B-C+D) Net Increase In Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate matter (TSP)	6.15	7.96	9.64	31.72	36.2	25	Yes
Particulate matter (PM10)	6.15	2.79	9.64	31.72	31.0	15	Yes
Sulfur dioxide	39.60	--	--	--	39.6	40	No
Nitrogen oxides	11.14	--	--	--	11.1	40	No
Carbon monoxide	2.79	--	--	--	2.8	100	No
Volatile organic compounds	0.11	--	--	--	0.11	40	No
Sulfuric acid mist	0.068	--	--	--	0.07	7	No
Total reduced sulfur	--	--	--	--	--	10	No
Lead	0.0007	--	--	--	0.0007	0.6	No
Mercury	0.0002	--	--	--	0.0002	0.1	No
Beryllium	0.0002	--	--	--	0.0002	0.0004	No
Fluorides	--	--	--	--	--	3	No
Asbestos	--	--	--	--	--	0.007	No
Vinyl Chloride	--	--	--	--	--	1	No

PERMIT AC13-234568

BEST AVAILABLE COPY

Florida Department of Environmental Protection

RECEIVED
NOV 22 1993
TECHNICAL SERVICES

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

NOV 18 1993

CERTIFIED MAIL

NOTICE OF PERMIT ISSUANCE

In the Matter of an Application
for Permit by:
Mr. Scott Quaas, Environmental Manager /
455 Fairway Drive /
Deerfield Beach, Florida 33441 /

DEP File No. AC 13-234568
Dade County

Enclosed is Permit Number AC 13-234568 to modify an existing air pollution source issued pursuant to Section 403.087, 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; 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 West Palm Beach, Florida.

MESW/nk/ms

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Mary E. S. Williams
Director of District Management

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by the close of business on NOV 18 1993 to the listed persons.

Clerk Stamp

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

Mary Lukemeyer (Clerk) NOV 18 1993 (Date)

cc: Dade County Environmental Resources Management

Printed on recycled paper.

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0617
PERMIT/CERTIFICATION NUMBER: AC 13-234568
DATE OF ISSUE: NOV 1 8 1993
EXPIRATION DATE: October 12, 1994
COUNTY: Dade
LATITUDE/LONGITUDE: 25°52'30"N/80°22'30"W
UTM: Zone 17; 562.8 Km. E; 2861.7 Km. N
PROJECT: Tarmac Florida, Inc.
Nonmetallic Mineral Processing

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 17-210, 296 and 297 and 17-4, and in conformance with all existing regulations of the Florida Department of Environmental Protection. 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:

MODIFY: Existing equipment in the aggregate plant. The facility consists of crushing, screening and conveying operation, storage bins, and rail and truck loadout operations. The modified facility is expected to emit maximum annual emission of 35.4 TPY of PM and 14 TPY of PM_{10} based on AP-42 emission factors calculated and submitted with application to this office (thereby avoiding PSD Review).

IN ACCORDANCE WITH: Application to Modify existing aggregate plant received July 16, 1993, and Public Notice of Intent issued October 12, 1993, and published October 25, 1993, in the Miami Daily Business Review. (none are attached)

LOCATED AT: 11000 N.W. 121 Way, Medley, Dade County, Florida.

TO SERVE: Nonmetallic mineral processing plant (SIC # 3295).

SUBJECT TO: General Conditions 1-14 and Specific Conditions 1-10.

Printed on recycled paper.

NOV 1 8 1993

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 403.141, 403.727, or 403.859 through 403.861, F.S. 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), F.S., 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.

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 reasonable times, 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 the permit, the permittee shall immediately notify and provide the Department with the following information:

(a) A description of and cause of noncompliance; and

GENERAL CONDITIONS:

(b) The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. 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 403.111 and 403.73, F.S. 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 Rule 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

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

13. The permittee shall comply with the following :

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

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

(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.

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 the 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:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0617
PERMIT/CERTIFICATION NUMBER: AC 13-234568
DATE OF ISSUE: NOV 1 8 1993
EXPIRATION DATE: October 12, 1994

SPECIFIC CONDITIONS:

1. Permit Requirements

Application for a permit to operate, along with the initial compliance test report, shall be submitted to the Department at least sixty (60) days prior to the expiration of this permit, but in no case more than fourteen (14) days after commencement of operation. In no case shall a source be operated without an appropriate operating permit. The Certification of Completion of Construction, DEP Form 17-1.202(3) may be submitted in lieu of the application for a permit to operate.

2. Emission Limiting Standards

a) In accordance with 40 CFR 60.670 (Subpart 000), Pursuant to Florida Administrative Code Rule 17-296.800 - No owner or operator 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% opacity (15% for crushers).

b) In accordance with Florida Administrative Code Rule 17-296.310(2)(a) - Visible Emissions from primary crusher, storage piles and all other nonaffected transfer points shall be limited to 20% opacity.

3. The compliance test report shall include results of tests by the following methods:

Source/Emission Point	Pollutant	Test Method
Affected facilities (conveying, screening, storage bins, rail and truck loadout operations)	Visible Emissions	DEP Method 9
Affected facilities - crushers	Visible Emissions	DEP Method 9
Primary crusher, storage piles and all other nonaffected transfer points	Visible Emissions	DEP Method 9

The compliance test report shall be submitted to the Department in accordance with Florida Administrative Code (F.A.C.) Rule 17-297.570.

4. The overall throughput capacity of the facility shall not exceed 2,000 tons per hour (40,000 tons/day).

5. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and at 90 - 100% of the rated capacity of the source. If a source is not tested at 90 - 100% of rated capacity, the source may not be operated above 110% of the test load until a new test is conducted. The source is only allowed to operate for 15 days above the 110% rate to conduct the new test to regain the rated capacity in the permit.

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0617
PERMIT/CERTIFICATION NUMBER: AC 13-234568
DATE OF ISSUE: NOV 1 8 1993
EXPIRATION DATE: October 12, 1994

SPECIFIC CONDITIONS:

6. The Department and Dade County Environmental Resources Management shall be notified of expected test dates at least fifteen (15) days prior to compliance testing.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Protection, Southeast District Office and Dade County Environmental Resources Management.

8. The operation of the sources covered by this permit shall be limited to 20 hours/day, 7 days/week and 52 weeks/year.

9. Unconfined emissions of particulate shall be controlled by the following means:

   a) Paved parking and trafficked areas shall be maintained and kept free of particulate matter build-up.

   b) Sprinkling with water shall be used as necessary on paved areas and stockpiles.

10. The Permittee shall be aware of and operate under the attached "General Permit Conditions Numbers 1 thru 14". General Permit Conditions are binding upon the Permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.

Executed in West Palm Beach, Florida.

MESW:nk/ms

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Mary E.S. Williams
Director of District Management

BEST AVAILABLE COPY

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

RECEIVED
NOV 23 1993
TECHNICAL SERVICES

November 22, 1993

Mr. Albert Townsend, Director of Technical Services
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

AC 13-234568
Tarmac Florida, Inc.
Nonmetallic Mineral Processing

Dear Mr. Townsend:

Per our telephone conversation today, we are changing Specific Condition Number 4

FROM:

4. The overall throughput capacity of the facility shall not exceed 2,000 tons per hour (40,000 tons/day).

TO:

4. The overall throughput capacity of the facility shall not exceed 1,213,333 tons per month (14,560,000 tons/yr.)

This letter must be attached to the original permit and becomes part of that permit.

NK/ms

Sincerely,

Nick Kadivar
Air Permitting Engineer

Printed on recycled paper.

BEST AVAILABLE COPY

Department of Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

OCT 1 1 1994

RECEIVED
OCT 12 1994

TECHNICAL SERVICES

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Scott Quaas
Tarmac FL, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441

Dade County
AP - Tarmac FL, Inc.

Re: Extension of Expiration Date, Permit Number AC 13-234568

Dear Mr. Quaas:

Your Pennsuco Aggragate Plant located at 11000 NW 121st Way, Medley, Florida will require a Florida Title V operation permit as it subject to NSPS i.e., 40 CFR 60, Subpart 000 - Nonmetallic Mineral Processing Plants. In order to comply in a timely manner, you will need to apply for the said permit on or before July 2, 1995. This letter is to extend the expiration of your existing permit, AC 13-234568, to September 2, 1995, at "no cost" to you. All other conditions of your permit will remain the same.

This letter must be attached to the original permit and becomes part of that permit.

This letter constitutes final agency action unless a person substantially affected by this action requests an administrative hearing pursuant to 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 Florida Administrative Code Rule 28-5.201 and be filed pursuant to Rule 17-103.155(1) in the Office of General Counsel of the Department of Environmental Protection at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions which are not filed in accordance with the above provisions will not be accepted by the Department. If a formal proceeding pursuant to Section 120.57(1) is requested, at such formal hearing 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 proceeding is requested, the agency will, in accordance with its rules of procedure, give 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. The hearing process is designed to formulate agency action. Accordingly, the Department's final action as a result of a hearing may be different from the position taken by it in this stage. Therefore any person who may wish to contest the

Mr. Scott Quaas
Tarmac FL, Inc.
Page 2

Dade County
AP - Tarmac FL, Inc.

OCT 1 1 1994

Department's ultimate permitting decision must petition for hearing within the fourteen day period described above. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Ernest E. Frey
Acting Director of District Management

EEF:hhs

cc: Dade County Environmental Resources Management

CERTIFICATE OF SERVICE

This is to certify that this EXTENSION OF EXPIRATION DATE and all copies were mailed before the close of business on OCT 1 1 1994 to the listed persons.

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

Mary A. Smith
Clerk

OCT 1 1 1994
Date

PERMIT AO13-238048

BEST AVAILABLE COPY

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

RECEIVED
DEC 21 1993
TECHNICAL SERVICES

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048*
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998
COUNTY: Dade
LATITUDE/LONGITUDE: 25°52'30"N/80°22'30"W
UTM: Zone 17; 562.8 Km. E; 2861.7 Km. N
PROJECT: Tarmac Florida, Inc.
Portland Cement Manufacturer

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-210, 296 and 297, and in conformance with all existing regulations of the Florida Department of Environmental Protection. 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:

OPERATE: A portland cement manufacturing plant consisting of the following air pollution sources:

- Coal handling system with a 13 ton/hr. throughput capacity consisting of:

  Dump hopper controlled by a baghouse (G-509) emitting particulate 33 feet above ground level (A.G.L.).

  Screening tower controlled by baghouse (G-521) emitting particulate 38 feet A.G.L.

  Coal mill feed bin controlled by baghouse (G-527) emitting particulate 120 feet A.G.L.

  Bowl mill controlled by baghouses (G-576, G-578, G-580, G-582) emitting particulate through a common stack 117 feet A.G.L. System includes a cyclone used for coal transfer to the pulverized coal bin.

- Kiln 1 with a 40.5 (dry) ton/hr. input capacity controlled by a double chambered electrostatic precipitator (E.S.P.) emitting pollutants 200 ft. A.G.L. **

- Cooler 1 with 25.0 ton/hr. throughput capacity vented to a multiclone and controlled by a double chambered E.S.P. emitting pollutants 86 feet A.G.L. **

- Kiln 2 with 40.5 (dry) ton/hr. input capacity controlled by a double chambered E.S.P. emitting pollutants 200 feet A.G.L. **

Printed on recycled paper.

OPERATE: (continued)

- Cooler 2 with a 25.0 ton/hr. throughput capacity vented to a multiclone and controlled by a double chambered E.S.P. emitting pollutants 86 feet A.G.L. **

- Kiln 3 with a 142 (dry) ton/hr. input capacity vented to a dropout box and controlled by a double chambered E.S.P. emitting pollutants 200 feet A.G.L. ***

- Cooler 3 with an 87.5 ton/hr. throughput capacity vented to a dropout box and controlled by a 2184 bag (228,000 cfm) baghouse emitting pollutants 100 feet A.G.L. Baghouse also controls emissions from the parallel clinker drag conveyors. ***

- A clinker handling and storage system (for Kiln Systems 1 and 2) consisting of:

  Duplicate bucket elevator/silo distribution drag conveyor operations and clinker silos 1, 2, 4, 5, 11 and 12. Each of the two elevator/conveyor operations and the common silos are controlled by a baghouse (K-147 for one configuration, K-247 for the other) emitting particulate 147 feet A.G.L. Neither elevator/conveyor operation is used simultaneously.

- A clinker handling and storage system (for Kiln System 3) consisting of:

  Duplicate bucket elevator/silo distribution drag conveyor operations and clinker silos 1 and 17. Each of the elevator/conveyor operations and the common silos are controlled by a baghouse (K-347 for one configuration, K-447 for the other) emitting particulate 160 feet A.G.L. Neither elevator/conveyor operation is used simultaneously.

  Clinker silos 4 and 18 controlled by baghouse (K-521) emitting particulate 130 feet A.G.L.

  Clinker silos 11, 19, and 20 controlled by baghouse (K-522) emitting particulate 130 feet A.G.L.

  Clinker silos 21, 22, 23, 26, 27, and 28 controlled by baghouse (K-633) emitting particulate 130 feet A.G.L.

- Finish mill system 1 with a 25 ton/hr. capacity consisting of two in-line ball mills, clinker/gypsum conveyor, bucket elevator, airslide, separator and transfer line to cement pump (to storage). All of these are controlled by baghouse (F-130) emitting particulate 106 feet A.G.L.

- Finish mill system 2 with a 25 ton/hr. capacity consisting of finish mill 2, clinker/gypsum conveyer, bucket elevator, airslide, separator and transfer line to cement pump (to storage). All of these are controlled by baghouse (F-230) emitting particulate 106 feet A.G.L.

- Finish mill system 3 with an 83.5 ton/hr. capacity consisting of finish mill 3, clinker/gypsum conveyor system controlled by baghouses (F-313 and F-330), a bucket elevator and airslide controlled by a baghouse (F-332), a separator and transfer line to the cement pump (to storage) controlled by a baghouse (F-330). The particulates are emitted 110 feet A.G.L.

OPERATE: (continued)

- Finish mill system 4 with a capacity of 113 ton/hr. consisting of finish mill 4, a mill sweep controlled by a baghouse (F-430), a clinker/gypsum conveyor system controlled by 4 baghouses (F-603, F-604, F-605) and a general purpose baghouse (F-432), a bucket elevator and airslide controlled by the general purpose baghouse (F-432), a bucket elevator and airslide controlled by the general purpose baghouse (F-432), a separator and a transfer line to two cement pumps (to storage) controlled by a general purpose baghouse (F-432). The particulates are emitted at an average height of 72 feet A.G.L.

- Cement storage silos 1-9 serving finish mill systems 1, 2, 3 and 4 controlled by baghouses (F-522 for silos 1-6 and F-512 for silos 7-9) emitting particulate 200 feet A.G.L.

- Cement storage silos 10-12 serving finish mill system 4 controlled by baghouses (F-513, F-514 and F-515 respectively) emitting particulate 200 feet A.G.L.

- Bulk cement (truck) loadout unit 3 (cement from silos 10-12) consisting of dual loadout bucket elevators each controlled by a baghouse. (B-372 for one, B-374 for the other) emitting particulate 12 feet A.G.L.; airslide; vibrating screen; truck loadout bin; and telescopic truck loadout spout/hoist. The latter equipment is controlled by baghouse (B-382) emitting particulate 86 feet A.G.L.

- A packhouse with two baggers (for cement silos 3 and 5 for one, 7-9 for the other) controlled by a common baghouse (B-621) emitting particulate 40 feet A.G.L.

- Bulk cement (railcar/truck) loadout unit 1 (uses cement from silos 1-6 and 8) controlled by baghouse (B-110) emitting particulate to exterior of loadout unit 1 building.

- Bulk cement (truck) loadout unit 2 (uses cement from silos 7-9) controlled by baghouse (B-210) emitting particulate to exterior of loadout unit 2 building.

Non-point Sources

- Cement hopper (transfers cement from silos 10-12 to 6 and 8) controlled by baghouse (B-323) emitting particulate to enclosed basement of cement silos 10-12.

IN ACCORDANCE WITH: Application for renewal of permit to Operate Air Pollution Sources received September 20, 1993; Applications for Renewal of Permit to Operate Air Pollution Sources received November 15, 1988, and Applications to Operate Air Pollution Sources dated April 28, 1983, addressing: coal handling (revised September 23, 1983), clinker handling/storage, finish mill systems 1 and 2, cement storage silos 1-9 and packhouse. (none are attached)

- Certificates of Completion of Construction dated September 28, 1982, submitted in conjunction with Application to construct Air Pollution Sources dated June 14, 1979, (supplemented by letters dated August 2, 1979, and September 10, 1979, addressing: cement storage silos 10-12 and bulk cement (truck) loadout units 1, 2, and 3.

- Applications for Renewal dated May 6 and 31, 1983, (as modified/supplemented September 23, 1983) based on Application to Operate Air Pollution Sources dated March 1, 1971 (as modified by letter dated June 5, 1978) addressing: kiln and cooler systems 1 and 2.

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998

IN ACCORDANCE WITH: (continued)

- Applications for Renewal dated May 6 and 31, 1983 (as modified/supplemented September 23, 1983) based on Application to Construct Air Pollution Sources dated September 26, 1972) as modified July 18, 1973, and September 23, 1983) and July 2, 1973, addressing: kiln and cooler system 3. Certificate of Completion of Construction dated April 29, 1985. Method of Operation as specified by letter dated October 4, 1985; Application to Construct Air Pollution Sources dated February 8, 1980, further information supplied by letters dated May 22, 1980, and June 23, 1982, and request for extension dated March 30, 1982.

- Application for Renewal dated October 3, 1984, based on Applications to Construct Air Pollution Sources dated July 11, 1972, addressing: finish mill system 3.

- Certification of Completion of Construction dated December 10, 1982, based on Application to Construct Air Pollution Sources dated June 1, 1979, and letters dated June 14, 1979, August 2, 1979, December 14, 1982, and February 23, 1983, addressing: finish mill system 4.

- Best Available Control Technology (BACT) determinations signed October 15, 1979, for cement silos 10-12 and bulk cement (truck) loadout unit 3, and April 8, 1980, for coal handling, and coal final firing (as modified January 21, 1985, and February 12, 1985).

  Non-point information provided April 28, 1978. (none are attached)

LOCATED AT: 11000 Northwest 121 Way, Medley, Dade County, Florida.

TO SERVE: A wet process cement manufacturer (SIC # 3241).

SUBJECT TO: General Conditions 1-14 and Specific Conditions 1-13.

* This permit is a renewal of AO 13-157297 issued February 2, 1989.

** Kiln Systems 1 and 2 contain a common dust insufflation system which can return captured particulate to the kiln firing hoods. The dust handling equipment for the insufflation system includes a surge bin (for each kiln precipitator) and a common dust bin controlled by baghouse (K-181) emitting particulate 103 feet A.G.L.

*** Kiln System 3 contains a dust insufflation system which can return captured particulate to the kiln firing hood. The dust handling equipment for the insufflation system includes a scoop bin and a dust bin for the kiln precipitator controlled by baghouses (K-383 and K-396 respectively) emitting particulate 100 feet A.G.L. Four new gas sampling ports located in the same plane and elevation as previous location, 45° from the original ports were installed.

BEST AVAILABLE COPY

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998

SPECIFIC CONDITIONS:

1. Compliance testing shall be conducted for the sources covered by this permit annually (prior to December 31 of each year) in accordance with the methods specified below.

2. Emission limiting standards are as follows:

Coal handling:

a) Particulate shall not exceed 0.01 gr/dscf (April 8, 1980 BACT).

b) Visible emissions shall not exceed 5 percent opacity (April 8, 1980 BACT).

Kilns and Coolers 1 and 2:

a) Particulate shall not exceed the process weight rate table allowable (F.A.C. Rules 17-296.407(1) and 17-296.310(1)). Insufflated material may be included in kiln process weights.

b) Visible emissions shall not exceed 20 percent opacity (F.A.C. Rule 17-296.310(2)(a)).

Kiln 3:

a) Particulate shall not exceed 0.3 lb./ton of dry kiln feed (F.A.C. Rule 17-296.407(2)(a) and 17-296.800) (Standards of Performance for New Stationary Sources (NSPS)). Insufflated material may be included in kiln process weights.

b) Visible emissions shall not equal or exceed 20 percent opacity (F.A.C. Rule 17-296.310(2)(a)).

c) In accordance with the Department BACT Determination Modifications January 21, 1985, for 400 lb. SO_2/hr. maximum emission rate, and at operating rates less than maximum, 4.6 lb. SO_2/ton of clinker produced.

Cooler 3:

a) Particulate shall not exceed 0.1 lb./ton of dry kiln feed (F.A.C. Rules 17-296.407(2)(b) and F.A.C. Rule 17-296.800/NSPS).

Insufflation systems: K-181; K-383 + K-396

a) Visible emissions shall not equal or exceed 20 percent opacity (F.A.C. Rule 17-296.310(2)(a)).

Clinker storage (silos 21-23 and 26-28): Baghouse K-633

a) Visible emissions shall not exceed 5 percent opacity (October 15, 1979 BACT)

BEST AVAILABLE COPY

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998

SPECIFIC CONDITIONS:

2. (continued)

Clinker handling/storage (silos 1, 2, 4, 5, 12 and 17-20):

a) Visible emissions shall not equal or exceed 20 percent opacity (F.A.C. Rule 17-296.310(2)(a)).

Finish mill systems 1, 2, and 3:

a) Particulate shall not exceed the process weight rate table allowable (F.A.C. Rule 17-296.310(2)(a)).

Finish mill system 4:

a) Particulate shall not exceed the process weight rate table allowable (F.A.C. Rule 17-296.310(2)(a)).

b) Visible emissions shall not exceed 5 percent opacity (October 15, 1979 BACT).

Cement storage silos 1-9 and packhouse:

a) Visible emissions shall not exceed 20 percent opacity (F.A.C. Rule 17-296.310(2)(a)).

Cement storage silos 10-12 and bulk cement loadout unit 3:

a) Visible emissions shall not exceed 5 percent opacity (October 15, 1979 BACT).

Bulk cement loadout units 1 and 2:

a) Visible emissions shall not equal or exceed 10 percent opacity (F.A.C. Rule 17-296.800/NSPS).

3. Compliance test methods (continued):

Source/Emission Point	Pollutant	Test Method
Coal handling/G-509, G-521, G-527, G-576, G-578, G-580 & G-582	Particulate Visible Emissions	EPA Method 5 * EPA Method 9 **
Kiln 1, Cooler 1, Kiln 2, Cooler 2 & Cooler 3	Particulate Visible Emissions	EPA Method 5 ** EPA Method 9
Kiln 3	SO_2 Particulate Visible Emissions	EPA Method 6 EPA Method 5 EPA Method 9
[Insufflation system] K-181,	Visible Emissions	EPA Method 9
Clinker handling & storage system/ K-633, K-147, K-247, K-347, K-447, K-521, & K-522	Visible Emissions	EPA Method 9

SPECIFIC CONDITIONS:

3. (continued)

Source/Emission Point	Pollutant	Test Method
Finish mill systems 1, 2, 3, & 4 F-130 & F-230	Particulate Visible Emissions	EPA Method 5 * EPA Method 9
Cement storage silos, packhouse & bulk cement loadout units 1, 2, & 3 (F-511), (F-512-N.), (F-512-S.), (F-513), (F-514), (F-515), (B-621), (B-382), (B-372), & (B-374)	Visible Emissions	EPA Method 9

* Visible emissions testing demonstrating opacity does not exceed 5 percent opacity (by EPA Method 9) may be submitted in lieu of particulate testing.

** EPA Method 17 may be used for Kilns and Coolers 1 and 2.

The compliance test report shall be submitted to the Department in accordance with Florida Administrative Code (F.A.C.) Rule 17-297.570.

4. Emissions testing is required to be conducted as soon as practical but no later than thirty (30) days after reactivation of any source which did not operate the previous calendar year.

5. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and at 90 - 100% of the rated capacity of the source. If a source is not tested at 90 - 100% of rated capacity, the source may not be operated above 110% of the test load until a new test is conducted. The source is only allowed to operate for 15 days above the 110% rate to conduct the new test to regain the rated capacity in the permit.

6. The Department and the Dade County Environmental Resources Management shall be notified of expected test dates at least fifteen (15) days prior to compliance testing.

7. On or before March 1 of each calendar year, a completed DEP Form 17-210.900(4) , Annual Operations Report Form for Air Emissions Sources shall be submitted to the Department.

8. Fuel used in Kilns 1 and 2 shall be limited to natural gas and No. 6 fuel oil except that operation with other fuels is allowed under a valid construction permit for debugging and testing equipment. Kiln 3 shall be limited to low sulfur (< 2.5%s) coal, natural gas, No. 6 fuel oil and used oil fuel meeting EPA specifications for used oil fuel. For used oil fuel, the amount of used oil fuel generated on site shall be kept in a log on the premises. Samples shall be drawn on a semi-annual basis with the analyses by EPA Recommended Analytical procedures for used oil fuel for lead, arsenic, cadmium, chromium, total halogens and flashpoint. Analyses by ASTM methods, or other methods with prior DEP-SEFD approval shall be performed on each sample for sulfur, ash, BTU content and PCB's. The results of the analyses (on the laboratory's letterhead) shall be submitted to the DEP-SEFD no later than 30 days after the analyses. The unused portion of the used oil fuel sample shall be retained for six months following the submittal of the analyses in case further testing is required. All records, reports and data collected shall be maintained as specified in General Condition 13, Part B.

BEST AVAILABLE COPY

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998

SPECIFIC CONDITIONS:

9. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Protection, Southeast District Office, and Dade County Environmental Resources Management.

10. Unconfined emissions of particulate shall be controlled by the following means:

    a) Paved parking and trafficked areas shall be well maintained and kept free of particulate matter build-up.

    b) Sprinkling when necessary shall be used for unpaved areas and in conjunction with vacuum type sweeper(s) for paved areas. Sweeper(s) shall be maintained and operated such that visible emissions do not exceed 5 percent opacity by EPA Method 9. from the sweeper

    c) Bulk cement (railcar/truck) loadout unit 1, bulk cement (truck) loadout unit 2 and transfer pump hopper (under silos 10-12), equipped with baghouses B-110, B-210 and B-323 respectively, exhaust particulate emissions to the interior of enclosed area. Fugitive emissions shall be contained in this manner so as not to exceed 5 percent opacity. from vents, doors, etc

11. Proof of compliance with the permit shall be the kiln daily operating log, the SO_x/NO_x monitor's strip charts and compliance test data. The day, time, type of fuel, fuel feed rate (TPH), sulfur content of the fuel, kiln feed rate (TPH), sulfur content of the kiln feed, oxygen content of the flue gas and the clinker production rate shall be recorded for each kiln. The time period that each kiln operated will also be recorded in the operating log. The logs shall be maintained on the premises for viewing during subsequent compliance inspections and shall be kept for a minimum of two (2) years.

12. Permittee will continue the use of the SO_2 and NO_x monitor to measure the concentrations of SO_2 and NO_x in the stack for Kiln Number 3. The measured concentrations, as demonstrated by the SO_2/NO_x strip chart recording, shall not be used to determine compliance with applicable emission limitations. However, whenever the strip chart recording indicates a SO_2 concentration greater than 350 ppm or a NO_x concentration more than 500 ppm, the permittee shall notify the Department by telephone. The Department may then determine whether a stack test will be necessary to confirm the status of Kiln Number 3 emissions for the parameter exceeding the above stated thresholds. The permittee shall note on the daily log whether or not threshold values were exceeded. If exceeded, the time the Department was notified shall be noted.

    In addition, the permittee will continue to discharge to waste the dust from fields five and six of the electrostatic precipitator for Kiln Number 3, which represents the conditions existing during the stack test of April 28, 1987, during which compliance with the state and federal SO_2 and NO_x emission limitations was demonstrated. The permittee shall verify on the kiln daily log that the dust collected in the hoppers for fields five and six is discharged to the "Dust Waste Bin".

PERMITTEE:
Mr. Scott Quaas, Environmental Manager
Tarmac Florida, Inc.
Deerfield Beach, Florida 33441

I.D. NUMBER: 50/DAD/13/0020
PERMIT/CERTIFICATION NUMBER: AO 13-238048
DATE OF ISSUE: DEC 17 1993
EXPIRATION DATE: November 15, 1998

SPECIFIC CONDITIONS:

13. The Permittee shall be aware of and operate under the attached "General Permit Conditions Numbers 1 thru 14". General Permit Conditions are binding upon the Permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.

Executed in West Palm Beach, Florida.

MESW/nk/ms

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

J. Goldman

for Mary E.S. Williams
Director of District Management

EXCERPTS FROM SUBPART UUU BID

EPA-450/3-85-025a

Calciners and Dryers in Mineral Industries— Background Information for Proposed Standards

Emission Standards and Engineering Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

October 1985

Coating-grade clays are those with all particles smaller than 15 μm (6×10^{-4} in.) and at least 70 percent of the particles less than 2 μm (8×10^{-5} in.). These clays also have 50 percent or more of the particles smaller than 1 μm (4×10^{-5} in.) in size. The extremely fine grades of coating clay currently being produced approach the range of 100 percent minus 2 μm (8×10^{-5} in.).[82]

3.2.10.4 Calcining. Because kaolin consists primarily of the mineral kaolinite, it is considered to be a fire clay. Low-temperature calcining produces a kaolin used for filler. High-temperature calcining produces a kaolin for use in the refractory industry. Section 3.2.6 (Fire clay) discusses kaolin use as a refractory material. Multiple hearth furnaces are the most common type of calciner; however, flash and rotary calciners are also used. Multiple hearth furnaces require less space and maintenance than flash calciners although they have a longer startup time.

3.2.11 Lightweight Aggregate

3.2.11.1 Background. The lightweight aggregate (LWA) industry encompasses the processing of clay-like materials into a low-density product. Lightweight aggregate is produced by calcining clay, shale, or slate. The raw materials used to produce LWA are chosen for their bloating properties when heated. When these materials are heated to temperatures of about 1000°C (1800°F), they become plastic and begin to flow like a viscous fluid.[90] As the plastic state is achieved, carbonaceous compounds in the material form gas bubbles, the material begins to expand, and the gas bubbles are trapped in the viscous plastic material. The material is then cooled in the expanded condition to form a porous, solid LWA. Substitutes for the more common raw materials in the production of LWA products are natural pumice and blast furnace slag.

Lightweight aggregate is used principally for the manufacture of structural concrete products such as concrete blocks and prestressed structural units. Concrete made with LWA has about the same strength and approximately two-thirds the weight of concrete made with natural aggregate. Other properties of concrete made with LWA, such as fire resistance and thermal and accoustical insulating qualities, make it

desirable as a building material. Lightweight aggregate is a substitute for more dense, naturally occurring aggregate (granite, limestone) and is used by companies that further process the material into other products. Other applications of LWA include accoustical plaster, roofing granules, highway surfacing, insulating fills, horticulture applications, and running tracks.[91] The end uses of LWA in 1980 were: concrete block (65 percent), structural concrete (25 percent), highway surfacing (6.5 percent), and other uses (3.5 percent).[92] Fine, medium, and coarse grades of LWA are available, ranging in diameter from dust to 3.8 cm (1.5 in.). Seven companies produce approximately 50 percent of the LWA processed in the United States. Typically, LWA cannot be economically shipped beyond approximately a 480-km (300-mi) radius of the production facility. Local demand for LWA may be greater in areas where natural aggregates are scarce.

The U.S. Bureau of Mines (BOM) categorizes the raw materials used to produce LWA as clays and stone. Clays are classified as kaolin, ball clay, fire clay, bentonite, fuller's earth, and common clay and shale. Approximately 11 percent of the clays mined in the U.S. in 1980 were used for the production of LWA.[91] Crushed slate is the only stone used in LWA production. Approximately 0.05 percent of the crushed stone mined in the U.S. in 1980 was used for the production of LWA.[91] Lightweight aggregate was produced at 34 plants in 24 States in 1981. The BOM estimated that consumption of clay and shale used in the production of LWA was 4.4 $x10^6$ Mg (4.9 $x10^6$ tons) in 1981, compared to 2.15 $x10^5$ Mg (2.4 $x10^5$ tons) of slate and 7.3 $x10^5$ Mg (8.0 $x10^5$ tons) of slag.[91]

Two methods are used to produce LWA. The rotary kiln method is used by approximately 88 percent (30 of 34) of the operating plants in the United States. The remaining 12 percent of the operating plants use the traveling-grate method, or process naturally occurring LWA. Because of the energy intensive nature of the traveling-grate process, no future growth in the use of this process for LWA production is anticipated.

3.2.11.2 Process Description.

3.2.11.2.1 General. The operations involved in producing LWA are quarrying or mining, crushing and screening, calcining or sintering, product cooling, and materials handling and storage. Figure 3-27 shows

a diagram of a typical LWA plant. Raw material is usually strip-mined from open fields by earth movers. Cone crushers, jaw crushers, hammermills, or pugmills are used to reduce the size of the raw material, which is then passed through screens. Any oversize material that does not pass through the screens initially may be returned to the crushers for secondary crushing. Material passing through the screens (about minus 3.8 cm [1.5 in.] in diameter) is transferred by conveyor belts to feed hoppers for charging to the calciner.

3.2.11.2.2 Rotary calciners. Rotary calciners are fired from the discharge end with fuel oil, natural gas, or coal. As the cost of fuel oil and natural gas increases, the trend is toward the use of pulverized coal. The burner used to fire the calciner is installed in the center of a fixed or movable calciner hood. The pilot flame of the burner is normally fueled by natural gas.

Rotary calciner production capacities range from 230 to 910 Mg (250 to 1,000 tons) per day per calciner.[90] Lightweight aggregate plants typically have two or three rotary calciners. One manufacturer of rotary calciners states that the smallest rotary calciner considered to be economical for LWA production in the U.S. is one that produces 450 Mg (500 tons) per day and that is approximately 3.4 m (11 ft) in diameter and 50 m (175 ft) long.[93]

Normal feed sizes range from 2.4 mm (8 mesh) to 33 mm (1.5 in.).[90] When the clay, shale, or slate is not closely screened, segregation of the various size chunks of raw material occurs as the calciner rotates. This segregation of particles is avoided by some calciner operators who screen the feed material so that a narrow range of particle sizes is fed to the calciner.[92] The fines are calcined by direct solid-to-solid heat transfer from the calciner walls, and the larger (coarser) particles are calcined by solid-to-gas heat transfer from the hot gas. The intermediate-size particles are protected from the heat by the layers of fine and coarse particles and may not be completely calcined.

3.2.12 Magnesium Compounds

3.2.12.1 Background. Natural brine solutions, such as sea, lake, and wellwaters are the primary source of domestically produced magnesium compounds. Magnesium compounds are also produced from natural magnesite

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 24, 1995

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Albert W. Townsend
Director, Environmental/Real Estate
Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, FL 33441

Dear Mr. Townsend:

Re: Tarmac, File No. AC 13-273887/PSD-FL-230

The Department has made a preliminary review of your application for a permit to construct a blast furnace slag processing facility at the Pennsuco Cement Plant in Medley, Dade County, Florida. Additional information is needed before this application can be processed. Please provide the information requested below.

1. The proposed slag processing facility may be subject to at least one of the new source performance standards; 40 CFR 60, Subpart OOO, Subpart UUU, or Subpart F. Also, the fuel storage tank may be subject to 40 CFR 60, Subpart Kb. Please address the applicability of these regulations to the proposed project.

2. Expand on the reasonable precautions to be used to minimize unconfined emissions of particulate matter from the slag after it leaves the dryer. Specifically address the storage and handling of the dried slag in the yard, loading the slag into the conveyor system, and the conveyors/drop points of the conveyors.

3. What size is the slag reduced to in the grinders?

4. Particulate matter formed during the combustion of fuel oil is a function of the sulfur content of the oil. Can Tarmac use No. 2 fuel oil with 0.05 percent sulfur?

5. Please provide a copy of permit Nos. AC 13-234568 and AO 13-238048.

6. Will low NO_x burners be used in the dryer?

The Department will resume processing your application after receipt of the requested information. If you have any questions on this matter, please write to me or call Willard Hanks at (904) 488-1344.

Sincerely,

A.A. Linero, P.E.
Administrator
New Source Review Section

AL/WH/s

cc: Stephanie Brooks, SFD
Ewart Anderson, DERM
Jewell Harper, EPA
John Bunyak, NPS
David Buff, KBN

Fold at line over top of envelope to the

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert W. Townsend
Tarmac America, Inc
455 Fairway Dr.
Deerfield Bch, Fl
33441

4a. Article Number
Z 392 979 063

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

7. Date of Delivery
7-31-95

5. Signature (Addressee)

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

6. Signature (Agent)
Cecelia Tennis

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 063

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

UNITED STATES POSTAL SERVICE

PS Form 3800, March 1993

Sent to Albert Townsend	
Street and No. Tarmac	
P.O., State and ZIP Code Deerfield Bch. Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 7-27-95	

AC13-273887
PSO-FI-230

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 12, 1995

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

RE: Tarmac Florida, Inc.
Pennsuco Cement Plant/Slag Dryer
Dade County, PSD-FL-230

Dear Ms. Harper:

Enclosed for your review and comment is the above referenced PSD application. Please forward your comments to the Department's Bureau of Air Regulation as soon as possible. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Willard Hanks or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia D. Adams for

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

CHF/pa

Enclosures

cc: W. Hanks

Department of Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

July 12, 1995

Mr. John Bunyak, Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
P. O. Box 25287
Denver, Colorado 80225

RE: Tarmac Florida, Inc.
Pennsuco Cement Plant/Slag Dryer
Dade County, PSD-FL-230

Dear Mr. Bunyak:

Enclosed for your review and comment is the above referenced PSD application. Please forward your comments to the Department's Bureau of Air Regulation as soon as possible. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact Willard Hanks or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G Adams

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

CHF/pa

Enclosures

cc: W. Hanks

BEST AVAILABLE COPY

Tarmac

RECEIVED
JUL 10 1995
Bureau of
Air Regulation

RECEIVED
AIR - MAIL ROOM
1995 JUL 10 AM 7:45

5 July 1995

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

RE: Tarmac's Pennsuco Cement Plant/Slag Dryer

Dear Mr. Fancy:

Enclosed please find four (4) copies of an application to construct a slag dryer at the referenced site, along with our Check No. 193323 in the amount of $7,500.00. I have taken the liberty of sending copies of this application to Patrick Wong, Dade County Environmental Resources Management, and Stephanie Brooks at your West Palm Beach Office.

If you have any questions or concerns, please do not hesitate to call me.

Very truly yours,

Albert W. Townsend
Director Environmental/Real Estate

AWT/ct

Enclosures

cc: Stephanie Brooks - DEP - West Palm Beach
Patrick Wong - Dade County Environmental Resources Mgmt.

cc: EPA
NPS

Tarmac America, Inc.
455 Fairway Drive • Deerfield Beach, FL 33441
305-481-2800 • FAX: 305-570-9245

TARMAC
NORFOLK, VA

NationsBank of Texas, N.A.
Wichita Falls, Texas 76301

CHECK NO. 193323

88-130
1119

01038G2

Seven Thousand Five Hundred and 00 /100th

DATE	AMOUNT
7/03/95	7,500.00

PAY TO THE ORDER OF

1016059
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

R D Copeland

AUTHORIZED SIGNATURE

[redacted]

TARMAC
P.O. BOX 2016, NORFOLK, VIRGINIA 23501

VENDOR NO. 1016059

CHECK NO. 193323 193323

ROUTE CODE	INV. DATE	VENDOR INVOICE NO.	GROSS AMOUNT	DISCOUNT	NET AMOUNT
DC	6/29/95	APPLIC. FEES	7,500.00	.00	7,500.00
			7,500.00	.00	7,500.00

ANY QUESTIONS PERTAINING TO THIS PAYMENT SHOULD BE MADE TO OUR OFFICE AT THE ADDRESS ABOVE.

RECEIVED
JUL 10 1995
Bureau of
Air Regulation

AIR CONSTRUCTION PERMIT APPLICATION FOR USE OF SLAG AS A CEMENT PRODUCT TARMAC FLORIDA, INC.

Prepared For:

Tarmac Florida, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

Prepared By:

KBN Engineering and Applied Sciences, Inc.
6241 NW 23rd Street
Gainesville, Florida 32653-1500

July 1995
15007Y/F1

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form provides general information on the scope of this application, the purpose for which this application is being submitted, and the nature of any construction or modification activities proposed as a part of this application. This section also includes information on the owner of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department on diskette, this section of the Application for Air Permit must also be submitted in hard-copy form.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility name, if any; and a brief reference to the facility's physical location. If known, also enter the ARMS or AIRS facility identification number. This information is intended to give a quick reference, on the first page of the application form, to the facility addressed in this application. Elsewhere in the form, numbered data fields are provided for entry of the facility data in computer-input format.

Tarmac Florida, Inc.; Pennsuco Cement Plant; 50DAD130020

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	7-10-95
2. Permit Number:	AC 13-273887
3. PSD Number (if applicable):	PSD-FL-230
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

Albert W. Townsend, Director of Environmental/Real Estate

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Tarmac Florida, Inc.**
Street Address: **455 Fairway Drive**
City: **Deerfield Beach** State: **FL** Zip Code: **33441**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: **(305) 481-2800** Fax: **(305) 480-9352**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative of the facility (non-Title V source) addressed in this Application for Air Permit or the responsible official, as defined in Chapter 62-213, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. Further, I agree to operate and maintain the air pollutant emissions units and air pollution control equipment described in this application so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. If the purpose of this application is to obtain an air operation permit or operation permit revision for one or more emissions units which have undergone construction or modification, I certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted source.*

Signature

7/5/95
Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility (or Title V source). An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID / Description of Emissions Unit

Unit #	ARMS ID	Emissions Unit Name/Description
1		Slag Dryer
2	009	Clinker Storage Silos - 21,22,23,26,27, and 28
3	013	Finish Mill No.4
4	014	Cement Storage Silos 1,2,3,4,5,6,7,8, and 9
5	015	Bulk Cement Loadout Units 1 and 2

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be renewed: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

_____

[ ] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit. Give reason for the revision e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction Permit Applications Subject to Processing Under Rule 62-210.300(2)(b),F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

_____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units.

This Application for Air Permit is submitted to obtain:

[X] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: _____

AO13-238048

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

_____

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

[x] Attached - Amount: $ **$ 7,500.00** [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

See Attachment A

2. Projected or Actual Date of Commencement of Construction (DD-MON-YYYY):

1 Aug 1995

3. Projected Date of Completion of Construction (DD-MON-YYYY):

31 Dec 1995

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**

2. Professional Engineer Mailing Address:
   Organization/Firm: **KBN Engineering and Applied Sciences, Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**

3. Professional Engineer Telephone Numbers:
   Telephone: **(904) 336-5600** Fax: **(904) 336-6603**

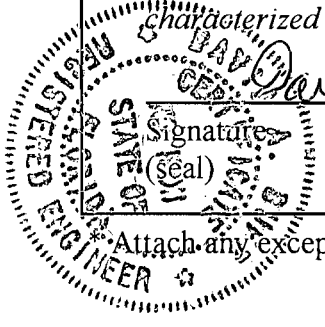
4. Professional Engineer's Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance (a) that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; or (b) for any application for a Title V source air operation permit, that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application;

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application; and

(3) For any application for an air construction permit for one or more proposed new or modified emissions units, the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.



David a. Buff — Signature (Seal)

7/5/95 — Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:
   Scott Quass, Environmental Manager

2. Application Contact Mailing Address:

   Organization/Firm: **Tarmac Florida, Inc.**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**

3. Application Contact Telephone Numbers:

   Telephone: **(305) 481-2800** Fax: **(305) 480-9352**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Name, Location, and Type

1. Facility Owner or Operator: **Tarmac Florida, Inc.**

2. Facility Name: **Pennsuco Cement Plant**

3. Facility Identification Number: **5O DAD 13 0020** [ ] Unknown

4. Facility Location Information:
   Facility Street Address: **11000 N.W. 121 Way**
   City: **Medley** County: **Dade** Zip Code: **33178**

5. Facility UTM Coordinates:
   Zone: **17** East (km): **562.8** North (km): **2861.7**

6. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): / / Longitude: (DD/MM/SS): / /

7. Governmental Facility Code:	8. Facility Status Code:	9. Relocatable Facility?	10. Facility Major Group SIC Code:
0	**A**	[ ] Yes [X] No	**32**

11. Facility Comment:

Facility Contact

1. Name and Title of Facility Contact:
   Scott Quass, Environmental Manager

2. Facility Contact Mailing Address:
   Organization/Firm: **Tarmac Florida, Inc.**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**

3. Facility Contact Telephone Numbers:
   Telephone: **(305) 481-2800** Fax: **(305) 480-9352**

Facility Regulatory Classifications

1. Small Business Stationary Source?		
[ ] Yes	[x] No	[ ] Unknown
2. Title V Source?		
[x] Yes	[ ] No	
3. Synthetic Non-Title V Source?		
[ ] Yes,	[x] No	
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?		
[x] Yes	[ ] No	
5. Synthetic Minor Source of Pollutants Other than HAPs?		
[ ] Yes	[x] No	
6. Major Source of HAPs?		
[ ] Yes	[x] No	[ ] Possible
7. Synthetic Minor Source of HAPs?		
[ ] Yes	[x] No	
8. One or More Emissions Units Subject to NSPS?		
[x] Yes	[ ] No	
9. One or More Emissions Units Subject to NESHAP?		
[ ] Yes	[x] No	
10. Title V Source by EPA Designation?		
[ ] Yes	[x] No	
11. Facility Regulatory Classifications Comment:		

B. FACILITY REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of federal, state, and local regulations applicable to the facility as a whole. (Regulations applicable to individual emissions units within the facility are addressed in Subsection III-B of the form.)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-212.400 PSD

C. FACILITY POLLUTANT INFORMATION

This subsection of the Application for Air Permit form allows for the reporting of potential and estimated emissions of selected pollutants on a facility-wide basis. It must be completed for each pollutant for which the applicant proposes to establish a facility-wide emissions cap and for each pollutant for which emissions are not reported at the emissions-unit level.

Facility Pollutant Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Estimated Emissions:		(tons/yr)
3. Requested Emissions Cap:	(lb/hr)	(tons/yr)
4. Basis for Emissions Cap Code:		
5. Facility Pollutant Comment:		

Facility Pollutant Information Pollutant _____ of _____

1. Pollutant Emitted:		
2. Estimated Emissions:		(tons/yr)
3. Requested Emissions Cap:	(lb/hr)	(tons/yr)
4. Basis for Emissions Cap Code:		
5. Facility Pollutant Comment:		

Facility Pollutant Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Estimated Emissions:		(tons/yr)
3. Requested Emissions Cap:	(lb/hr)	(tons/yr)
4. Basis for Emissions Cap Code:		
5. Facility Pollutant Comment:		

Facility Pollutant Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Estimated Emissions:		(tons/yr)
3. Requested Emissions Cap:	(lb/hr)	(tons/yr)
4. Basis for Emissions Cap Code:		
5. Facility Pollutant Comment:		

D. FACILITY SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the facility as a whole. (Supplemental information related to individual eissions units within the facility is provided in Subsection III-I of the form.) Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: ATTACHMENT A
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: ATTACHMENT A
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [X] Attached, Document ID(s): ATTACHMENT A
   [ ] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [X] Attached, Document ID: ATTACHMENT A
   [ ] Not Applicable

5. Fugitive Emissions Identification:
   [X] Attached, Document ID: ATTACHMENT A
   [ ] Not Applicable

6. Supplemental Information for Construction Permit Application:
   [X] Attached, Document ID: ATTACHMENT A
   [ ] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Insignificant Activities:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities Onsite but Not Required to be Individually Listed
   [ ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

11. Enhanced Monitoring Plan:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

12. Risk Management Plan Verification:

   [ ] Plan Submitted to Implementing Agency - Verification Attached
   Attached, Document ID: _____

   [ ] Plan to be Submitted to Implementing Agency by Required Date

   [ ] Not Applicable

13. Compliance Report and Plan
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

14. Compliance Statement (Hard-copy Required)
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

Emissions Unit Information Section 1 of 5

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

This subsection of the Application for Air Permit form provides general information on the emissions unit addressed in this Emissions Unit Information Section, including information on the type, control equipment, operating capacity, and operating schedule of the emissions unit..

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

   Slag Dryer

2. ARMS Identification Number: [X] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
C	[ ] Yes [X] No	32

6. Initial Startup Date (DD-MON-YYYY):

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit:
   Manufacturer: Model Number:

9. Generator Nameplate Rating: MW

10. Incinerator Information:

Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

11. Emissions Unit Comment:

Emissions Unit Control Equipment Information

A.

1. Description:

   Fabric Filter

2. Control Device or Method Code: **016**

B.

1. Description:

2. Control Device or Method Code:

C.

1. Description:

2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **52** mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **150** **tons/hr**
4. Maximum Production Rate:
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
12	hours/day,	**5**	days/week,
52	weeks/yr	**3,000**	hours/yr

B. EMISSIONS UNIT REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of all federal, state, and local regulations applicable to the emissions unit addressed in this Emissions Unit Information Section.

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-212.400
62-296.310

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   Slag Dryer

2. Emission Point Type Code:

   [ ] 1 [ ] 2 [x] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit:

   Slag Dryer; Slag handling and storage operations

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [ ] H [ ] P
   [ ] R [x] V [ ] W

6. Stack Height:	**20**	ft
7. Exit Diameter:	**2.26**	ft
8. Exit Temperature:	**450**	°F
9. Actual Volumetric Flow Rate:	**22,000**	acfm
10. Percent Water Vapor:	**6**	%
11. Maximum Dry Standard Flow Rate:	**12,000**	dscfm
12. Nonstack Emission Point Height:		ft

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment:

Stack is square: 2 ft. x 2 ft.

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate Information: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Raw material grinding and drying**	
2. Source Classification Code (SCC): **30500613**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **150**	5. Maximum Annual Rate: **300,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment: **Raw material is blast furnace slag.**	

Segment Description and Rate Information: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Process Heaters**	
2. Source Classification Code (SCC): **30590001**	
3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **0.3714**	5. Maximum Annual Rate: **1,114.3**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.2**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **140**	
10. Segment Comment: **No. 2 fuel oil burning in slag dryer.**	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 5

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **016**
4. Secondary Control Device Code:
5. Potential Emissions: **4.1** lbs/hr **6.15** tons/yr
6. Synthetically Limited? [**X**] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [**X**] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.04 gr/dscf** Reference: **NSPS for asphalt plant**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5
10. Calculation of Emissions: **0.04 gr/dscf x 12,000 dscfm x 60 min/hr ÷ 7000 gr/lb = 4.1 lb/hr; 4.1 lb/hr x 3000 hr/yr x ton/2000 lb = 6.15 TPY**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 1 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.04 gr/dscf**	
4. Equivalent Allowable Emissions:	**4.15** lbs/hr **6.15** tons/yr
5. Method of Compliance: **Annual VE test using EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode): **Proposed BACT limit.**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 5

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **016**
4. Secondary Control Device Code:
5. Potential Emissions: **4.1** lbs/hr **6.15** tons/yr
6. Synthetically Limited? [**X**] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [**X**] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.04 gr/dscf** Reference: **NSPS for asphalt plants**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5
10. Calculation of Emissions: **See PM calculation**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 1 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.04 gr/dscf**	
4. Equivalent Allowable Emissions:	**4.15** lbs/hr **6.15** tons/yr
5. Method of Compliance: ***Annual VE test using EPA Method 9***	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode): **Proposed BACT limit.**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 3 of 5

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Primary Control Device Code:
4. Secondary Control Device Code:
5. Potential Emissions: **10.55** lbs/hr **15.82** tons/yr
6. Synthetically Limited? [**X**] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **142 (S) lb/1000 gal** Reference: **AP-42**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: **371.4 gal/hr x 142(0.2) lb/1000 gal = 10.55 lb/hr; 10.55 lb/hr x 3000 hr/yr x ton/2000 lb = 15.82 TPY**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 1 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 4 of 5

1. Pollutant Emitted: **NOx**
2. Total Percent Efficiency of Control: %
3. Primary Control Device Code:
4. Secondary Control Device Code:
5. Potential Emissions: **7.43** lbs/hr **11.14** tons/yr
6. Synthetically Limited? [**x**] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **20 lb/1000 gal** Reference: **AP-42**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [**x**] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: **371.4 gal/hr x 20 lb/1000 gal = 7.43 lb/hr; 7.43 lb/hr x 3000 hr/yr x ton/2000 lb = 11.14 TPY**
11. Pollutant Potential/Estimated Emissions Comment:

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 5 of 5

1. Pollutant Emitted: CO
2. Total Percent Efficiency of Control: %
3. Primary Control Device Code:
4. Secondary Control Device Code:
5. Potential Emissions: 1.86 lbs/hr 2.79 tons/yr
6. Synthetically Limited? [X] Yes [ ] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: 5 lb/1000 gal Reference: AP-42
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: 371.4 gal/hr x 5 lb/1000 gal = 1.86 lb/hr; 1.86 lb/hr x 3000 hr/yr x ton/2000 lb = 2.79 TPY
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 1 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

Emissions Unit Information Section 1 of 5
Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

F. VISIBLE EMISSIONS INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are subject to a visible emissions limitation. The intent of this subsection of the form is to identify each activity associated with the emissions unit addressed in this section for which a separate opacity limitation would be applicable. Visible emission subtype codes for each such activity are listed in the instructions for Field 1. Most emissions units will be subject to a "subtype VE" limit only.

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [**X**] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **EPA Method 9**
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

G. CONTINUOUS MONITOR INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are required by rule or permit to install and operate one or more continuous emission, opacity, flow, or other type monitors. A separate set of continuous monitor information (fields 1-6) must be completed for each monitoring system required.

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

H. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

This subsection of the Application for Air Permit form must be completed for all applications, not just those undergoing prevention-of-significant-deterioration (PSD) review persuant to Rule 62-212.400, F.A.C. The intent of this subsection is to make a preliminary determination as to whether the emissions unit addressed in this Emissons Unit Information Section consumes PSD increment. PSD increment is consumed (or expanded) as a result of emission increases (decreases) occurring after pollutant-specific baseline dates. Pollutants for which baseline dates have been established are sulfur dioxide, particulate matter, and nitrogen dioxide.

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [x] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[X] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[X] C	[ ] E	[ ] Unknown
	NO_2	[X] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	0 lbs/hr	0 tons/yr	
	SO_2	0 lbs/hr	0 tons/yr	
	NO_2		0 tons/yr	
5.	PSD Comment:			

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: ATT. A	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Enhanced Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

Emissions Unit Information Section 2 of 5

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

This subsection of the Application for Air Permit form provides general information on the emissions unit addressed in this Emissions Unit Information Section, including information on the type, control equipment, operating capacity, and operating schedule of the emissions unit..

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

   Clinker Storage Silos 21,22,23,26,27 & 28

2. ARMS Identification Number: [ ] No Corresponding ID [ ] Unknown

   009

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
A	[ ] Yes [X] No	**32**

6. Initial Startup Date (DD-MON-YYYY):

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit:
   Manufacturer: Model Number:

9. Generator Nameplate Rating: MW

10. Incinerator Information:

Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

11. Emissions Unit Comment:

Emissions Unit Control Equipment Information

A.

1. Description:

   Baghouse K-633

2. Control Device or Method Code: **018**

B.

1. Description:

2. Control Device or Method Code:

C.

1. Description:

2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **150** **tons/hr**
4. Maximum Production Rate:
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
24	hours/day,	**7**	days/week,
52	weeks/yr	**8,760**	hours/yr

B. EMISSIONS UNIT REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of all federal, state, and local regulations applicable to the emissions unit addressed in this Emissions Unit Information Section.

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-296.310

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   K-633

2. Emission Point Type Code:

   [ ] 1 [ ] 2 [x] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit:

   Clinker Silos 21,22,23,26,27 & 28

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [x] H [ ] P
   [ ] R [ ] V [ ] W

6. Stack Height:	**130**	ft
7. Exit Diameter:	**0.76**	ft
8. Exit Temperature:	**90**	°F
9. Actual Volumetric Flow Rate:	**1,500**	acfm
10. Percent Water Vapor:		%
11. Maximum Dry Standard Flow Rate:		dscfm
12. Nonstack Emission Point Height:		ft

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment:

Stack dimensions are 0.67 ft. x 0.67 ft.

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate Information: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Clinker Storage Silos**	
2. Source Classification Code (SCC): **3-05-007-99**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **87.5**	5. Maximum Annual Rate: **766,500**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment: **Rate represents tons of clinker produced.**	

Segment Description and Rate Information: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Clinker Storage Silos**	
2. Source Classification Code (SCC): **3-05-007-99**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **150**	5. Maximum Annual Rate: **300,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment: **Rate represents tons of slag produced; 3,000 hr/yr.**	

Emissions Unit Information Section 2 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.13** lbs/hr **0.56** tons/yr
6. Synthetically Limited? [ ] Yes [x] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [x] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 2 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

Emissions Unit Information Section 2 of 5

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 2

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.13** lbs/hr **0.56** tons/yr
6. Synthetically Limited? [ ] Yes [**X**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

F. VISIBLE EMISSIONS INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are subject to a visible emissions limitation. The intent of this subsection of the form is to identify each activity associated with the emissions unit addressed in this section for which a separate opacity limitation would be applicable. Visible emission subtype codes for each such activity are listed in the instructions for Field 1. Most emissions units will be subject to a "subtype VE" limit only.

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: VE
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: Annual VE test with EPA Method 9
5.	Visible Emissions Comment: BACT

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

G. CONTINUOUS MONITOR INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are required by rule or permit to install and operate one or more continuous emission, opacity, flow, or other type monitors. A separate set of continuous monitor information (fields 1-6) must be completed for each monitoring system required.

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

H. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

This subsection of the Application for Air Permit form must be completed for all applications, not just those undergoing prevention-of-significant-deterioration (PSD) review persuant to Rule 62-212.400, F.A.C. The intent of this subsection is to make a preliminary determination as to whether the emissions unit addressed in this Emissons Unit Information Section consumes PSD increment. PSD increment is consumed (or expanded) as a result of emission increases (decreases) occurring after pollutant-specific baseline dates. Pollutants for which baseline dates have been established are sulfur dioxide, particulate matter, and nitrogen dioxide.

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	0 lbs/hr	0 tons/yr	
	SO_2	lbs/hr	tons/yr	
	NO_2		tons/yr	
5.	PSD Comment:			

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: ATT. A	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[ ] Attached, Document ID: _____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [ ] Not Applicable

12. Enhanced Monitoring Plan

[ ] Attached, Document ID: _____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [ ] Not Applicable

14. Acid Rain Permit Application

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[ ] Not Applicable

Emissions Unit Information Section 3 of 5

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

This subsection of the Application for Air Permit form provides general information on the emissions unit addressed in this Emissions Unit Information Section, including information on the type, control equipment, operating capacity, and operating schedule of the emissions unit..

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

   Finish Mill #4: F-430, F-432, F-603, F-604, F-605

2. ARMS Identification Number: [ ] No Corresponding ID [ ] Unknown

   013

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
A	[ ] Yes [X] No	**32**

6. Initial Startup Date (DD-MON-YYYY):

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit:
   Manufacturer: Model Number:

9. Generator Nameplate Rating: MW

10. Incinerator Information:

    Dwell Temperature: °F
    Dwell Time: seconds
    Incinerator Afterburner Temperature: °F

11. Emissions Unit Comment:

Emissions Unit Control Equipment Information

A.

1. Description:

Five baghouses; F-430, F-432, F-603, F-604, F-605

2. Control Device or Method Code: **018**

B.

1. Description:

2. Control Device or Method Code:

C.

1. Description:

2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **150** **TPH**
4. Maximum Production Rate:
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day,	**7**	days/week,
52	weeks/yr	**8,760**	hours/yr

B. EMISSIONS UNIT REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of all federal, state, and local regulations applicable to the emissions unit addressed in this Emissions Unit Information Section.

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-296.310

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   F-430, F-432, F-603, F-604, F-605

2. Emission Point Type Code:

   [ ] 1 [ ] 2 [x] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit:

   Ball Mill/Mill Sweep (F-430); clinker/gypsum conveyor system, separator and transfer line (F-432); clinker/gypsum conveyors (F-603, F-604, F-605).

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [ ] H [ ] P
   [ ] R [x] V [ ] W

6. Stack Height:	**72**	ft
7. Exit Diameter:	**1.5**	ft
8. Exit Temperature:	**90**	°F
9. Actual Volumetric Flow Rate:	**13,400**	acfm
10. Percent Water Vapor:		%
11. Maximum Dry Standard Flow Rate:		dscfm
12. Nonstack Emission Point Height:		ft

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment:

F-430; 30,000 acfm; 2.0 ft. diameter. F-432; 17,000 acfm; 1.5 ft. diameter. F-603; 8,000 acfm; 1.0 x 1.0 ft. F-604; 8,000 acfm; 1.0 x 1.0 ft. F-605; 4,000 acfm; 0.67 x 0.67 ft.

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate Information: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Clinker Grinding**	
2. Source Classification Code (SCC): **3-05-007-17**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **150**	5. Maximum Annual Rate: **1,314,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

Segment Description and Rate Information: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 2

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **5.75** lbs/hr **25.14** tons/yr
6. Synthetically Limited? [ ] Yes [**X**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 3 **of** 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.01 gr/acf**	
4. Equivalent Allowable Emissions:	**5.75** lbs/hr **25.14** tons/yr
5. Method of Compliance: **Annual VE test using EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode): **BACT**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **5.75** lbs/hr **25.14** tons/yr
6. Synthetically Limited? [ ] Yes [**x**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**x**] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 3 **of** 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.01 gr/acf**	
4. Equivalent Allowable Emissions:	**5.75** lbs/hr **25.14** tons/yr
5. Method of Compliance: **Annual VE test using EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode): **BACT**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

F. VISIBLE EMISSIONS INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are subject to a visible emissions limitation. The intent of this subsection of the form is to identify each activity associated with the emissions unit addressed in this section for which a separate opacity limitation would be applicable. Visible emission subtype codes for each such activity are listed in the instructions for Field 1. Most emissions units will be subject to a "subtype VE" limit only.

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **Annual test using EPA Method 9**
5.	Visible Emissions Comment: **BACT**

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

G. CONTINUOUS MONITOR INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are required by rule or permit to install and operate one or more continuous emission, opacity, flow, or other type monitors. A separate set of continuous monitor information (fields 1-6) must be completed for each monitoring system required.

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

H. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

This subsection of the Application for Air Permit form must be completed for all applications, not just those undergoing prevention-of-significant-deterioration (PSD) review persuant to Rule 62-212.400, F.A.C. The intent of this subsection is to make a preliminary determination as to whether the emissions unit addressed in this Emissons Unit Information Section consumes PSD increment. PSD increment is consumed (or expanded) as a result of emission increases (decreases) occurring after pollutant-specific baseline dates. Pollutants for which baseline dates have been established are sulfur dioxide, particulate matter, and nitrogen dioxide.

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [x] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	0 lbs/hr	0 tons/yr	
	SO_2	lbs/hr	tons/yr	
	NO_2		tons/yr	
5.	PSD Comment:			

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: ATT. A	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Enhanced Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

Emissions Unit Information Section 4 of 5

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

This subsection of the Application for Air Permit form provides general information on the emissions unit addressed in this Emissions Unit Information Section, including information on the type, control equipment, operating capacity, and operating schedule of the emissions unit..

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

   Cement storage silos 7-9; F-512

2. ARMS Identification Number: [ ] No Corresponding ID [ ] Unknown

   014

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
A	[ ] Yes [X] No	**32**

6. Initial Startup Date (DD-MON-YYYY):

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit:
   Manufacturer: Model Number:

9. Generator Nameplate Rating: MW

10. Incinerator Information:

Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

11. Emissions Unit Comment:

Emissions Unit Control Equipment Information

A.

1. Description:

   Baghouse, F-512

2. Control Device or Method Code: **018**

B.

1. Description:

2. Control Device or Method Code:

C.

1. Description:

2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **150** **TPH**
4. Maximum Production Rate:
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day,	**7**	days/week,
52	weeks/yr	**8,760**	hours/yr

B. EMISSIONS UNIT REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of all federal, state, and local regulations applicable to the emissions unit addressed in this Emissions Unit Information Section.

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-296.310

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   F-512

2. Emission Point Type Code:

   [x] 1 [ ] 2 [ ] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit:

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [x] H [ ] P
   [ ] R [ ] V [ ] W

6. Stack Height:	**200**	ft
7. Exit Diameter:	**1.1**	ft
8. Exit Temperature:	**90**	°F
9. Actual Volumetric Flow Rate:	**10,000**	acfm
10. Percent Water Vapor:		%
11. Maximum Dry Standard Flow Rate:		dscfm
12. Nonstack Emission Point Height:		ft

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment:

Stack dimensions are 1.0 ft. x 1.0 ft.

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate Information: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Cement storage silos**	
2. Source Classification Code (SCC): **3-05-007-18**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **150**	5. Maximum Annual Rate: **1,314,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

Segment Description and Rate Information: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 2

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.86** lbs/hr **3.75** tons/yr
6. Synthetically Limited? [ ] Yes [x] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [x] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 4 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: **0.01 gr/acf**		
4. Equivalent Allowable Emissions:	**0.86** lbs/hr	**3.75** tons/yr
5. Method of Compliance: **Annual VE using EPA Method 9**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lbs/hr	tons/yr
5. Method of Compliance:		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):		

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.86** lbs/hr **3.75** tons/yr
6. Synthetically Limited? [ ] Yes [X] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [X] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 4 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.01 gr/acf**
4. Equivalent Allowable Emissions: **0.86** lbs/hr **3.75** tons/yr
5. Method of Compliance: **Annual VE using EPA Method 9**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions: lbs/hr tons/yr
5. Method of Compliance:
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):

F. VISIBLE EMISSIONS INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are subject to a visible emissions limitation. The intent of this subsection of the form is to identify each activity associated with the emissions unit addressed in this section for which a separate opacity limitation would be applicable. Visible emission subtype codes for each such activity are listed in the instructions for Field 1. Most emissions units will be subject to a "subtype VE" limit only.

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **Annual VE test, EPA Method 9**
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

G. CONTINUOUS MONITOR INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are required by rule or permit to install and operate one or more continuous emission, opacity, flow, or other type monitors. A separate set of continuous monitor information (fields 1-6) must be completed for each monitoring system required.

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

H. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

This subsection of the Application for Air Permit form must be completed for all applications, not just those undergoing prevention-of-significant-deterioration (PSD) review persuant to Rule 62-212.400, F.A.C. The intent of this subsection is to make a preliminary determination as to whether the emissions unit addressed in this Emissons Unit Information Section consumes PSD increment. PSD increment is consumed (or expanded) as a result of emission increases (decreases) occurring after pollutant-specific baseline dates. Pollutants for which baseline dates have been established are sulfur dioxide, particulate matter, and nitrogen dioxide.

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:				
	PM	[ ] C	[ ] E	[X] Unknown	
	SO_2	[ ] C	[ ] E	[ ] Unknown	
	NO_2	[ ] C	[ ] E	[ ] Unknown	
4.	Baseline Emissions:				
	PM	**1.5** lbs/hr	**5.25** tons/yr		
	SO_2	lbs/hr	tons/yr		
	NO_2		tons/yr		
5.	PSD Comment:				

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: ATT. A	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[ ] Attached, Document ID: _____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [ ] Not Applicable

12. Enhanced Monitoring Plan

[ ] Attached, Document ID: _____ [ ] Not Applicable

13. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [ ] Not Applicable

14. Acid Rain Permit Application

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[ ] Not Applicable

Emissions Unit Information Section 5 of 5

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

This subsection of the Application for Air Permit form provides general information on the emissions unit addressed in this Emissions Unit Information Section, including information on the type, control equipment, operating capacity, and operating schedule of the emissions unit..

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

   Bulk cement loadout units 1 & 2

2. ARMS Identification Number: [ ] No Corresponding ID [ ] Unknown

   015

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
A	[ ] Yes [X] No	**32**

6. Initial Startup Date (DD-MON-YYYY):

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit:
   Manufacturer: Model Number:

9. Generator Nameplate Rating: MW

10. Incinerator Information:

    Dwell Temperature: °F
    Dwell Time: seconds
    Incinerator Afterburner Temperature: °F

11. Emissions Unit Comment:

Emissions Unit Control Equipment Information

A.

1. Description:

Two baghouses: B-110, B-220

2. Control Device or Method Code: **018**

B.

1. Description:

2. Control Device or Method Code:

C.

1. Description:

2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: mmBtu/hr
2. Maximum Incineration Rate: lbs/hr tons/day
3. Maximum Process or Throughput Rate: **300** **TPH**
4. Maximum Production Rate:
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
24	hours/day,	**7**	days/week,
52	weeks/yr	**8,760**	hours/yr

B. EMISSIONS UNIT REGULATIONS

Depending on the application category, this subsection of the Application for Air Permit form provides either a brief analysis or detailed listing of all federal, state, and local regulations applicable to the emissions unit addressed in this Emissions Unit Information Section.

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-296.310

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   B-110, B-210

2. Emission Point Type Code:

   [ ] 1 [ ] 2 [x] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit:

   Railcar/Truck loadout Unit 1 (B-110); Truck loadout Unit 2 (B-210)

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [x] H [ ] P
   [ ] R [ ] V [ ] W

6. Stack Height:	**30**	ft
7. Exit Diameter:	**0.76**	ft
8. Exit Temperature:	**90**	°F
9. Actual Volumetric Flow Rate:	**3,000**	acfm
10. Percent Water Vapor:		%
11. Maximum Dry Standard Flow Rate:		dscfm
12. Nonstack Emission Point Height:		ft

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment:

Stack dimensions are 0.67 ft. x 0.67 ft.

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate Information: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Cement loadout**	
2. Source Classification Code (SCC): **3-05-007-19**	
3. SCC Units: **tons cement produced**	
4. Maximum Hourly Rate: **300**	5. Maximum Annual Rate: **2,628,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

Segment Description and Rate Information: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment:	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 2

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.52** lbs/hr **2.26** tons/yr
6. Synthetically Limited? [ ] Yes [**x**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**x**] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 5 **of** 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.01 gr/acf**	
4. Equivalent Allowable Emissions:	**0.52** lbs/hr **2.26** tons/yr
5. Method of Compliance: **Annual VE test using EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 2

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: **99.9** %
3. Primary Control Device Code: **018**
4. Secondary Control Device Code:
5. Potential Emissions: **0.52** lbs/hr **2.26** tons/yr
6. Synthetically Limited? [ ] Yes [**x**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
8. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer's Design**
9. Emissions Method Code (check one): [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**x**] 5
10. Calculation of Emissions: **See Table 3-4, Attachment A**
11. Pollutant Potential/Estimated Emissions Comment:

Emissions Unit Information Section 5 of 5

Allowable Emissions (Pollutant identification on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.01 gr/acf**	
4. Equivalent Allowable Emissions:	**0.52** lbs/hr **2.26** tons/yr
5. Method of Compliance: **Annual VE test using EPA Method 9**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lbs/hr tons/yr
5. Method of Compliance:	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode):	

F. VISIBLE EMISSIONS INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are subject to a visible emissions limitation. The intent of this subsection of the form is to identify each activity associated with the emissions unit addressed in this section for which a separate opacity limitation would be applicable. Visible emission subtype codes for each such activity are listed in the instructions for Field 1. Most emissions units will be subject to a "subtype VE" limit only.

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **Annual VE test using EPA Method 9**
5.	Visible Emissions Comment: **62-296.800; NSPS**

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment:

G. CONTINUOUS MONITOR INFORMATION

This subsection of the Application for Air Permit form must be completed for only those emissions units which are required by rule or permit to install and operate one or more continuous emission, opacity, flow, or other type monitors. A separate set of continuous monitor information (fields 1-6) must be completed for each monitoring system required.

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

Continuous Monitoring System Continuous Monitor _____ of _____

1.	Parameter Code:
2.	CMS Requirement: [ ] Rule [ ] Other
3.	Monitor Information: Monitor Manufacturer: Model Number: Serial Number:
4.	Installation Date (DD-MON-YYYY):
5.	Performance Specification Test Date (DD-MON-YYYY):
6.	Continuous Monitor Comment:

H. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

This subsection of the Application for Air Permit form must be completed for all applications, not just those undergoing prevention-of-significant-deterioration (PSD) review persuant to Rule 62-212.400, F.A.C. The intent of this subsection is to make a preliminary determination as to whether the emissions unit addressed in this Emissons Unit Information Section consumes PSD increment. PSD increment is consumed (or expanded) as a result of emission increases (decreases) occurring after pollutant-specific baseline dates. Pollutants for which baseline dates have been established are sulfur dioxide, particulate matter, and nitrogen dioxide.

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[X] C	[ ] E	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	0 lbs/hr	0 tons/yr	
	SO_2	lbs/hr	tons/yr	
	NO_2		tons/yr	
5.	PSD Comment:			

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: ATT. A	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: ATT. A	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Enhanced Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

ATTACHMENT A

AIR CONSTRUCTION PERMIT APPLICATION

for

USE OF SLAG AS A CEMENT PRODUCT

Tarmac Florida, Inc.

JULY 1995

Attachment A

1.0 INTRODUCTION

Tarmac Florida, Inc., is proposing to process up to 300,000 tons per year of blast furnace slag at its existing portland cement plant located in Medley, Florida. In order to process this raw material, a dryer will be installed and fueled by low sulfur fuel oil. The slag material will be brought to the facility by truck, dried, and then conveyed via the existing plant conveying system to the cement plant storage silos. In the cement plant, the dried slag will be ground and stored for shipment. The slag will be shipped to concrete batch plants for use as a raw material in concrete.

A description of the proposed project is presented in Section 2.0. Existing and future maximum air emissions from affected emissions units at the facility are described in Section 3.0. Air quality regulations applicable to the proposed project are described in Section 4.0. Based on this analysis, the project will be subject to prevention of significant deterioration (PSD) review. However, since the proposed project will utilize best available control technology (BACT), and the increase in emissions of all regulated pollutants due to the project will be less than 50 TPY, the project is exempt from all PSD new source review requirements except application of BACT. The BACT analysis is presented in Section 5.0.

2.0 PROJECT DESCRIPTION

Tarmac Florida, Inc., currently operates a portland cement plant located in Medley, Dade County, Florida (refer to Figures 2-1 and 2-2). A single air operating permit (AO13-238048, issued Dec. 17, 1993) regulates air emissions from the cement plant, while a second permit (AC13-234568) regulates air emissions from the aggregate plant.

Tarmac is proposing to use blast furnace slag from iron foundries as an alternative cement type product. It is currently anticipated that up to 300,000 tons per year (TPY) of slag could be processed. The slag will be delivered to the facility via truck (refer to flow diagram, Figure 2-3). The delivered slag is wet, in the range of 6 percent to 10 percent moisture, hence the need to dry the slag prior to use. The slag will be delivered to an open storage area within the existing aggregate facility (see Figure 2-3). It will then be picked up by a front end loader and fed into a

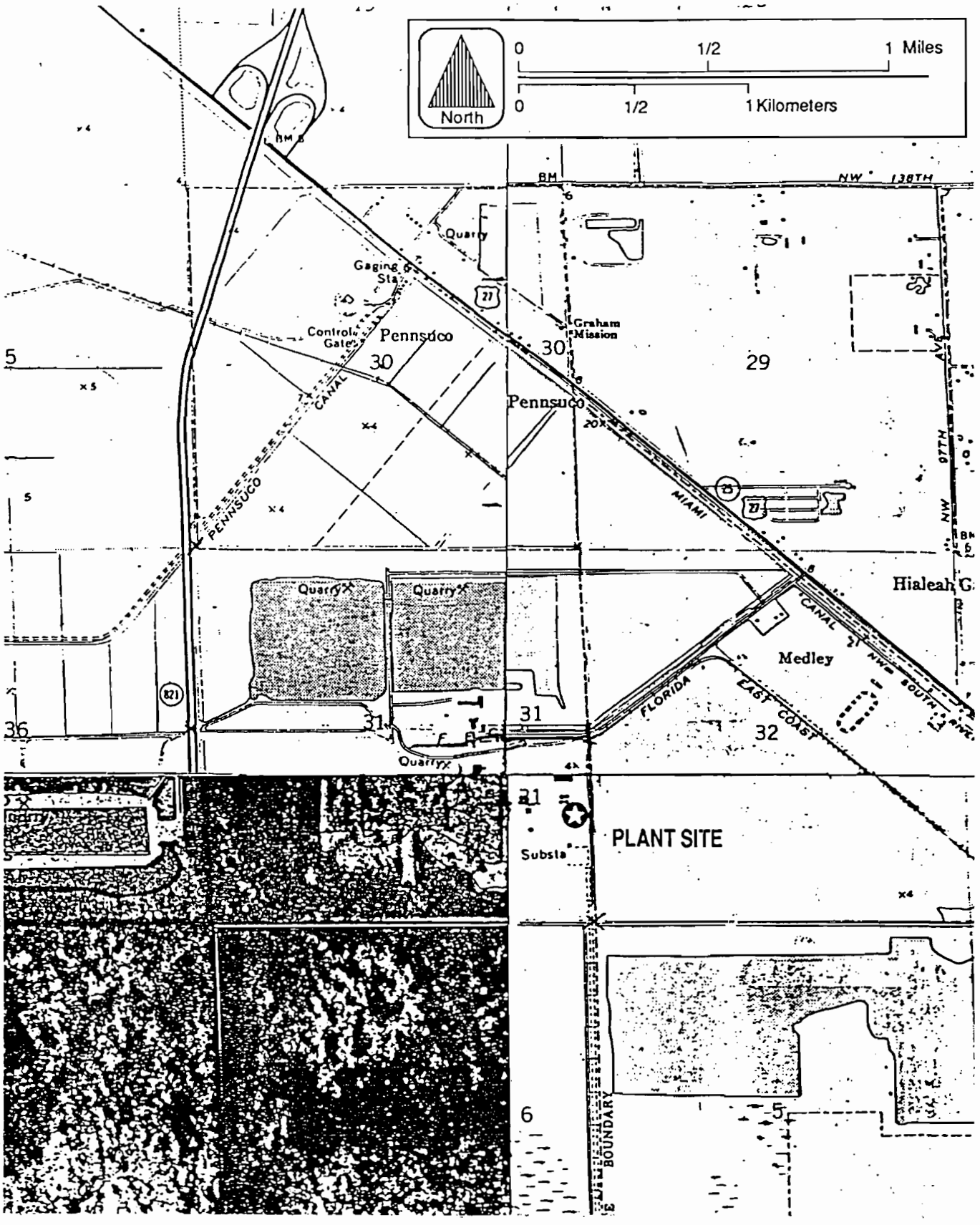


Figure 2-1
Location of Tarmac Florida Facility

BEST AVAILABLE COPY

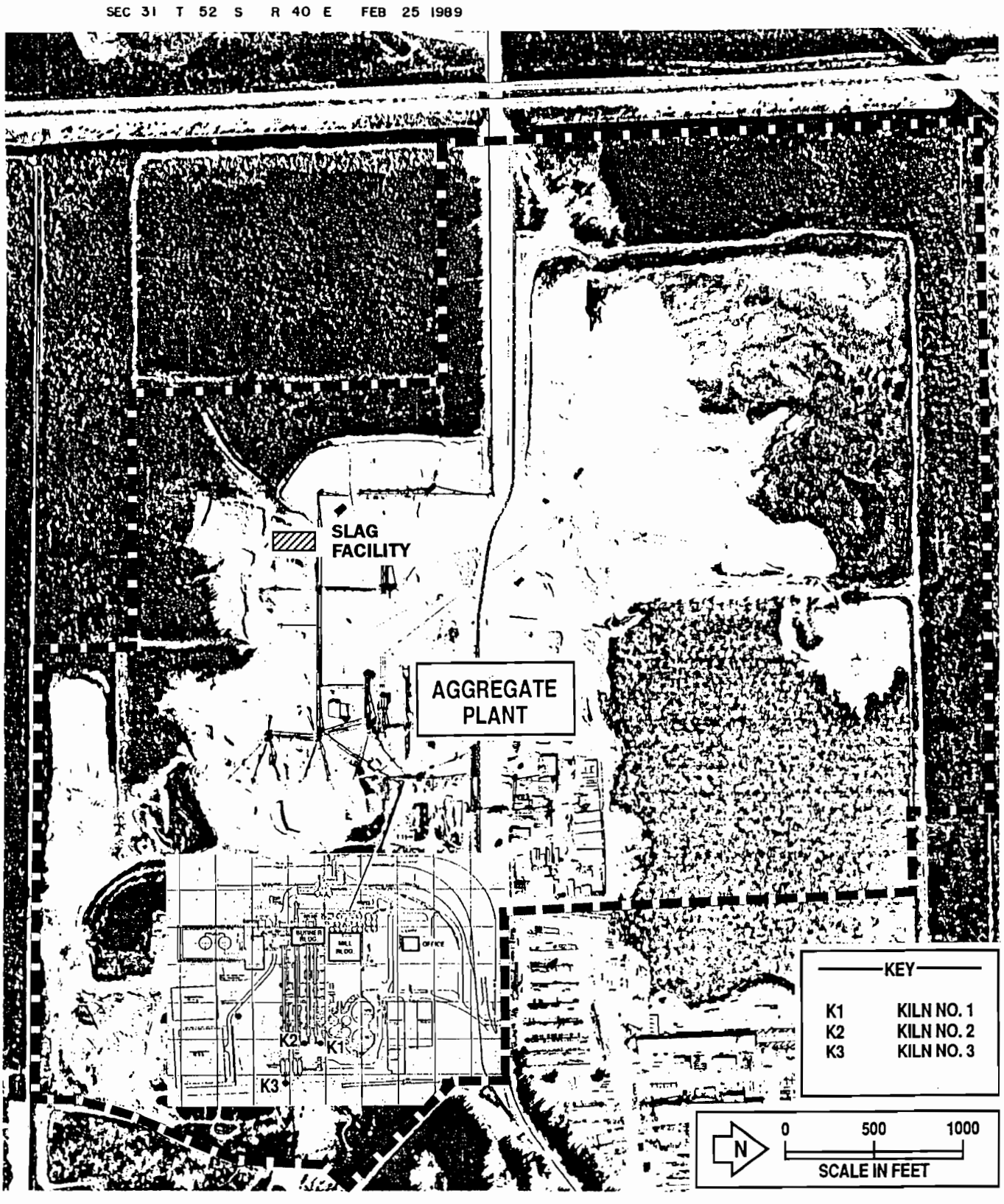


Figure 2-2
Plot Plan and Boundary of Tarmac Florida Facility

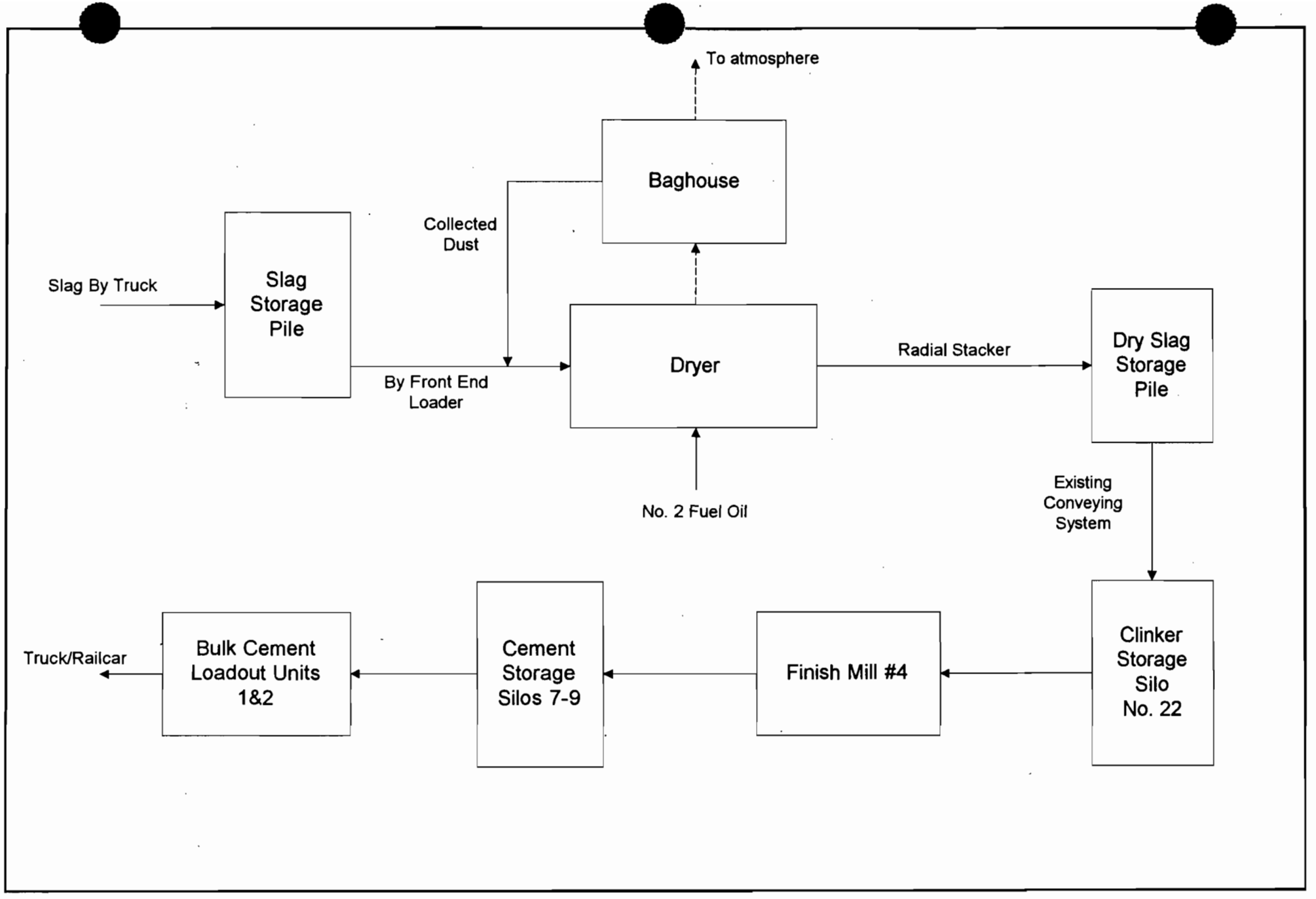


Figure 2-3 Flow Diagram of Slag Processing System, Tarmac Florida

Process Flow Legend:
Gas
Solid/Liquid

Emission Unit:
Process Area:
Filename: TARMAC1.VSD
Latest Revision Date: 6/27/95

KBN Engineering and Applied Sciences, Inc.

hopper, onto a conveyor, and then into the slag dryer. The slag dryer will dry the slag to approximately 5 percent moisture.

The slag dryer Tarmac will utilize is a previously fabricated asphalt dryer (see Figure 2-4). The unit was originally fabricated in 1972, and includes a Flex-Kleen baghouse for PM control. The maximum process rate for the dryer will be 150 tons per hour (TPH), with an average process rate of 100 TPH. The dryer will burn No. 2 fuel oil with a maximum sulfur content of 0.2 percent. Maximum heat input to the dryer will be 52 MMBtu/hr. A 10,000 gallon fuel oil storage tank will be installed to store the fuel. A plot plan of the slag dryer site is shown in Figure 2-3.

The baghouse for the slag dryer is a Flex-Kleen Model 84UDLM288M216XLA. This unit was fabricated with the original dryer. The baghouse will be refurbished prior to use. Pertinent data for the baghouse is as follows:

Air flow rate: 22,000 acfm
Gas temperature: 450°F, max.
Cloth area: 3,391 sq. ft.
Air/cloth ratio: 6.48:1
Cloth type: 14 oz. nomex felt
Cleaning method: Pulse jet
Outlet grain loading: estimated maximum of 0.04 gr/dscf

From the dryer, the slag is conveyed to an open storage pile. From the pile, front end loaders will be used to load the material onto the existing conveying system to the cement plant. The slag will be delivered to the existing clinker silos, i.e., silos 21, 22, 23, 26, 27 and 28. From the silos, the slag will be ground in Finish Mill #4. The ground slag will then be transferred and stored in Cement Silos 7, 8 and 9, and then shipped out via the bulk cement loadout units (Units 1 & 2).

A typical analysis of iron slag is presented in Table 2-1. As shown, the slag is primarily composed of calcium oxide (lime) and silicon oxides, with smaller amounts of aluminum oxide.

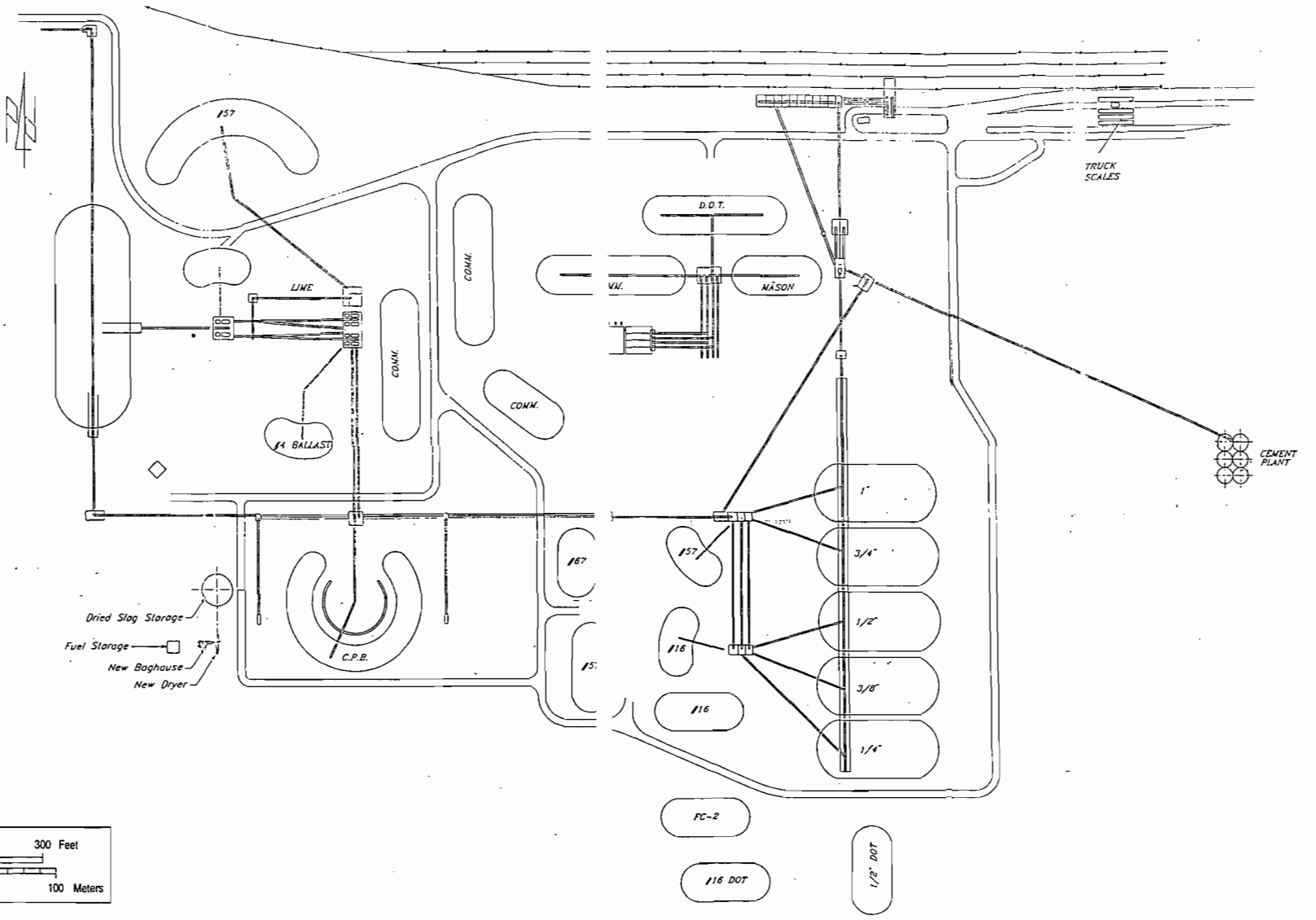


Figure 2-4
Layout of Slag Dryer and Handling Facilities

Table 2-1. Analysis of Iron Slag

Parameter	Composition (% by weight, wet)
Silicon Oxide	33.0
Aluminum Oxide	14.3
Iron Oxide	1.9
Calcium Oxide	40.0
Sulfur Trioxide	1.8
Moisture	9.0

Source: Tarmac Florida, 1995.

3.0 AIR EMISSIONS

3.1 SLAG DRYER

The maximum particulate matter (PM) emissions from the slag dryer are based on an outlet dust loading from the baghouse of 0.04 gr/dscf. Based on the maximum air flow rate of 22,000 acfm @ 450°F, the dry standard air flow rate is 12,000 dscfm (assuming about 6 percent moisture). Maximum operating hours for the dryer will be 3,000 hr/yr. Maximum PM emissions are therefore:

12,000 dscfm x 0.04 gr/dscf x 60 min/hr / 7000 gr/lb = 4.1 lb/hr

4.1 lb/hr x 3,000 hr/yr x ton/2,000 lb = 6.15 TPY

Emissions of other pollutants from the slag dryer are due to fuel oil burning, and are presented in Table 3-1. The emissions are based on AP-42 emission factors for fuel oil combustion.

3.2 CEMENT PRODUCTION, STORAGE AND HANDLING

The aggregate plant facilities to be affected by the slag utilization include several transfer points along the existing conveying system. The estimated PM emissions from these conveying operations are quantified in Table 3-2. Also included are fugitive PM emissions due to vehicular traffic in the slag storage pile area and wind erosion from the slag storage piles. The derivation of these emissions are presented in the Appendix.

The existing cement production facilities affected by the slag utilization consists of Clinker Storage silos 21, 22, 23, 26, 27 and 28; Finish Mill #4; Cement Silos 7-9; and the Bulk Cement Loadout Units 1&2. All of these sources are controlled by baghouses. The current existing PM emissions for these sources, based on average operating hours for 1993-1994, are presented in Table 3-3. The proposed maximum PM emissions from each of these sources is shown in Table 3-4, based on future maximum operating hours of 8,760 hr/yr.

In the case of Finish Mill #4, the PM emissions are currently limited by the process weight table according to operating permit AO13-157297. However, the process weight table severely overestimates the actual emissions from these baghouse controlled sources. The baghouse on Finish Mill #4 is designed to achieve an outlet dust loading of 0.01 gr/acf. Therefore, Tarmac is proposing to lower the allowable PM emissions from Finish Mill #4 to 0.01 gr/acf.

Table 3–1. Maximum Emissions Due to Fuel Combustion for Slag Dryer, Tarmac Florida

Parameter			No. 2 Fuel Oil	
OPERATING DATA				
Operating Time (hr/yr)			3,000	
Heat Input Rate (MMBtu/hr)			52.0	
Fuel Oil Use (gal/hr)[a]			371.4	
Fuel Oil Use (gal/yr)			1,114,286	
Maximum Sulfur Content (Wt %)			0.2	
Pollutant	Emission Factor [b]		Maximum Emissions lb/hr	TPY
EMISSIONS DATA				
SO2:	142*S	lb/Mgal[c]	10.55	15.82
NOx:	20	lb/Mgal	7.43	11.14
CO:	5	lb/Mgal	1.86	2.79
NMVOC:	0.2	lb/Mgal	0.074	0.11
Sulfuric Acid Mist:	0.1225	lb/Mgal	0.046	0.068
Lead–Total:	8.9E–06	lb/MMBtu	4.63E–04	6.94E–04
Mercury:	3.0E–06	lb/MMBtu	1.56E–04	2.34E–04
Beryllium:	2.5E–06	lb/MMBtu	1.30E–04	1.95E–04

Note: NA = not applicable.

[a] Based on 140,000 Btu/gal for 0.2% S oil.
[b] Emission factors based on AP–42.
[c] "S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.2%

Table 3-2. Fugitive Dust Emissions For Slag Project, Tarmac Florida, Inc.

SOURCE	TYPE OF OPERATION	M MOISTURE CONTENT (%)	U WIND SPEED (MPH)	UNCONTROLLED EMISSION FACTOR[a] (LB/TON)	CONTROL	CONTROL EFFICIENCY (%)	CONTROLLED EMISSION FACTOR (LB/TON)	ACTIVITY FACTOR	MAXIMUM ANNUAL PM(TSP) EMISSIONS (TONS/YR)	PM10 SIZE MULT.	MAXIMUM ANNUAL PM10 EMISSIONS (TONS/YR)
TRUCK DUMP	BATCH DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
FRONTEND LOADER-TO-HOPPER	BATCH DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
HOPPER-TO-BELT	CONTINUOUS DROP	6	9	0.00148	NONE	0	0.00148	300,000 TPY	0.221	0.35	0.077
DRYER-TO-RADIAL STACKER	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
RADIAL STACKER-TO-STORAGE PILE	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
FRONTEND LOADER-TO-HOPPER	BATCH DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
HOPPER-TO-CONVEYOR Y76	CONTINUOUS DROP	3	9	0.00389	NONE	0	0.00389	300,000 TPY	0.584	0.35	0.204
CONVEYOR Y76-TO-Y75	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y75-TO-Y78	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y78-TO-Y79	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y79-TO-Y102	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
CONVEYOR Y102-TO-CLINKER SILOS	CONTINUOUS DROP	3	9	0.00389	PARTIAL ENCLOSURE	50	0.00195	300,000 TPY	0.292	0.35	0.102
SLAG STORAGE PILES (2)	WIND EROSION	--	--	--	NONE	0	--	--	0.027[d]	0.5	0.014
SLAG STORAGE PILES MAINTENANCE	VEHICULAR TRAFFIC	--	--	0.96[b]	WATERING	50	0.93[b]	15,000 VMT[c]	3.470[d]	0.35	1.215
TOTAL									7.958		2.790

Notes/References

[a] Batch Drop and Continuous Drop Emission Factors are computed from AP-42 (USEPA, 1988), Section 11.2.3:
$E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

[b] Pound per Vehicle Mile Travel (lb/VMT), see Appendix for derivation.

[c] Based on vehicle operating 3,000 hrs/yr @ 5 mph.

[d] Refer to Appendix for derivation.

Table 3–3. Actual 1993–1994 Particulate Emissions From Cement Production Facilities, Tarmac Florida, Inc.

Emission Unit/Point	Emission Point ID	Control Equipment Type	Maximum Process Rate (TPH)	Air Flow Rate (cfm)	PM Emission Factor	PM Emissions (lb/hr)	PM Emissions (hr/yr)[a]	PM Emissions (TPY)
Clinker Storage Silos								
Clinker silos 21, 22, 23, 26, 27 & 28	K–633	Baghouse	150.0	1,500	0.01 gr/acf	0.13	7,550	0.49
Finish Mill #4								
Ball mill/mill sweep	F–430	Baghouse	150.0	30,000	0.01 gr/acf	2.57	2,068	2.66
Belt conveyor/separator/cement pump	F–432	Baghouse	150.0	17,000	0.01 gr/acf	1.46	2,068	1.51
Clinker/gypsum conveyors	F–603	Baghouse	150.0	8,000	0.01 gr/acf	0.69	2,068	0.71
Clinker/gypsum conveyors	F–604	Baghouse	150.0	8,000	0.01 gr/acf	0.69	2,068	0.71
Clinker/gypsum conveyors	F–605	Baghouse	150.0	4,000	0.01 gr/acf	0.34	2,068	0.35
Cement Storage Silos 1–9								
Cement Silos 7–9	F–512	Baghouse	150.0	10,000	0.01 gr/acf	0.86	6,030	2.58
Bulk Cement Loadout Units 1 & 2								
Railcar/Truck Unit 1	B–110	Baghouse	300.0	3,000	0.01 gr/acf	0.26	2,468	0.32
Truck Unit 2	B–210	Baghouse	300.0	3,000	0.01 gr/acf	0.26	2,468	0.32
					TOTAL =	7.24		9.64

[a] Based on actual 1993–1994 operating hours.

15007Y/F1/WP
06/28/95

Table 3–4. Future Maximum Particulate Emissions From Cement Production Facilities, Tarmac Florida, Inc.

Emission Unit/Point	Emission Point ID	Control Equipment Type	Maximum Process Rate (TPH)	Air Flow Rate (cfm)	PM Emission Factor	PM Emissions (lb/hr)	PM Emissions (hr/yr)	PM Emissions (TPY)
Clinker Storage Silos								
Clinker silos 21, 22, 23, 26, 27 & 28	K–633	Baghouse	150.0	1,500	0.01 gr/acf	0.13	8,760	0.56
Finish Mill #4								
Ball mill/mill sweep	F–430	Baghouse	150.0	30,000	0.01 gr/acf	2.57	8,760	11.26
Belt conveyor/separator/cement pump	F–432	Baghouse	150.0	17,000	0.01 gr/acf	1.46	8,760	6.38
Clinker/gypsum conveyors	F–603	Baghouse	150.0	8,000	0.01 gr/acf	0.69	8,760	3.00
Clinker/gypsum conveyors	F–604	Baghouse	150.0	8,000	0.01 gr/acf	0.69	8,760	3.00
Clinker/gypsum conveyors	F–605	Baghouse	150.0	4,000	0.01 gr/acf	0.34	8,760	1.50
Cement Storage Silos 1–9								
Cement Silos 7–9	F–512	Baghouse	150.0	10,000	0.01 gr/acf	0.86	8,760	3.75
Bulk Cement Loadout Units 1 & 2								
Railcar/Truck Unit 1	B–110	Baghouse	300.0	3,000	0.01 gr/acf	0.26	8,760	1.13
Truck Unit 2	B–210	Baghouse	300.0	3,000	0.01 gr/acf	0.26	8,760	1.13
					TOTAL =	7.24		31.72

4.0 REGULATORY APPLICABILITY

4.1 PSD NEW SOURCE REVIEW

A comparison of the net increase in emissions of regulated PSD pollutants due to the proposed project is presented in Table 4-1. The current actual emissions are current emissions due to existing facilities which will be affected by the project, i.e., the cement production facilities. The future maximum emissions include emissions due to both new facilities and the existing facilities which will be affected. The PSD significant emission rates are also shown in Table 4-1.

As shown, the net increase in PM and PM10 emissions will exceed the PSD significant emission rate of 25 and 15 TPY, respectively. Therefore, the proposed project is subject to PSD review for PM/PM10. However, because the net increase in emissions for all pollutants due to the proposed project are less than 50 TPY, the proposed modification is exempt from several of the requirements under PSD new source review [F.A.C. Rule 62-212.400(3)(d)]. The project is exempt from the requirements of Rule 62-212.400(5)(d), (e), (f) and (g), which are the requirements for ambient impact analysis, additional impact analysis, preconstruction air quality monitoring analysis, and post construction monitoring. Therefore, the proposed project is only subject to the control technology review requirements under PSD rules [62-212.400(5)(b) and (c)]. The control technology analysis for PM/PM10 is presented in Section 5.0.

4.2 STATE OF FLORIDA EMISSION STANDARDS

The State of Florida emission limiting standards for aggregate dryers consist of a PM limit based on the process weight table, and a visible emissions limitation [Rule 62-296.310(1) and (2)]. Based on a maximum process eight input rate of 150 TPH, the process weight table would allow up to 38.6 lb/hr of PM emissions. However, Tarmac will limit PM emissions from the slag dryer to 4.1 lb/hr based on fabric filter control technology. The regulations limit visible emissions from the dryer and materials handling operations to no more than 20 percent opacity.

4.3 FEDERAL NEW SOURCE PERFORMANCE STANDARDS

Federal new source performance standards (NSPS) have been promulgated by the U.S. EPA for nonmetallic mineral processing plants (40 CFR 60, Subpart OOO) and for dryers and calciners in the mineral industries (40 CFR 60, Subpart UUU). However, Tarmac is not processing any of the materials covered under these regulations. Therefore, the proposed facilities are not subject to the NSPS.

Table 4–1. Emissions Increase Associated With Slag Project, Tarmac Florida, Inc.

Regulated Pollutant	(A) Slag Dryer Emissions (TPY)	(B) Fugitives From Slag Handling (TPY)	Cement Production Facilities (C) Current Actuals (TPY)	Cement Production Facilities (D) Future Maximums (TPY)	(A+B–C+D) Net Increase In Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate matter (TSP)	6.15	7.96	9.64	31.72	36.2	25	Yes
Particulate matter (PM10)	6.15	2.79	9.64	31.72	31.0	15	Yes
Sulfur dioxide	15.82	--	--	--	15.8	40	No
Nitrogen oxides	11.14	--	--	--	11.1	40	No
Carbon monoxide	2.79	--	--	--	2.8	100	No
Volatile organic compounds	0.11	--	--	--	0.11	40	No
Sulfuric acid mist	0.068	--	--	--	0.07	7	No
Total reduced sulfur	--	--	--	--	--	10	No
Lead	0.0007	--	--	--	0.0007	0.6	No
Mercury	0.0002	--	--	--	0.0002	0.1	No
Beryllium	0.0002	--	--	--	0.0002	0.0004	No
Fluorides	--	--	--	--	--	3	No
Asbestos	--	--	--	--	--	0.007	No
Vinyl Chloride	--	--	--	--	--	1	No

5.0 BEST AVAILABLE CONTROL TECHNOLOGY ANALYSIS

5.1 REQUIREMENTS

The 1977 Clean Air Act Amendments established requirements for the approval of preconstruction permit applications under the PSD program. One of these requirements is that the best available control technology (BACT) be installed for applicable pollutants. BACT determinations must be made on a case-by-case basis considering technical, economic, energy, and environmental impacts for various BACT alternatives. To bring consistency to the BACT process, the EPA developed the so called "top-down" approach to BACT determinations. As mentioned previously, this approach has been challenged in court and a settlement agreement reached which requires EPA to initiate formal rulemaking on the top down approach. Nonetheless, in the absence of formal rules related to this approach, the "top-down" approach is followed in the Tarmac BACT analysis.

The first step in a top-down BACT analysis is to determine, for each applicable pollutant, the most stringent control alternative available for a similar source or source category. If it can be shown that this level of control is not feasible on the basis of technical, economic, energy, or environmental impacts for the source in question, then the next most stringent level of control is identified and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any technical, economic, energy, or environmental consideration.

In the case of the proposed modification at Tarmac, PM(TSP)/PM10 require BACT analysis. Only the slag dryer system requires BACT analysis as this is the only emissions units being added or physically modified as part of the project. The following sections present the BACT analysis.

5.1 BACT ANALYSIS FOR PM EMISSIONS

5.1.1 Slag Dryer

Tarmac is proposing a PM emission limit of 0.04 gr/dscf as BACT. This limit is equivalent to the new source performance standards (NSPS) which have been promulgated for asphalt concrete plants (40 CFR 60, Subpart I). The asphalt plant NSPS is based on fabric filter or venturi scrubber control technology, although fabric filter technology has been found to more consistently achieve the NSPS level. A second review of the asphalt plant NSPS conducted by EPA in 1985 demonstrated that fabric filter control technology was the best demonstrated technology to comply

with the NSPS. Of 26 plants surveyed with fabric filter control, the typical air to cloth ratio was 6:1, and the most common filter fabric was 14 ounce weight nomex.

The Tarmac slag dryer was originally fabricated as an asphalt concrete plant with fabric filter control. The air to cloth ratio is 6.5:1, and 14 ounce nomex bags (or equivalent) will be used. Therefore, it is believed that the asphalt NSPS of 0.04 gr/dscf can be achieved by the Tarmac system, although the drying of slag could cause higher inlet dust loadings to the fabric filter compared to an asphaltic dryer.

A review of previous BACT determinations for PM emissions from asphaltic dyers and similar materials dryers was conducted. The results of this review is presented in Table 5-1. It is noted that all determinations found were issued prior to 1991. However, all previous BACT determinations for asphalt plants were equal to the NSPS of 0.04 gr/dscf and were based on baghouse control technology. This demonstrates that baghouse technology is the best technology for application on asphalt plants and similar dryers.

A number of other determinations were found in the BACT Clearinghouse for various material dryers. However, many of these were expressed in terms not readily converted to a grain loading. In addition, these dryers were for materials other than slag, and the differences and/or similarities between these facilities and Tarmac are not readily definable.

In conclusion, Tarmac's proposed PM emission limit of 0.04 gr/dscf is equivalent to all previous BACT determinations for asphalt plant dryers. Considering the uncertainty associated with the existing fabric filter system and the drying of iron slag, a lower PM limit cannot be proposed. However, the resulting PM emissions are very low: 4.1 lb/hr and 6.15 TPY. This lower level of emissions does not warrant further controls or a lower limitation.

The proposed VE limitation is 20 percent opacity, which is equivalent to the NSPS limit for asphalt plants. This opacity limitation is also equivalent to the State of Florida limitation contained in F.A.C. 62-296.310.

Table 5-1. Summary of BACT Determinations for PM Emissions From Dryers of Aggregates/Non-Metallic Minerals

Plant Type/Company	Comments	State	Permit #	Permit Issue Date	New Source? (a)	Throughput	Emission Limit	Control Equipment
Asphalt Plants								
Lee Hy Paving Corp.		VA	50060	27-Jan-89	Yes	240,000 ton/yr	0.04 GR/DSCF	Baghouse
Lee Hy Paving Corp.		VA	(5)40031	14-Nov-86	Yes	200 ton/hr	0.04 GR/DSCF	Baghouse
B.P. Short & Sons Paving Co.		VA	50041	15-Apr-87	Yes	250 ton/yr	0.04 GR/DSCF	Baghouse
Blakemore Construction Corp.		VA	(3)40766	24-Jun-88	Yes	300 ton/yr	0.04 GR/DSCF	Baghouse
Concrete Plant								
Quikrete Co.		CT	145-0017	5-May-89	No	100,000 lb/hr	0.015 lb/hr	Baghouse
Lime Plants								
Austinville Limestone Co.		VA	10213	16-Sep-87	Yes	315,000 ton/yr	10.5 lb/hr	Fabric Filter
Dan River, Inc.		VA	30242	03-Dec-87	Yes	0	1.62 lb/hr	Baghouse
Stone Crushing Plant								
Luck Stone Corp.	Dryer Overhead Vent (2)	VA	50429	15-Aug-85	Yes	11,025 ton/yr	4.33 ton/yr (each)	Baghouse
	Dryer Bottom Vent (4)					11,025 ton/yr	3.3 ton/yr (each)	Baghouse
Miscellaneous Plants								
Englehard Corp.	Calciner/Spray Dryer	GA	3295-158-4632	18-Nov-87	No	20 ton/hr	0.025 GR/DSCF	Baghouse after start-up
Manville Sales Corp., PLT #1		OH	04-545	N/A	Yes	2,600 lb/hr	0.37 lb/hour	Fabric Filter
Kyanite Mining Corp.		VA	30677	10-Jul-85	Yes	48 MMBtu/hr	30.91 ton/yr	N/A
ICI Americas, Inc.		VA	50418	26-Jan-89	Yes	1 ton/hr	0.004 lb/hr	Bagfilters
Omya, Inc.	Dryers, Spray, (2)	VT	VT-009	27-Jul-90	No	20 ton/hr (each	1.32 lb/hr	Multiple Cyclones
	Dryers, Flash, (2)					6 ton/hr (each	0.02 GR/DSCF	Fabric Filter
Corona Ind.	Sand Dryer	CA	147795	25-Nov-86	Yes	100 ton/hr	72 lb/day	Cyclone Seperator & Scrubber
Ocean Salt Co., Inc.	Salt Dryer	CA	157476	N/A	No	200 ton/day	26 lb/day	Scrubbers
Beadex MFG Co., Inc.	Calcium Carbonate Dryer	CA	183480	18-Sep-89	Yes	406,000 lb/day	150 lb/day	Baghouse

(a) Indicates if emission unit subject to BACT was new construction (yes) or a modification (no).

Source: BACT/RACT/LAER Clearinghouse Database, June 1995.

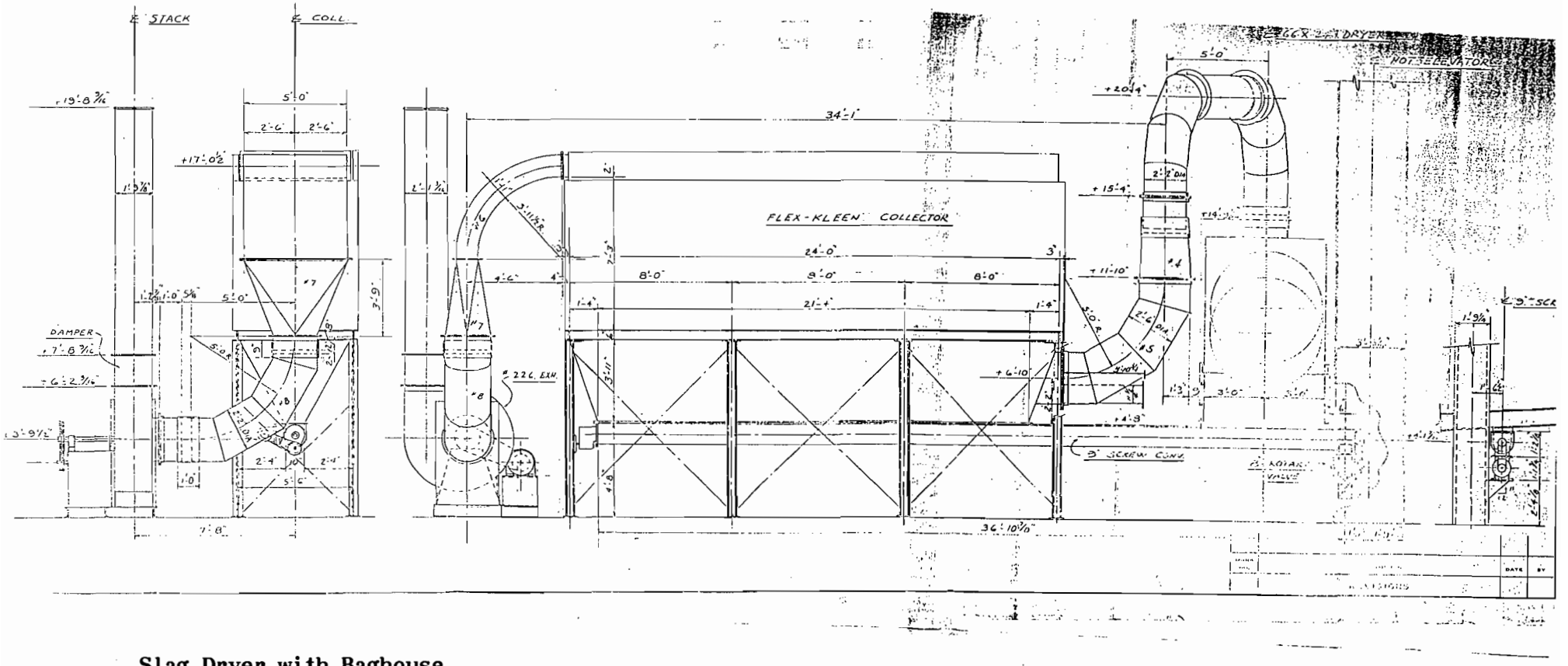
5.1.2 Materials Handling Operations

Tarmac will employ reasonable precautions to prevent fugitive emissions from the handling and storage of slag. These measures will include use of enclosures were feasible, and watering as needed to minimize fugitive dust emissions.

The existing materials handling system to be used for slag conveying and transfer are not being physically modified. Therefore, according to 40 CFR 52.21, BACT does not apply to these emission units.

APPENDIX

BEST AVAILABLE COPY



Slag Dryer with Baghouse

TARUNPAV
6/24/95

Table C1. Estimation of Emission Factors and Rates For Vehicle Traffic On Unpaved Roads For Slag Project

General Data	Pile Mainten. Front-end loader
Vehicle Data	
Description	Slag
Vehicle Speed (S), mph- Average	5
Vehicle weight (W), tons- Loaded	27
- Unloaded	9
- Average	18
Vehicle number of wheels (w)	4
Vehicle miles traveled (VMT) - Annual	15,000 [a]
General/ Site Characteristics	
Days of precipitation greater than or equal to 0.01 inch (p) - Annual	120
Silt content (s), %	4.8 [b]
Particle size multiplier, PM (k)	1.00
Particle size multiplier, PM10 (k)	0.35
Emission Control Data	
Emission control method	Watering
Emission control removal efficiency, %	50
Calculated PM Emission Factor (EF)	
Uncontrolled EF, lb/VMT - Annual	0.93
Controlled EF,lb/VMT- Annual	0.46
Calculated PM10 Emission Factor (EF)	
Uncontrolled EF, lb/VMT - Annual	0.32
Controlled EF,lb/VMT- Annual	0.16
Estimated Emission Rate (ER)	
PM Emissions (TPY)	3.47
PM10 Emissions (TPY)	1.21

Emission Factor (EF) Equations

Uncontrolled emission factor = UEF(lb/VMT) = $k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{.5} \times ((365 - p)/365)$

COntrolled emission factor = Uncontrolled emission factor x (100 - Removal efficiency (%))

[a] Based on vehicle operating 3,000 hr/yr @ 5 mph.

[b] **Based on sand and gravel processing, AP-42, Table 11.2.1-1.**

Source: AP-42, Section 13.2.1, Unpaved Roads, July, 1994.

AP-42 SECTIONS

AP-42
Fourth Edition
September 1985

COMPILATION OF AIR POLLUTANT EMISSION FACTORS

Volume I: Stationary Point And Area Sources

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office Of Air And Radiation
Office Of Air Quality Planning And Standards
Research Triangle Park, North Carolina 27711

September 1985

11.2.1 UNPAVED ROADS

11.2.1.1 General

Dust plumes trailing behind vehicles traveling on unpaved roads are a familiar sight in rural areas of the United States. When a vehicle travels an unpaved road, the force of the wheels on the road surface causes pulverization of surface material. Particles are lifted and dropped from the rolling wheels, and the road surface is exposed to strong air currents in turbulent shear with the surface. The turbulent wake behind the vehicle continues to act on the road surface after the vehicle has passed.

11.2.1.2 Emissions Calculation And Correction Parameters

The quantity of dust emissions from a given segment of unpaved road varies linearly with the volume of traffic. Also, field investigations have shown that emissions depend on correction parameters (average vehicle speed, average vehicle weight, average number of wheels per vehicle, road surface texture and road surface moisture) that characterize the condition of a particular road and the associated vehicle traffic.[1-4]

Dust emissions from unpaved roads have been found to vary in direct proportion to the fraction of silt (particles smaller than 75 micrometers in diameter) in the road surface materials.[1] The silt fraction is determined by measuring the proportion of loose dry surface dust that passes a 200 mesh screen, using the ASTM-C-136 method. Table 11.2.1-1 summarizes measured silt values for industrial and rural unpaved roads.

The silt content of a rural dirt road will vary with location, and it should be measured. As a conservative approximation, the silt content of the parent soil in the area can be used. However, tests show that road silt content is normally lower than in the surrounding parent soil, because the fines are continually removed by the vehicle traffic, leaving a higher percentage of coarse particles.

Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall. The temporary reduction in emissions caused by precipitation may be accounted for by not considering emissions on "wet" days (more than 0.254 millimeters [0.01 inches] of precipitation).

The following empirical expression may be used to estimate the quantity of size specific particulate emissions from an unpaved road, per vehicle kilometer traveled (VKT) or vehicle mile traveled (VMT), with a rating of A:

$$E = k(1.7)\left(\frac{s}{12}\right)\left(\frac{S}{48}\right)\left(\frac{W}{2.7}\right)^{0.7}\left(\frac{w}{4}\right)^{0.5}\left(\frac{365-p}{365}\right) \quad \text{(kg/VKT)}$$

$$E = k(5.9)\left(\frac{s}{12}\right)\left(\frac{S}{30}\right)\left(\frac{W}{3}\right)^{0.7}\left(\frac{w}{4}\right)^{0.5}\left(\frac{365-p}{365}\right) \quad \text{(lb/VMT)}$$

TABLE 11.2.1-1. TYPICAL SILT CONTENT VALUES OF SURFACE MATERIAL ON INDUSTRIAL AND RURAL UNPAVED ROADS[a]

Industry	Road use or surface material	Plant sites	Test samples	Silt (wgt. %) Range	Silt (wgt. %) Mean
Copper smelting	Plant road	1	3	15.9 - 19.1	17.0
Iron and steel production	Plant road	9	20	4.0 - 16.0	8.0
Sand and gravel processing	Plant road	1	3	4.1 - 6.0	4.8
Stone quarrying and processing	Plant road	1	5	10.5 - 15.6	14.1
Taconite mining and processing	Haul road	1	12	3.7 - 9.7	5.8
	Service road	1	8	2.4 - 7.1	4.3
Western surface coal mining	Access road	2	2	4.9 - 5.3	5.1
	Haul road	3	21	2.8 - 18	8.4
	Scraper road	3	10	7.2 - 25	17
	Haul road (freshly graded)	2	5	18 - 29	24
Rural roads	Gravel	1	1	NA	5.0
	Dirt	2	5	5.8 - 68	28.5
	Crushed limestone	2	8	7.7 - 13	9.6

[a]References 4-11. NA = Not available.

where: E = emission factor
k = particle size multiplier (dimensionless)
s = silt content of road surface material (%)
S = mean vehicle speed, km/hr (mph)
W = mean vehicle weight, Mg (ton)
w = mean number of wheels
p = number of days with at least 0.254 mm (0.01 in.) of precipitation per year

The particle size multiplier, k, in the equation varies with aerodynamic particle size range as follows:

Aerodynamic Particle Size Multiplier For Equation

≤30 um[a]	≤30 um	≤15 um	≤10 um	≤5um	≤2.5 um
1.0	0.80	0.50	0.36	0.20	0.095

[a] Stokes diameter

The number of wet days per year, p, for the geographical area of interest should be determined from local climatic data. Figure 11.2.1-1 gives the geographical distribution of the mean annual number of wet days per year in the United States.

The equation retains the assigned quality rating, if applied within the ranges of source conditions that were tested in developing the equation, as follows:

Ranges Of Source Conditions For Equation

Road silt content (wgt. %)	Mean vehicle weight		Mean vehicle speed		mean no. of wheels
	Mg	ton	km/hr	mph	
4.3 - 20	2.7 - 142	3 - 157	21 - 64	13 - 40	4 - 13

Also, to retain the quality rating of the equation when addressing a specific unpaved road, it is necessary that reliable correction parameter values be determined for the road in question. The field and laboratory procedures for determining road surface silt content are given in Reference 4. In the event that site specific values for correction parameters cannot be obtained, the appropriate mean values from Table 11.2.1-1 may be used, but the quality rating of the equation is reduced to B.

The equation was developed for calculating annual average emissions, and thus, is to be multiplied by annual vehicle distance traveled (VDT). Annual average values for each of the correction parameters are to be substituted for the equation. Worst case emissions, corresponding to dry road conditions, may be calculated by setting p = 0 in the equation (equivalent to dropping the last

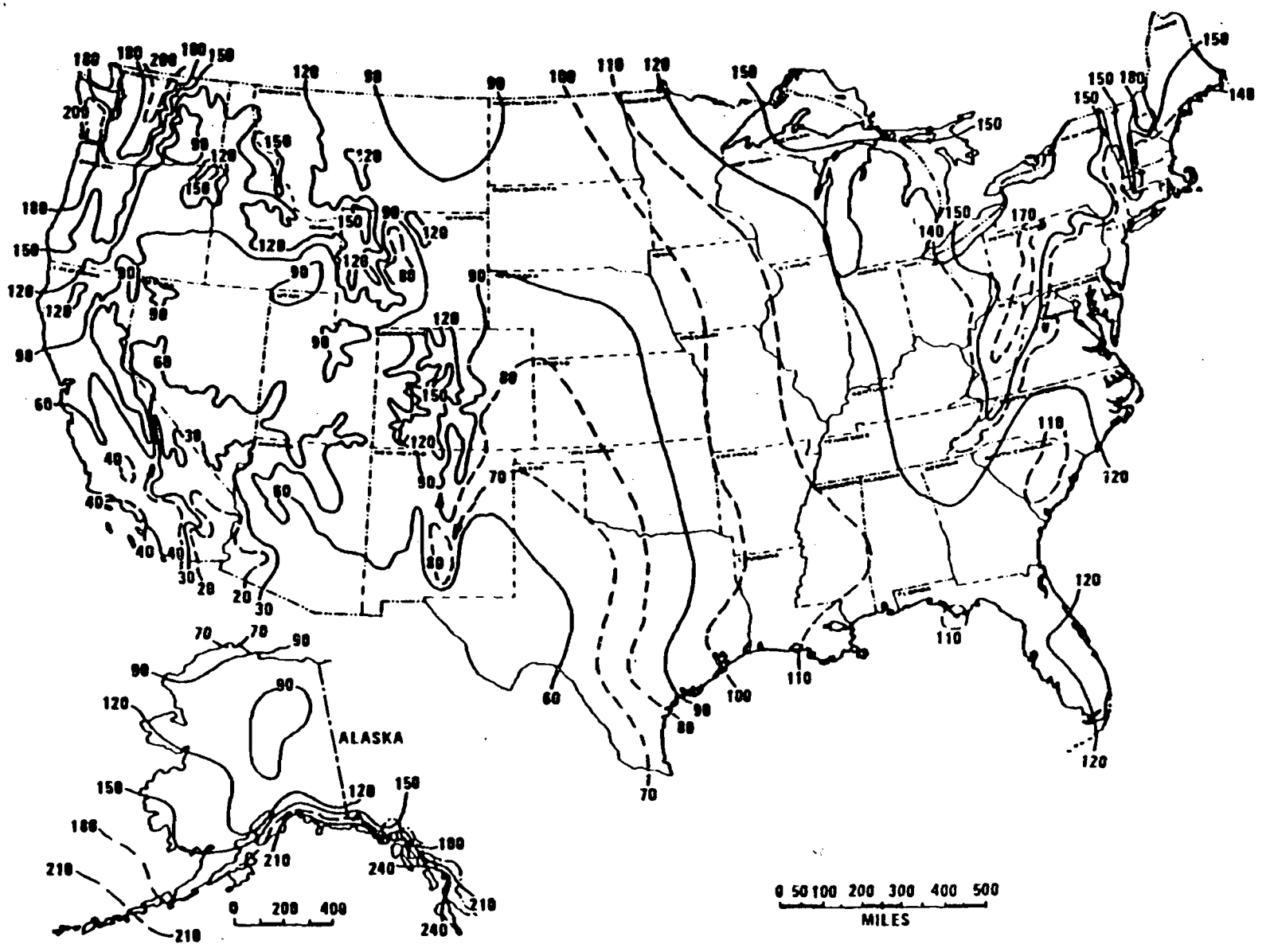


Figure 11.2.1-1. Mean number of days with 0.01 inch or more of precipitation in United States.[10]

term from the equation). A separate set of nonclimatic correction parameters and a higher than normal VDT value may also be justified for the worst case average period (usually 24 hours). Similarly, in using the equation to calculate emissions for a 91 day season of the year, replace the term (365-p)/365 with the term (91-p)/91, and set p equal to the number of wet days in the 91 day period. Also, use appropriate seasonal values for the nonclimatic correction parameters and for VDT.

11.2.1.3 Controls

Common control techniques for unpaved roads are paving, surface treating with penetration chemicals, working into the roadbed of stabilization chemicals, watering, and traffic control regulations. Chemical stabilizers work either by binding the surface material or by enhancing moisture retention. Paving, as a control technique, is often not economically practical. Surface chemical treatment and watering can be accomplished with moderate to low costs, but frequent retreatments are required. Traffic controls, such as speed limits and traffic volume restrictions, provide moderate emission reductions but may be difficult to enforce. The control efficiency obtained by speed reduction can be calculated using the predictive emission factor equation given above.

The control efficiencies achievable by paving can be estimated by comparing emission factors for unpaved and paved road conditions, relative to airborne particle size range of interest. The predictive emission factor equation for paved roads, given in Section 11.2.6, requires estimation of the silt loading on the traveled portion of the paved surface, which in turn depends on whether the pavement is periodically cleaned. Unless curbing is to be installed, the effects of vehicle excursion onto shoulders (berms) also must be taken into account in estimating control efficiency.

The control efficiencies afforded by the periodic use of road stabilization chemicals are much more difficult to estimate. The application parameters which determine control efficiency include dilution ratio, application intensity (mass of diluted chemical per road area) and application frequency. Other factors that affect the performance of chemical stabilizers include vehicle characteristics (e. g., traffic volume, average weight) and road characteristics (e. g., bearing strength).

Besides water, petroleum resin products have historically been the dust suppressants most widely used on industrial unpaved roads. Figure 11.2.1-2 presents a method to estimate <u>average</u> control efficiencies associated with petroleum resins applied to unpaved roads. Several items should be noted:

1. The term "ground inventory" represents the total volume (per unit area) of petroleum resin concentrate (<u>not solution</u>) applied since the start of the dust control season.

2. Because petroleum resin products must be periodically reapplied to unpaved roads, the use of a time-averaged control efficiency value is appropriate. Figure 11.2.1-2 presents control efficiency values averaged over two common application intervals, two weeks and one month. Other application intervals will require interpolation.

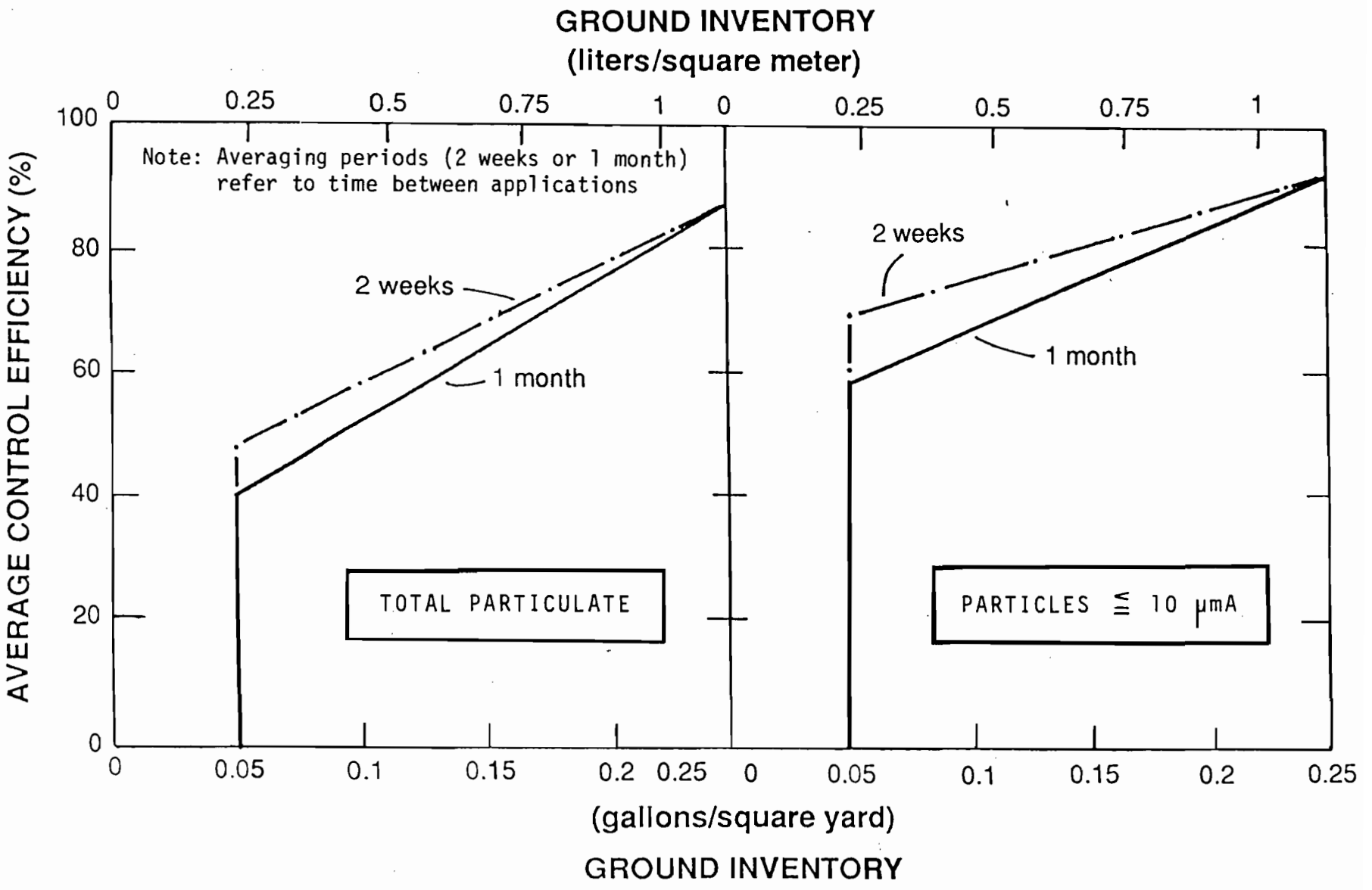


Figure 11.2.1-2. Average control efficiencies over common application intervals.

3. Note that zero efficiency is assigned until the ground inventory reaches 0.2 liters per square meter (0.05 gallons per square yard).

As an example of the use of Figure 11.2.1-2, suppose that the equation has been used to estimate an emission factor of 2.0 kilograms per vehicle kilometer traveled for particles equal to or less than 10 microns from a particular road. Also, suppose that, starting on May 1, the road is treated with 1 liter per square meter of a (1 part petroleum resin to 5 parts water) solution on the first of each month until October. Then, the following average controlled emission factors are found:

Period	Ground Inventory (L/m^2)	Average Control Efficiency[a] (%)	Average Controlled Emission Factor (kg/VKT)
May	0.17	0	2.0
June	0.33	62	0.76
July	0.50	68	0.64
August	0.67	74	0.52
September	0.83	80	0.40

[a]From Figure 11.2.1-2, $\leq$ 10 um. Zero efficiency assigned if ground inventory is less than 0.2 L/m^2 (0.05 gal/yd^2).

Newer dust suppressants have been successful in controlling emissions from unpaved roads. Specific test results for those chemicals, as well as for petroleum resins, are provided in References 14 through 16.

References for Section 11.2.1

1. C. Cowherd, Jr., et al., Development Of Emission Factors For Fugitive Dust Sources, EPA-450/3-74-037, U. S. Environmental Protection Agency, Research Triangle Park, NC, June 1974.

2. R. J. Dyck and J. J. Stukel, "Fugitive Dust Emissions From Trucks On Unpaved Roads", Environmental Science and Technology, 10(10):1046-1048, October 1976.

3. R. O. McCaldin and K. J. Heidel, "Particulate Emissions From Vehicle Travel Over Unpaved Roads", Presented at the 71st Annual Meeting of the Air Pollution Control Association, Houston, TX, June 1978.

4. C. Cowherd, Jr., et al., Iron And Steel Plant Open Dust Source Fugitive Emission Evaluation, EPA-600/2-79-013, U. S. Environmental Protection Agency, Cincinnati, OH, May 1979.

5. R. Bohn, et al., Fugitive Emissions From Integrated Iron And Steel Plants, EPA-600/2-78-050, U. S. Environmental Protection Agency, Cincinnati, OH, March 1978.

6. R. Bohn, Evaluation Of Open Dust Sources In The Vicinity Of Buffalo, New York, EPA Contract No. 68-02-2545, Midwest Research Institute, Kansas City, MO, March 1979.

7. C. Cowherd, Jr., and T. Cuscino, Jr., Fugitive Emissions Evaluation, MRI-4343-L, Midwest Research Institute, Kansas City, MO, February 1977.

8. T. Cuscino, Jr., et al., Taconite Mining Fugitive Emissions Study, Minnesota Pollution Control Agency, Roseville, MN, June 1979.

9. K. Axetell and C. Cowherd, Jr., Improved Emission Factors For Fugitive Dust From Western Surface Coal Mining Sources, 2 Volumes, EPA Contract No. 68-03-2924, PEI, Inc., Kansas City, MO, July 1981.

10. T. Cuscino, Jr., et al., Iron And Steel Plant Open Source Fugitive Emission Control Evaluation, EPA-600/2-83-110, U. S. Environmental Protection Agency, Cincinnati, OH, October 1983.

11. J. Patrick Reider, Size Specific Emission Factors For Uncontrolled Industrial and Rural Roads, EPA Contract No. 68-02-3158, Midwest Research Institute, Kansas City, MO, September 1983.

12. C. Cowherd, Jr., and P. Englehart, Size Specific Particulate Emission Factors For Industrial And Rural Roads, EPA-600/7-85-038, U. S. Environmental Protection Agency, Cincinnati, OH, September 1985.

13. Climatic Atlas Of The United States, U. S. Department Of Commerce, Washington, DC, June 1968.

14. G. E. Muleski, et al., Extended Evaluation Of Unpaved Road Dust Suppressants In The Iron And Steel Industry, EPA-600/2-84-027, U. S. Environmental Protection Agency, Cincinnati, OH, February 1984.

15. C. Cowherd, Jr., and J. S. Kinsey, Identification, Assessment And Control Of Fugitive Particulate Emissions, EPA-600/8-86-023, U. S. Environmental Protection Agency, Cincinnati, OH, August 1986.

16. G. E. Muleski and C. Cowherd, Jr., Evaluation Of The Effectiveness Of Chemical Dust Suppressants On Unpaved Roads, EPA-600/X-XX-XXX, U. S. Environmental Protection Agency, Cincinnati, OH, November 1986.

11.2.3 AGGREGATE HANDLING AND STORAGE PILES

11.2.3.1 General

Inherent in operations that use minerals in aggregate form is the maintenance of outdoor storage piles. Storage piles are usually left uncovered, partially because of the need for frequent material transfer into or out of storage.

Dust emissions occur at several points in the storage cycle, such as during material loading onto the pile, disturbances by strong wind currents, and loadout from the pile. The movement of trucks and loading equipment in the storage pile area is also a substantial source of dust.

11.2.3.2 Emissions And Correction Parameters

The quantity of dust emissions from aggregate storage operations varies with the volume of aggregate passing through the storage cycle. Also, emissions depend on three parameters of the condition of a particular storage pile: age of the pile, moisture content and proportion of aggregate fines.

When freshly processed aggregate is loaded onto a storage pile, its potential for dust emissions is at a maximum. Fines are easily disaggregated and released to the atmosphere upon exposure to air currents, either from aggregate transfer itself or from high winds. As the aggregate weathers, however, potential for dust emissions is greatly reduced. Moisture causes aggregation and cementation of fines to the surfaces of larger particles. Any significant rainfall soaks the interior of the pile, and the drying process is very slow.

Silt (particles equal to or less than 75 microns in diameter) content is determined by measuring the portion of dry aggregate material that passes through a 200 mesh screen, using ASTM-C-136 method. Table 11.2.3-1 summarizes measured silt and moisture values for industrial aggregate materials.

11.2.3.3 Predictive Emission Factor Equations

Total dust emissions from aggregate storage piles are contributions of several distinct source activities within the storage cycle:

1. Loading of aggregate onto storage piles (batch or continuous drop operations).
2. Equipment traffic in storage area.
3. Wind erosion of pile surfaces and ground areas around piles.
4. Loadout of aggregate for shipment or for return to the process stream (batch or continuous drop operations).

Adding aggregate material to a storage pile or removing it both usually involve dropping the material onto a receiving surface. Truck dumping on the pile or loading out from the pile to a truck with a front end loader are examples of batch drop operations. Adding material to the pile by a conveyor stacker is an example of a continuous drop operation.

TABLE 11.2.3-1. TYPICAL SILT AND MOISTURE CONTENT VALUES OF MATERIALS AT VARIOUS INDUSTRIES

Industry	Material	Silt (%)			Moisture (%)		
		No. of test samplers	Range	Mean	No. of test samplers	Range	Mean
Iron and steel production[a]	Pellet ore	10	1.4 - 13	4.9	8	0.64 - 3.5	2.1
	Lump ore	9	2.8 - 19	9.5	6	1.6 - 8.1	5.4
	Coal	7	2 - 7.7	5	6	2.8 - 11	4.8
	Slag	3	3 - 7.3	5.3	3	0.25 - 2.2	0.92
	Flue dust	2	14 - 23	18.0	0	NA	NA
	Coke breeze	1		5.4	1		6.4
	Blended ore	1		15.0	1		6.6
	Sinter	1		0.7	0	NA	NA
	Limestone	1		0.4	0	NA	NA
Stone quarrying and processing[b]	Crushed limestone	2	1.3 - 1.9	1.6	2	0.3 - 1.1	0.7
Taconite mining and processing[c]	Pellets	9	2.2 - 5.4	3.4	7	0.05 - 2.3	0.9
	Tailings	2	NA	11.0	1		0.35
Western surface coal mining[d]	Coal	15	3.4 - 16	6.2	7	2.8 - 20	6.9
	Overburden	15	3.8 - 15	7.5	0	NA	NA
	Exposed ground	3	5.1 - 21	15.0	3	0.8 - 6.4	3.4
Coal fired power generation[e]	Coal	60	0.6 - 4.8	2.2	59	2.7 - 7.4	4.5

[a] References 2-5. NA = not applicable.
[b] Reference 1.
[c] Reference 6.
[d] Reference 7.
[e] Reference 8. Values reflect "as received" conditions of a single power plant.

The quantity of particulate emissions generated by either type of drop operation, per ton of material transferred, may be estimated, with a rating of A, using the following empirical expression[2]:

$$E = k(0.0016) \frac{\left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (kg/Mg)}$$

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (lb/ton)}$$

where: E = emission factor
k = particle size multiplier (dimensionless)
U = mean wind speed, m/s (mph)
M = material moisture content (%)

The particle size multiplier, k, varies with aerodynamic particle diameter, as shown in Table 11.2.3-2.

TABLE 11.2.3-2. AERODYNAMIC PARTICLE SIZE MULTIPLIER (k)

<30 um	<15 um	<10 um	<5 um	<2.5 um
0.74	0.48	0.35	0.20	0.11

The equation retains the assigned quality rating if applied within the ranges of source conditions that were tested in developing the equation, as given in Table 11.2.3-3. Note that silt content is included in Table 11.2.3-3, even though silt content does not appear as a correction parameter in the equation. While it is reasonable to expect that silt content and emission factors are interrelated, no significant correlation between the two was found during the derivation of the equation, probably because most tests with high silt contents were conducted under lower winds, and vice versa. It is recommended that estimates from the equation be reduced one quality rating level, if the silt content used in a particular application falls outside the range given in Table 11.2.3-3.

TABLE 11.2.3-3. RANGES OF SOURCE CONDITIONS FOR EQUATION 1

Silt Content	Moisture Content	Wind Speed (m/s)	Wind Speed (mph)
0.44 - 19	0.25 - 4.8	0.6 - 6.7	1.3 - 15

Also, to retain the equation's quality rating when applied to a specific facility, it is necessary that reliable correction parameters be determined for the specific sources of interest. The field and laboratory procedures for aggregate sampling are given in Reference 3. In the event that site specific values for correction parameters cannot be obtained, the appropriate mean values from Table 11.2.3-1 may be used, but, in that case, the quality rating of the equation is reduced by one level.

For emissions from equipment traffic (trucks, front end loaders, dozers, etc.) traveling between or on piles, it is recommended that the equations for vehicle traffic on unpaved surfaces be used (see Section 11.2.1). For vehicle travel between storage piles, the silt value(s) for the areas among the piles (which may differ from the silt values for the stored materials) should be used.

Worst case emissions from storage pile areas occur under dry windy conditions. Worst case emissions from materials handling operations may be calculated by substituting into the equation appropriate values for aggregate material moisture content and for anticipated wind speeds during the worst case averaging period, usually 24 hours. The treatment of dry conditions for vehicle traffic (Section 11.2.1), centering on parameter p, follows the methodology described in Section 11.2.1. Also, a separate set of nonclimatic correction parameters and source extent values corresponding to higher than normal storage pile activity may be justified for the worst case averaging period.

11.2.3.4 Controls

Watering and chemical wetting agents are the principal means for control of aggregate storage pile emissions. Enclosure or covering of inactive piles to reduce wind erosion can also reduce emissions. Watering is useful mainly to reduce emissions from vehicle traffic in the storage pile area. Watering of the storage piles themselves typically has only a very temporary slight effect on total emissions. A much more effective technique is to apply chemical wetting agents for better wetting of fines and longer retention of the moisture film. Continuous chemical treatment of material loaded onto piles, coupled with watering or treatment of roadways, can reduce total particulate emissions from aggregate storage operations by up to 90 percent.[9]

References for Section 11.2.3

1. C. Cowherd, Jr., et al., Development Of Emission Factors For Fugitive Dust Sources, EPA-450/3-74-037, U. S. Environmental Protection Agency, Research Triangle Park, NC, June 1974.

2. R. Bohn, et al., Fugitive Emissions From Integrated Iron And Steel Plants, EPA-600/2-78-050, U. S. Environmental Protection Agency, Cincinnati, OH, March 1978.

3. C. Cowherd, Jr., et al., Iron And Steel Plant Open Dust Source Fugitive Emission Evaluation, EPA-600/2-79-103, U. S. Environmental Protection Agency, Cincinnati, OH, May 1979.

4. R. Bohn, Evaluation Of Open Dust Sources In The Vicinity Of Buffalo, New York, EPA Contract No. 68-02-2545, Midwest Research Institute, Kansas City, MO, March 1979.

5. C. Cowherd, Jr., and T. Cuscino, Jr., Fugitive Emissions Evaluation, MRI-4343-L, Midwest Research Institute, Kansas City, MO, February 1977.

6. T. Cuscino, et al., Taconite Mining Fugitive Emissions Study, Minnesota Pollution Control Agency, Roseville, MN, June 1979.

7. K. Axetell and C. Cowherd, Jr., Improved Emission Factors For Fugitive Dust From Western Surface Coal Mining Sources, 2 Volumes, EPA Contract No. 68-03-2924, PEI, Inc., Kansas City, MO, July 1981.

8. E. T. Brookman, et al., Determination of Fugitive Coal Dust Emissions From Rotary Railcar Dumping, 1956-L81-00, TRC, Hartford, CT, May 1984.

9. G. A. Jutze, et al., Investigation Of Fugitive Dust Sources Emissions And Control, EPA-450/3-74-036a, U. S. Environmental Protection Agency, Research Triangle Park, NC, June 1974.

CONTROL EFFICIENCY REFERENCES

BEST AVAILABLE COPY

DOE/RG/10312-1(Vol.2)
(DE85010939)

Energy FOSSIL

TECHNICAL GUIDE FOR ESTIMATING FUGITIVE DUST IMPACTS FROM COAL HANDLING OPERATIONS

By
George C. Howroyd

September 1984

Work Performed Under Contract No. AC01-80RG10312

Dames & Moore
Atlanta, Georgia

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

TABLE 4-9

ESTIMATED DUST CONTROL EFFICIENCIES FOR FUGITIVE DUST EMISSIONS FROM LIMESTONE HANDLING AND STORAGE OPERATIONS

Activity		Control Method	Estimated Control Efficiencies (%)	References
A. Load-In		- water sprays	75	Bohn, et al. (1978)
			40	EPA (1977b)
		- chemicals	<99	EPA (1977b)
			80-90	Jutze, et al. (1977)
	*	- enclosure	70-90	Jutze, et al. (1977)
		- enclosure with chemical wetting	95	Davis, et al. (1981)
	*	- partial enclosure with telescopic chute	90	TRW (1982)
		- wind guards	50	Bohn, et al. (1978)
		- stone ladder	80	Bohn, et al. (1978)
		- telescopic chutes	75	Bohn, et al. (1978) Jutze, et al. (1977)
		- stacker spreader	25	Bohn, et al. (1978)
		- micron-sized foam spray	99	Cole & Ayers (1983)
		- micron-droplet spray	90	Kretch (1983)
B. Pile Traffic & Maintenance		- carryover of water/chemical from load-in	60	Davis, et al. (1981)
C. Wind Erosion		- water sprays	50	Bohn, et al. (1978)
		- chemical	70	Bohn, et al. (1978)
		- water/chemical carryover from load-in	80	Davis, et al. (1978)
		- wind breaks/fences	30	Bohn, et al. (1978)
		- vegetative cover	70	Bohn, et al. (1978)
		- partial enclosure - active pile	70	TRW (1982)

TABLE 4-9 (Continued)

Activity	Control Method	Estimated Control Efficiencies (%)	References
D. Load-Out	- water sprays	40	EPA (1977b)
	- chemicals	<99	EPA (1977b)
	* - water sprays	80	Bohn, et al. (1978)
		50	Jutze, et al. (1977)
	- enclosure with bag filter	99	Bohn, et al. (1978), TRW (1982)
	- enclosure with chemical wetting	99	Davis, et al. (1981)
	- telescopic chute with dust suppressant carryover from storage pile	75	Davis, et al. (1981)
	- stacker/reclaimer	40	Jutze et al. (1977)
	* - under-pile conveyor	80	Jutze et al. (1977)
	- micron-sized foam spray	99	Cole & Ayers (1983)
	- micron droplet spray	90	Kretch (1983)

WIND EROSION CALCULATIONS

WIND EROSION FROM SLAG PILE

Spreadsheet as of 09:29:27 on 06-27-1995

Input Filename: tslag1.epc
Inventory area: Tarmac Slag Pile 1
Source ID: Tslag1 Filename: A:\Tslag1.EPC

Emissions estimate year: 1995
Based on wind data year: 1990
Fastest mile filename: miami90.met
System of units: English
Source life (inclusive days of year)
Start day: 1
End day: 346 2nd Day set equal to last day in fastest mile of wind file!
F=flat area, PC=conical pile, PO=oval_pile: PC
Pile height (ft) :20
Pile diameter (ft) :70
Area (sq ft): 4430.211
Material description: Slag
Percent moisture content: 6
Percent silt content: 5
Threshold friction velocity, U*t, (cm/sec): 102
Roughness height (cm): 0.1
Mode (mm) of size distribution 2.844418# (# denotes calculated value)
Lc value (cf. Fig. 6-3 of reference manual):

Frequency of disturbance information :
Us/Ur = .9 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .9 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .6 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .6 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .2 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .2 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)

Total emissions emitted over the period: 12388.81 g

Threshold velocity = 102 cm/s
Control: Effective windspeed ratio = 1

Us/Ur = .9 Disturbance interval = 1 days

Period 25 - 26 high on 26 1.062787 m/s 14.51838 g emitted
Period 26 - 27 high on 26 1.062787 m/s 14.51838 g emitted
Period 41 - 42 high on 42 1.062787 m/s 14.51838 g emitted
Period 42 - 43 high on 42 1.062787 m/s 14.51838 g emitted
Period 45 - 46 high on 46 1.062787 m/s 14.51838 g emitted
Period 46 - 47 high on 46 1.062787 m/s 14.51838 g emitted
Period 52 - 53 high on 53 1.232833 m/s 98.1353 g emitted
Period 53 - 54 high on 53 1.232833 m/s 98.1353 g emitted
Period 56 - 57 high on 57 1.232833 m/s 98.1353 g emitted
Period 57 - 58 high on 57 1.232833 m/s 98.1353 g emitted
Period 58 - 59 high on 58 1.190322 m/s 73.34848 g emitted
Period 61 - 62 high on 62 1.020276 m/s 8.516572E-02 g emitted
Period 62 - 63 high on 62 1.020276 m/s 8.516572E-02 g emitted

Period 65 - 66 high on 66 1.190322 m/s 73.34848 g emitted
Period 66 - 67 high on 66 1.190322 m/s 73.34848 g emitted
Period 74 - 75 high on 75 1.062787 m/s 14.51838 g emitted
Period 75 - 76 high on 75 1.062787 m/s 14.51838 g emitted
Period 80 - 81 high on 81 1.020276 m/s 8.516572E-02 g emitted
Period 81 - 82 high on 81 1.020276 m/s 8.516572E-02 g emitted
Period 88 - 89 high on 89 1.105299 m/s 31.53999 g emitted
Period 89 - 90 high on 89 1.105299 m/s 31.53999 g emitted
Period 92 - 93 high on 93 1.190322 m/s 73.34848 g emitted
Period 93 - 94 high on 93 1.190322 m/s 73.34848 g emitted
Period 104 - 105 high on 105 1.105299 m/s 31.53999 g emitted
Period 105 - 106 high on 105 1.105299 m/s 31.53999 g emitted
Period 108 - 109 high on 109 1.062787 m/s 14.51838 g emitted
Period 109 - 110 high on 109 1.062787 m/s 14.51838 g emitted
Period 143 - 144 high on 144 1.020276 m/s 8.516572E-02 g emitted
Period 144 - 145 high on 144 1.020276 m/s 8.516572E-02 g emitted
Period 145 - 146 high on 146 1.190322 m/s 73.34848 g emitted
Period 146 - 147 high on 146 1.190322 m/s 73.34848 g emitted
Period 147 - 148 high on 147 1.105299 m/s 31.53999 g emitted
Period 151 - 152 high on 152 1.827994 m/s 716.9332 g emitted
Period 152 - 153 high on 152 1.827994 m/s 716.9332 g emitted
Period 159 - 160 high on 160 1.020276 m/s 8.516572E-02 g emitted
Period 160 - 161 high on 160 1.020276 m/s 8.516572E-02 g emitted
Period 161 - 162 high on 162 1.105299 m/s 31.53999 g emitted
Period 162 - 163 high on 162 1.105299 m/s 31.53999 g emitted
Period 179 - 180 high on 180 1.062787 m/s 14.51838 g emitted
Period 180 - 181 high on 180 1.062787 m/s 14.51838 g emitted
Period 189 - 190 high on 190 1.062787 m/s 14.51838 g emitted
Period 190 - 191 high on 190 1.062787 m/s 14.51838 g emitted
Period 192 - 193 high on 193 1.062787 m/s 14.51838 g emitted
Period 193 - 194 high on 193 1.062787 m/s 14.51838 g emitted
Period 198 - 199 high on 199 1.232833 m/s 98.1353 g emitted
Period 199 - 200 high on 199 1.232833 m/s 98.1353 g emitted
Period 204 - 205 high on 205 1.487902 m/s 301.2126 g emitted
Period 205 - 206 high on 205 1.487902 m/s 301.2126 g emitted
Period 250 - 251 high on 251 1.487902 m/s 301.2126 g emitted
Period 251 - 252 high on 252 1.572925 m/s 389.6124 g emitted
Period 252 - 253 high on 252 1.572925 m/s 389.6124 g emitted
Period 273 - 274 high on 274 1.062787 m/s 14.51838 g emitted
Period 274 - 275 high on 274 1.062787 m/s 14.51838 g emitted
Period 281 - 282 high on 282 1.360368 m/s 188.0262 g emitted
Period 282 - 283 high on 282 1.360368 m/s 188.0262 g emitted
Period 283 - 284 high on 283 1.190322 m/s 73.34848 g emitted
Period 302 - 303 high on 303 1.275344 m/s 125.5104 g emitted
Period 303 - 304 high on 303 1.275344 m/s 125.5104 g emitted
Period 305 - 306 high on 306 1.020276 m/s 8.516572E-02 g emitted
Period 306 - 307 high on 306 1.020276 m/s 8.516572E-02 g emitted

Summary for Us/Ur = .9 Disturbance Interval = 1
5402.364 Total g emitted over 1 - 346

Us/Ur = .9 Disturbance interval = 1 days

Period 25 - 26 high on 26 1.062787 m/s 14.51838 g emitted
Period 26 - 27 high on 26 1.062787 m/s 14.51838 g emitted
Period 41 - 42 high on 42 1.062787 m/s 14.51838 g emitted
Period 42 - 43 high on 42 1.062787 m/s 14.51838 g emitted
Period 45 - 46 high on 46 1.062787 m/s 14.51838 g emitted
Period 46 - 47 high on 46 1.062787 m/s 14.51838 g emitted
Period 52 - 53 high on 53 1.232833 m/s 98.1353 g emitted

```
Period  53 - 54  high on  53   1.232833  m/s  98.1353  g emitted
Period  56 - 57  high on  57   1.232833  m/s  98.1353  g emitted
Period  57 - 58  high on  57   1.232833  m/s  98.1353  g emitted
Period  58 - 59  high on  58   1.190322  m/s  73.34848  g emitted
Period  61 - 62  high on  62   1.020276  m/s  8.516572E-02  g emitted
Period  62 - 63  high on  62   1.020276  m/s  8.516572E-02  g emitted
Period  65 - 66  high on  66   1.190322  m/s  73.34848  g emitted
Period  66 - 67  high on  66   1.190322  m/s  73.34848  g emitted
Period  74 - 75  high on  75   1.062787  m/s  14.51838  g emitted
Period  75 - 76  high on  75   1.062787  m/s  14.51838  g emitted
Period  80 - 81  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  81 - 82  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  88 - 89  high on  89   1.105299  m/s  31.53999  g emitted
Period  89 - 90  high on  89   1.105299  m/s  31.53999  g emitted
Period  92 - 93  high on  93   1.190322  m/s  73.34848  g emitted
Period  93 - 94  high on  93   1.190322  m/s  73.34848  g emitted
Period  104 - 105  high on  105   1.105299  m/s  31.53999  g emitted
Period  105 - 106  high on  105   1.105299  m/s  31.53999  g emitted
Period  108 - 109  high on  109   1.062787  m/s  14.51838  g emitted
Period  109 - 110  high on  109   1.062787  m/s  14.51838  g emitted
Period  143 - 144  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  144 - 145  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  145 - 146  high on  146   1.190322  m/s  73.34848  g emitted
Period  146 - 147  high on  146   1.190322  m/s  73.34848  g emitted
Period  147 - 148  high on  147   1.105299  m/s  31.53999  g emitted
Period  151 - 152  high on  152   1.827994  m/s  716.9332  g emitted
Period  152 - 153  high on  152   1.827994  m/s  716.9332  g emitted
Period  159 - 160  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  160 - 161  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  161 - 162  high on  162   1.105299  m/s  31.53999  g emitted
Period  162 - 163  high on  162   1.105299  m/s  31.53999  g emitted
Period  179 - 180  high on  180   1.062787  m/s  14.51838  g emitted
Period  180 - 181  high on  180   1.062787  m/s  14.51838  g emitted
Period  189 - 190  high on  190   1.062787  m/s  14.51838  g emitted
Period  190 - 191  high on  190   1.062787  m/s  14.51838  g emitted
Period  192 - 193  high on  193   1.062787  m/s  14.51838  g emitted
Period  193 - 194  high on  193   1.062787  m/s  14.51838  g emitted
Period  198 - 199  high on  199   1.232833  m/s  98.1353  g emitted
Period  199 - 200  high on  199   1.232833  m/s  98.1353  g emitted
Period  204 - 205  high on  205   1.487902  m/s  301.2126  g emitted
Period  205 - 206  high on  205   1.487902  m/s  301.2126  g emitted
Period  250 - 251  high on  251   1.487902  m/s  301.2126  g emitted
Period  251 - 252  high on  252   1.572925  m/s  389.6124  g emitted
Period  252 - 253  high on  252   1.572925  m/s  389.6124  g emitted
Period  273 - 274  high on  274   1.062787  m/s  14.51838  g emitted
Period  274 - 275  high on  274   1.062787  m/s  14.51838  g emitted
Period  281 - 282  high on  282   1.360368  m/s  188.0262  g emitted
Period  282 - 283  high on  282   1.360368  m/s  188.0262  g emitted
Period  283 - 284  high on  283   1.190322  m/s  73.34848  g emitted
Period  302 - 303  high on  303   1.275344  m/s  125.5104  g emitted
Period  303 - 304  high on  303   1.275344  m/s  125.5104  g emitted
Period  305 - 306  high on  306   1.020276  m/s  8.516572E-02  g emitted
Period  306 - 307  high on  306   1.020276  m/s  8.516572E-02  g emitted

Summary for Us/Ur =  .9     Disturbance Interval =  1
 5402.364  Total g emitted over  1  -  346
---------------------------------------------------------------

Us/Ur =  .6    Disturbance interval = 1  days

Period  151 - 152  high on  152   1.218663  m/s  358.3416  g emitted
```

```
Period  152 - 153  high on  152   1.218663  m/s  358.3416  g emitted
Period  251 - 252  high on  252   1.048617  m/s  37.67894  g emitted
Period  252 - 253  high on  252   1.048617  m/s  37.67894  g emitted

Summary for Us/Ur =  .6      Disturbance Interval =  1
 792.0411  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .6    Disturbance interval = 1  days

Period  151 - 152  high on  152   1.218663  m/s  358.3416  g emitted
Period  152 - 153  high on  152   1.218663  m/s  358.3416  g emitted
Period  251 - 252  high on  252   1.048617  m/s  37.67894  g emitted
Period  252 - 253  high on  252   1.048617  m/s  37.67894  g emitted

Summary for Us/Ur =  .6      Disturbance Interval =  1
 792.0411  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .2    Disturbance interval = 1  days


Summary for Us/Ur =  .2      Disturbance Interval =  1
 0  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .2    Disturbance interval = 1  days


Summary for Us/Ur =  .2      Disturbance Interval =  1
 0  Total g emitted over  1  -  346
---------------------------------------------------------------
Summary for entire source:  12388.81   g emitted over period  1  -  346
NOTE: For a variety of reasons given in the user manual, the erosion estimates
      presented above may be considered as CONSERVATIVELY HIGH.  See the
      user manual for more information.
```

WIND EROSION FROM DRY SLAG PILE

Spreadsheet as of 09:49:12 on 06-27-1995

Input Filename: tslag2.epc
Inventory area: Tarmac Slag Pile 2
Source ID: tslag2 Filename: A:\tslag2.EPC

Emissions estimate year: 1995
Based on wind data year: 1990
Fastest mile filename: miami90.met
System of units: English
Source life (inclusive days of year)
Start day: 1
End day: 346 2nd Day set equal to last day in fastest mile of wind file!
F=flat area, PC=conical pile, PO=oval pile: PC
Pile height (ft) :20
Pile diameter (ft) :70
Area (sq ft): 4430.211
Material description: Slag
Percent moisture content: 3
Percent silt content: 5
Threshold friction velocity, U*t, (cm/sec): 102
Roughness height (cm): 0.1
Mode (mm) of size distribution 2.844418# (# denotes calculated value)
Lc value (cf. Fig. 6-3 of reference manual):

Frequency of disturbance information :
Us/Ur = .9 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .9 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .6 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .6 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .2 -- subarea # 1 -- 50 % of regime disturbed every 1 day(s)
Us/Ur = .2 -- subarea # 2 -- 50 % of regime disturbed every 1 day(s)

Total emissions emitted over the period: 12388.81 g

Threshold velocity = 102 cm/s
Control: Effective windspeed ratio = 1

Us/Ur = .9 Disturbance interval = 1 days

Period 25 - 26 high on 26 1.062787 m/s 14.51838 g emitted
Period 26 - 27 high on 26 1.062787 m/s 14.51838 g emitted
Period 41 - 42 high on 42 1.062787 m/s 14.51838 g emitted
Period 42 - 43 high on 42 1.062787 m/s 14.51838 g emitted
Period 45 - 46 high on 46 1.062787 m/s 14.51838 g emitted
Period 46 - 47 high on 46 1.062787 m/s 14.51838 g emitted
Period 52 - 53 high on 53 1.232833 m/s 98.1353 g emitted
Period 53 - 54 high on 53 1.232833 m/s 98.1353 g emitted
Period 56 - 57 high on 57 1.232833 m/s 98.1353 g emitted
Period 57 - 58 high on 57 1.232833 m/s 98.1353 g emitted
Period 58 - 59 high on 58 1.190322 m/s 73.34848 g emitted
Period 61 - 62 high on 62 1.020276 m/s 8.516572E-02 g emitted
Period 62 - 63 high on 62 1.020276 m/s 8.516572E-02 g emitted

```
Period  65 - 66  high on  66   1.190322  m/s  73.34848  g emitted
Period  66 - 67  high on  66   1.190322  m/s  73.34848  g emitted
Period  74 - 75  high on  75   1.062787  m/s  14.51838  g emitted
Period  75 - 76  high on  75   1.062787  m/s  14.51838  g emitted
Period  80 - 81  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  81 - 82  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  88 - 89  high on  89   1.105299  m/s  31.53999  g emitted
Period  89 - 90  high on  89   1.105299  m/s  31.53999  g emitted
Period  92 - 93  high on  93   1.190322  m/s  73.34848  g emitted
Period  93 - 94  high on  93   1.190322  m/s  73.34848  g emitted
Period  104 - 105  high on  105   1.105299  m/s  31.53999  g emitted
Period  105 - 106  high on  105   1.105299  m/s  31.53999  g emitted
Period  108 - 109  high on  109   1.062787  m/s  14.51838  g emitted
Period  109 - 110  high on  109   1.062787  m/s  14.51838  g emitted
Period  143 - 144  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  144 - 145  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  145 - 146  high on  146   1.190322  m/s  73.34848  g emitted
Period  146 - 147  high on  146   1.190322  m/s  73.34848  g emitted
Period  147 - 148  high on  147   1.105299  m/s  31.53999  g emitted
Period  151 - 152  high on  152   1.827994  m/s  716.9332  g emitted
Period  152 - 153  high on  152   1.827994  m/s  716.9332  g emitted
Period  159 - 160  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  160 - 161  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  161 - 162  high on  162   1.105299  m/s  31.53999  g emitted
Period  162 - 163  high on  162   1.105299  m/s  31.53999  g emitted
Period  179 - 180  high on  180   1.062787  m/s  14.51838  g emitted
Period  180 - 181  high on  180   1.062787  m/s  14.51838  g emitted
Period  189 - 190  high on  190   1.062787  m/s  14.51838  g emitted
Period  190 - 191  high on  190   1.062787  m/s  14.51838  g emitted
Period  192 - 193  high on  193   1.062787  m/s  14.51838  g emitted
Period  193 - 194  high on  193   1.062787  m/s  14.51838  g emitted
Period  198 - 199  high on  199   1.232833  m/s  98.1353  g emitted
Period  199 - 200  high on  199   1.232833  m/s  98.1353  g emitted
Period  204 - 205  high on  205   1.487902  m/s  301.2126  g emitted
Period  205 - 206  high on  205   1.487902  m/s  301.2126  g emitted
Period  250 - 251  high on  251   1.487902  m/s  301.2126  g emitted
Period  251 - 252  high on  252   1.572925  m/s  389.6124  g emitted
Period  252 - 253  high on  252   1.572925  m/s  389.6124  g emitted
Period  273 - 274  high on  274   1.062787  m/s  14.51838  g emitted
Period  274 - 275  high on  274   1.062787  m/s  14.51838  g emitted
Period  281 - 282  high on  282   1.360368  m/s  188.0262  g emitted
Period  282 - 283  high on  282   1.360368  m/s  188.0262  g emitted
Period  283 - 284  high on  283   1.190322  m/s  73.34848  g emitted
Period  302 - 303  high on  303   1.275344  m/s  125.5104  g emitted
Period  303 - 304  high on  303   1.275344  m/s  125.5104  g emitted
Period  305 - 306  high on  306   1.020276  m/s  8.516572E-02  g emitted
Period  306 - 307  high on  306   1.020276  m/s  8.516572E-02  g emitted

Summary for Us/Ur =  .9      Disturbance Interval =  1
 5402.364  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .9    Disturbance interval = 1  days

Period  25 - 26  high on  26   1.062787  m/s  14.51838  g emitted
Period  26 - 27  high on  26   1.062787  m/s  14.51838  g emitted
Period  41 - 42  high on  42   1.062787  m/s  14.51838  g emitted
Period  42 - 43  high on  42   1.062787  m/s  14.51838  g emitted
Period  45 - 46  high on  46   1.062787  m/s  14.51838  g emitted
Period  46 - 47  high on  46   1.062787  m/s  14.51838  g emitted
Period  52 - 53  high on  53   1.232833  m/s  98.1353  g emitted
```

```
Period  53 - 54  high on  53   1.232833  m/s  98.1353  g emitted
Period  56 - 57  high on  57   1.232833  m/s  98.1353  g emitted
Period  57 - 58  high on  57   1.232833  m/s  98.1353  g emitted
Period  58 - 59  high on  58   1.190322  m/s  73.34848  g emitted
Period  61 - 62  high on  62   1.020276  m/s  8.516572E-02  g emitted
Period  62 - 63  high on  62   1.020276  m/s  8.516572E-02  g emitted
Period  65 - 66  high on  66   1.190322  m/s  73.34848  g emitted
Period  66 - 67  high on  66   1.190322  m/s  73.34848  g emitted
Period  74 - 75  high on  75   1.062787  m/s  14.51838  g emitted
Period  75 - 76  high on  75   1.062787  m/s  14.51838  g emitted
Period  80 - 81  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  81 - 82  high on  81   1.020276  m/s  8.516572E-02  g emitted
Period  88 - 89  high on  89   1.105299  m/s  31.53999  g emitted
Period  89 - 90  high on  89   1.105299  m/s  31.53999  g emitted
Period  92 - 93  high on  93   1.190322  m/s  73.34848  g emitted
Period  93 - 94  high on  93   1.190322  m/s  73.34848  g emitted
Period  104 - 105  high on  105   1.105299  m/s  31.53999  g emitted
Period  105 - 106  high on  105   1.105299  m/s  31.53999  g emitted
Period  108 - 109  high on  109   1.062787  m/s  14.51838  g emitted
Period  109 - 110  high on  109   1.062787  m/s  14.51838  g emitted
Period  143 - 144  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  144 - 145  high on  144   1.020276  m/s  8.516572E-02  g emitted
Period  145 - 146  high on  146   1.190322  m/s  73.34848  g emitted
Period  146 - 147  high on  146   1.190322  m/s  73.34848  g emitted
Period  147 - 148  high on  147   1.105299  m/s  31.53999  g emitted
Period  151 - 152  high on  152   1.827994  m/s  716.9332  g emitted
Period  152 - 153  high on  152   1.827994  m/s  716.9332  g emitted
Period  159 - 160  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  160 - 161  high on  160   1.020276  m/s  8.516572E-02  g emitted
Period  161 - 162  high on  162   1.105299  m/s  31.53999  g emitted
Period  162 - 163  high on  162   1.105299  m/s  31.53999  g emitted
Period  179 - 180  high on  180   1.062787  m/s  14.51838  g emitted
Period  180 - 181  high on  180   1.062787  m/s  14.51838  g emitted
Period  189 - 190  high on  190   1.062787  m/s  14.51838  g emitted
Period  190 - 191  high on  190   1.062787  m/s  14.51838  g emitted
Period  192 - 193  high on  193   1.062787  m/s  14.51838  g emitted
Period  193 - 194  high on  193   1.062787  m/s  14.51838  g emitted
Period  198 - 199  high on  199   1.232833  m/s  98.1353  g emitted
Period  199 - 200  high on  199   1.232833  m/s  98.1353  g emitted
Period  204 - 205  high on  205   1.487902  m/s  301.2126  g emitted
Period  205 - 206  high on  205   1.487902  m/s  301.2126  g emitted
Period  250 - 251  high on  251   1.487902  m/s  301.2126  g emitted
Period  251 - 252  high on  252   1.572925  m/s  389.6124  g emitted
Period  252 - 253  high on  252   1.572925  m/s  389.6124  g emitted
Period  273 - 274  high on  274   1.062787  m/s  14.51838  g emitted
Period  274 - 275  high on  274   1.062787  m/s  14.51838  g emitted
Period  281 - 282  high on  282   1.360368  m/s  188.0262  g emitted
Period  282 - 283  high on  282   1.360368  m/s  188.0262  g emitted
Period  283 - 284  high on  283   1.190322  m/s  73.34848  g emitted
Period  302 - 303  high on  303   1.275344  m/s  125.5104  g emitted
Period  303 - 304  high on  303   1.275344  m/s  125.5104  g emitted
Period  305 - 306  high on  306   1.020276  m/s  8.516572E-02  g emitted
Period  306 - 307  high on  306   1.020276  m/s  8.516572E-02  g emitted

Summary for Us/Ur =  .9      Disturbance Interval =  1
 5402.364  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .6    Disturbance interval = 1  days

Period  151 - 152  high on  152   1.218663  m/s  358.3416  g emitted
```

```
Period  152 - 153  high on  152   1.218663  m/s  358.3416  g emitted
Period  251 - 252  high on  252   1.048617  m/s  37.67894  g emitted
Period  252 - 253  high on  252   1.048617  m/s  37.67894  g emitted

Summary for Us/Ur =  .6      Disturbance Interval =  1
 792.0411  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .6    Disturbance interval = 1  days

Period  151 - 152  high on  152   1.218663  m/s  358.3416  g emitted
Period  152 - 153  high on  152   1.218663  m/s  358.3416  g emitted
Period  251 - 252  high on  252   1.048617  m/s  37.67894  g emitted
Period  252 - 253  high on  252   1.048617  m/s  37.67894  g emitted

Summary for Us/Ur =  .6      Disturbance Interval =  1
 792.0411  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .2    Disturbance interval = 1  days


Summary for Us/Ur =  .2      Disturbance Interval =  1
 0  Total g emitted over  1  -  346
---------------------------------------------------------------
Us/Ur =  .2    Disturbance interval = 1  days


Summary for Us/Ur =  .2      Disturbance Interval =  1
 0  Total g emitted over  1  -  346
---------------------------------------------------------------
Summary for entire source:  12388.81   g emitted over period  1  -  346
NOTE: For a variety of reasons given in the user manual, the erosion estimates
      presented above may be considered as CONSERVATIVELY HIGH.  See the
      user manual for more information.
```

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend, Director
Jannac Fla, Inc
455 Sawaia Dr.
Deerfield Bch, Fl
33441

4a. Article Number
Z 127 632 576

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

7. Date of Delivery 11-23-95

5. Signature (Addressee)

6. Signature (Agent)

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

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 576

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

UNITED STATES POSTAL SERVICE

Sent to Albert Townsend	
Street and No. Jannac. Fla	
P.O., State, and ZIP Code Deerfield Bch, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 11-20-95	
AC13-273887/BD-Fl-230	

PS Form 3800, March 1993

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend, DOJ-INS
Miami Florida
455 Fairway Dr
Deerfield Bch. Fl
33441

4a. Article Number
Z 127 632 561

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

7. Date of Delivery
10/30/95

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 561

UNITED STATES POSTAL SERVICE

Receipt for Certified Mail

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

Sent to
Albert Townsend
Street and No.
Miami Fla
P.O., State and ZIP Code
Deerfield Bch, Fl

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	10-27-95

AC13-273887
ASO-FI-230

PS Form **3800**, March 1993

Is your RETURN ADDRESS completed on the reverse side?

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert Townsend
Director of Tech. Serv.
Tarmac Fla., Inc
455 Fairway Dr.
Deerfield Bch FL 33441

4a. Article Number
Z 392 979 040

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

7. Date of Delivery
9/15/95

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 040

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

PS Form **3800**, March 1993

Sent to: Albert Townsend	
Street and No. Tarmac, Fl	
P.O., State and ZIP Code Deerfield Bch, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 9-13-95	

AC13-273887
PSD-FI-230

The visible emissions standards for these operations will be:

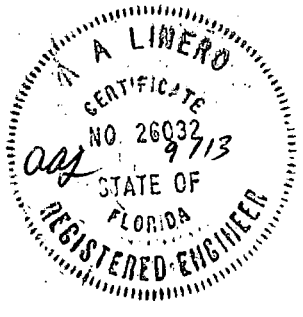
Storage Piles - 20 percent opacity
Belt Conveyer Transfer Points - 10 percent opacity
Finish Mill Baghouse - 5 percent opacity
Silo Baghouses - 5 percent opacity
Bulk Loadout Operation - 10 percent opacity

IV. AIR QUALITY IMPACT ANALYSIS

The increase in emissions from the blast furnace slag processing operation will not cause a violation of any ambient air quality standard.

V. CONCLUSION

On the basis of the information provided by Tarmac Florida, Inc., the Department has reasonable assurance that the proposed blast furnace slag processing operation, as described in this evaluation and subject to the conditions proposed within, will not cause a violation of any air quality standard, PSD increment, or other technical provision of Chapter 62-212 of the Florida Administrative Code.



Is your RETURN ADDRESS completed on the reverse side?

Fold at line over top of envelope to the

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 below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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:
Albert W. Townsend
Tarmac America, Inc
455 Fairway Dr.
Deerfield Bch, Fl
33441

4a. Article Number
Z 392 979 063

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

7. Date of Delivery
7-31-95

5. Signature (Addressee)

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

6. Signature (Agent)
[signature]

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 392 979 063

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

UNITED STATES POSTAL SERVICE

PS Form **3800**, March 1993

Sent to: Albert Townsend	
Street and No. Tarmac	
P.O., State and ZIP Code Deerfield Bch, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 7-27-95	

AC13-273887
PSO-FI-230

TARMAC
P.O. BOX 2016, NORFOLK, VIRGINIA 23501

VENDOR NO. 1016059

CHECK NO. 193323 193323

ROUTE CODE	INV. DATE	VENDOR INVOICE NO.	GROSS AMOUNT	DISCOUNT	NET AMOUNT
DC	6/29/95	APPLIC FEES	7,500.00	.00	7,500.00
			7,500.00	.00	7,500.00

ANY QUESTIONS PERTAINING TO THIS PAYMENT SHOULD BE MADE TO OUR OFFICE AT THE ADDRESS ABOVE.

BEST AVAILABLE COPY

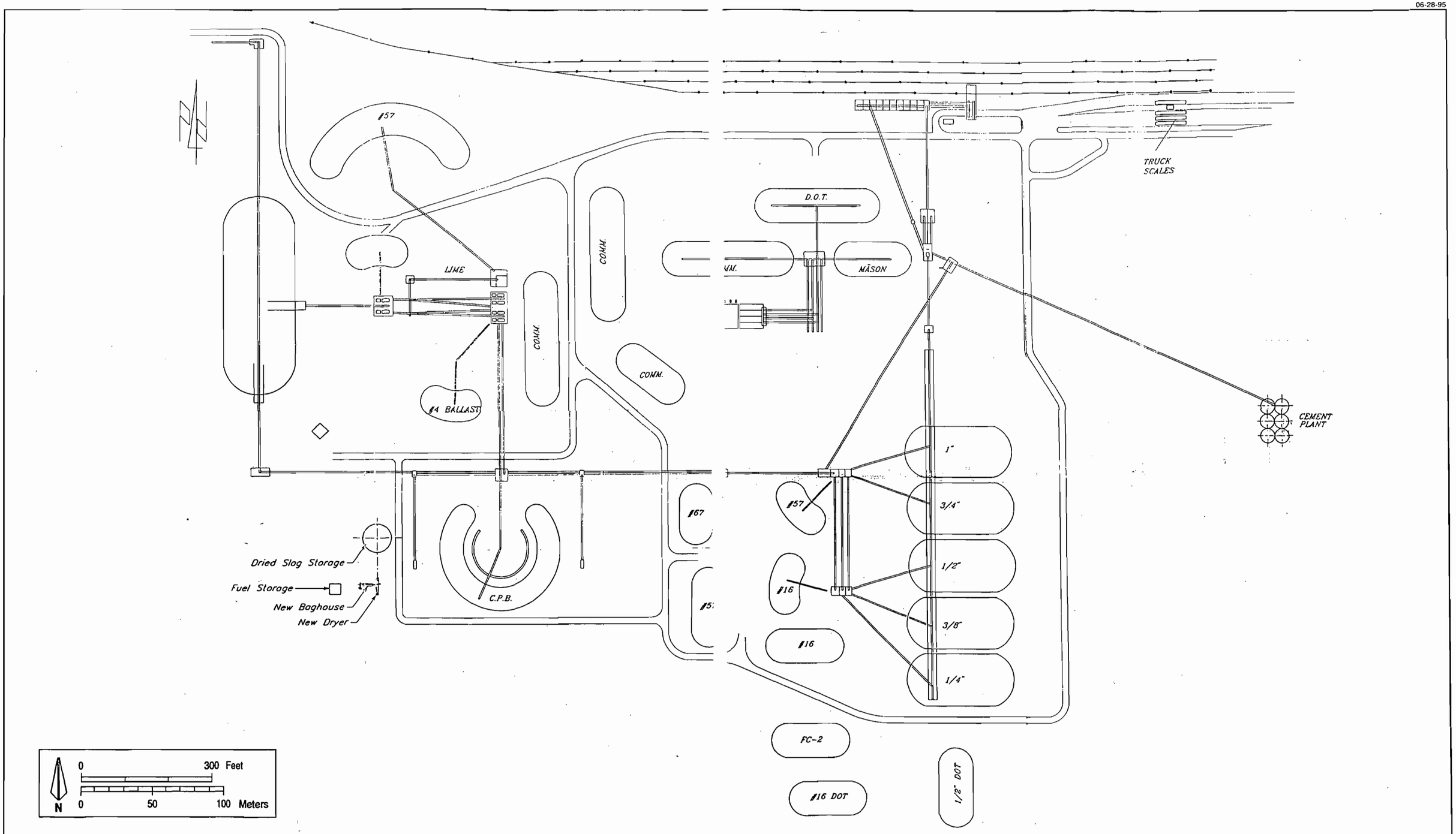


Figure 2-4
Layout of Slag Dryer and Handling Facilities

Check Sheet

Company Name: TARMAC FLORIDA INC. - PENNSUCO -
Permit Number: AC13-273887 - SLAGDRYER
PSD Number: 230
Permit Engineer: HANKS

Application:

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

Cross References:

- [ ]
- [ ]
- [ ]

Intent:

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

Correspondence with:

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

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

Final Determination:

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

Post Permit Correspondence:

- [✓] Extensions/Amendments/Modifications
- [✓] Other Test plan