

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit

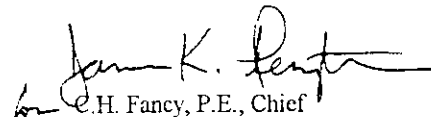
Mr. Scott Quaas, Environmental Manager
Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

DEP File No.0250020-001-AC
PSD-FL-236

Enclosed is the FINAL Permit Number PSD-FL-236. This permit is issued for a new blast furnace slag dryer and baghouse pursuant to 40 CFR 52.21-Prevention of Significant Deterioration (PSD permit). 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, F.S., 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 Legal Office; 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 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.


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

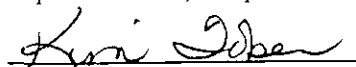
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 6-6-97 to the person(s) listed:

Mr. Scott Quaas, Tarmac America, Inc. *
Mr. David Buff, Golder Assoc.
Mr. Brian Beals, EPA
Mr. Isidore Goldman, SED
Mr. Pat Wong, DERM
Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 6-6-97
(Clerk) (Date)

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

Printed on recycled paper.

FINAL DETERMINATION

Tarmac America, Inc.

Permit No.0250020-001-AC (PSD-FL-236)

Pennsuco Cement Plant

An Intent to Issue an air construction permit for Tarmac America, Inc.'s Pennsuco cement plant located in Medley, Dade County, Florida, was distributed on March 6, 1997. The Notice of Intent was published in the Miami Daily Business Review on March 26, 1997. Comments were submitted on the Department's Intent by the applicant's engineer in a letter dated May 13, 1997.

The applicant requested that references in the permit for the aggregate plant be removed from this permit because the new unit will not use the aggregate plant conveyors. References to the aggregate plant in Specific Condition A.1 were deleted from the permit.

The applicant requested that the stack parameter specifications from the application not be a requirement of this permit. The Department has revised Specific Condition A.3 to require only the reporting of significant changes in the stack dimensions.

The engineer for the applicant said the design was changed to eliminate the transfer point conveying the dried slag to the silos. As a result of this change, the conveyor would not have a baghouse. Specific Condition A.6 and the Best Available Control Technology determination were re-worded to reflect this change.

Other minor revisions were made to Specific Conditions A.4 (noted federal regulations the unit is subject to), A.9.d (edited table), and Table 1 (corrected process rate).

The final action of the Department will be to issue the permit as proposed except for the changes described above.

is your RETURN ADDRESS completed on the reverse side?

SENDER: ■ Complete items 1 and/or 2 for additional services. ■ Complete items 3, 4a, and 4b. ■ 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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Scott Quas, Enw. Mgr. Tarmac America 455 Gateway Dr. Deerfield Bch, FL 33441		4a. Article Number P 339 251 196	
		4b. Service Type <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail <input type="checkbox"/> Insured <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> COD	
		7. Date of Delivery 6/9/97	
5. Received By: (Print Name)		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature: (Addressee or Agent) X <i>[Signature]</i>			

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P 339 251 196

US Postal Service
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 No Insurance Coverage Provided.
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Sent to	
Scott Quas	
Street & Number	
Tarmac Amer	
Post Office, State, & 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, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	6-6-97
0250020-001-AC	
PSO-FL-236	

PS Form 3800, April 1995



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 America, Inc.
Pennsuco Cement Plant
455 Fairway Drive
Deerfield Beach, Florida 33441

FID No.	0250020
PSD No.	PSD-FL-236
Permit No.	0250020-001-AC
Expires:	July 1, 1998

Authorized Representative:
Mr. Scott Quaas
Environmental Manager

LOCATED AT:

Tarmac America, Inc., Pennsuco Cement Plant
Project: Blast Furnace Slag Processing Furnace
Standard Industrial Classification Code (SIC): 3241
Dade County, Florida

UTM: Zone 17, 562.8 km E ; 2861.7 km N
Latitude/ Longitude: 25°52'26" / 80°22'27"

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendices and Tables made a part of this permit:

Appendix BD
Appendix GC
Table 1

BACT Determination
Construction Permit General Conditions
Future Maximum Particulate Emissions from Affected
Point Sources

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

PROJECT DESCRIPTION:

The permittee wishes to construct a Blast Furnace Slag Processing Operation consisting of a slag dryer 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, a new 125 ton per hour (TPH) Gencor (or equivalent) dryer with a baghouse, and a new dry slag conveyor 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.

Additional county permits may be required by the Dade County Department of Environmental Resource Management (DERM) for some of the slag drying operations (fuel tanks, slag storage, etc.).

This permit replaces permit No. AC13-273887, PSD-FL-230 when the new dryer authorized by this permit begins operation.

PERMIT SCHEDULE:

- 03/26/97 Notice of Intent published in the Miami Daily Business Review
- 03/06/97 Issued Notice of Intent to issue Permit
- 01/22/97 Application deemed complete

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

1. Application received December 6, 1996.
2. DEP letter dated December 30, 1996.
3. Golder Assoc. letter dated January 20, 1997.
4. Golder Assoc. letter dated May 13, 1997.

SECTION II. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS:

General

A.1 This permit incorporates all requirements 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; and Bulk Cement Loadout Units 1 and 2. This permit supersedes permit No. AC13-273887 (PSD-FL-230) when the Gencor dryer begins operation.

Construction

A.2 The No. 2 fuel oil storage tank shall be constructed so that their maximum storage capacity is less than 40 cubic meters (10,568 gallons). A DERM license may be required for this fuel tank.

A.3 Notify the Department if the blast furnace slag dryer stack is significantly changed from the proposed height of 30 feet and diameter of 4 feet. The stack shall be equipped with sampling facilities that comply with the requirements of Rule 62-297.345, F.A.C.

Federal Requirements

A.4 The facility is subject to the requirements of 40 CFR 52.21, Prevention of Significant Deterioration of Air Quality, and 40 CFR 60, Subpart F, Standards of Performance for Portland Cement Plants.

Emission Limits

A.5 The particulate matter emissions (total PM and PM₁₀) from the baghouse serving the slag dryer shall not exceed any of the following: 0.02 gr/dscf, 4.8 lbs/hr, 7.44 TPY, and 10 percent opacity. This standard may be modified if compliance tests show that the baghouse has an air to cloth ratio of 4.5:1 or larger and the filtering area is unable to meet a standard of 0.02 gr/dscf.

A.6 Reasonable precautions shall be employed to minimize unconfined particulate matter emissions from the dry slag conveying system.

A.7 Particulate matter emissions from the No. 4 Finishing Mill shall not exceed 0.01 gr/acf or 5 percent opacity.

A.8 Except for the new slag dryer, PM emissions from the other processing equipment handling blast furnace slag shall not exceed the quantities listed in Table 1 (attached). 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.

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

SECTION II. EMISSION UNIT(S) SPECIFIC CONDITIONS

- 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) Water sprinklers and wind breaks, enclosures, or covers shall be used to control unconfined PM emissions from the yard.

A DERM license may be required for the slag storage operation.

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

- a) Yard Storage/Handling Fugitive dust shall not be observed leaving the plant area.
- b) Each Clinker/Cement silo: 5% opacity
- c) Each Conveyor: 10% opacity
- d) No. 4 Finish Mill 5% opacity
- e) Bulk Cement Loadout Units 1 & 2: 10% opacity
- f) Slag dryer: 10% opacity

Operation Limitations

- A.10 The maximum wet blast furnace slag input rate to the dryer shall not exceed 125 TPH. The permittee shall install equipment or otherwise measure to the Department's satisfaction the process rate of the dryer and shall maintain records of the quantity of slag processed each day.
- A.11 The facility shall not process more than 300,000 tons of blast furnace slag during any calendar year.
- A.13 Only natural gas and low sulfur No. 2 fuel oil shall be burned in the blast furnace slag dryer. The sulfur content of the fuel shall not exceed 0.2 percent. The maximum heat input to the dryer shall not exceed 57.5 MMBtu/hr (approximately 410.6 GPH of oil or 57,000 CFH of gas). The maximum fuel consumption shall not exceed 1,281,000 GPY of oil or 178 MMCFPY of gas.
- A.14 The dryer shall not operate more than 3,120 hours per calendar year. The permittee shall maintain records of the hours of operation for the dryer each day.

Table 1. Future Maximum Particulate Emissions From Affected Point Sources

FACILITY ID NUMBER: 0250020

Permittee:

Permit No.: 0250020-001-AC, PSD-FL-236

Tarmac America, Inc., Pennsuco Cement Plant

E.U. ID#	Emission Unit/ Point	Emission Point ID	Control Equip. Type	Maximum Process Rate (TPH)	Air Flow Rate (CFM) ^a	PM/PM10 Emission Factor	PM/PM10 Emissions		
							(lb/hr)	(hr/yr)	(TPY)
EU 1	Slag Dryer	SLAG	Baghouse	125.0	34,100	0.02 gr/acf	5.75	3,120	9.12
EU 2	Clinker Handling System No. 3								
	Conveyor/Bucket Elevator	K-347	Baghouse	125.0	5,000	0.01 gr/acf	0.43	8,760	1.88
	Conveyor/Bucket Elevator	K-447	Baghouse	125.0	5,000	0.01 gr/acf	0.43	8,760	1.88
EU 2	Clinker Storage Silos								
	Clinker Silos 21,22,23,26,27,28	K-633	Baghouse	237.5	1,500	0.01 gr/acf	0.13	8,760	0.56
EU 3	Finish Mill #4								
	Ball mill/mill sweep	F-430	Baghouse	125.0	30,000	0.01 gr/acf	2.57	8,760	11.26
	Belt conveyor/separator/cement	F-432	Baghouse	125.0	17,000	0.01 gr/acf	1.46	8,760	6.38
	Clinker/gypsum conveyors	F-603	Baghouse	125.0	8,000	0.01 gr/acf	0.69	8,760	3.00
	Clinker/gypsum conveyors	F-604	Baghouse	125.0	8,000	0.01 gr/acf	0.69	8,760	3.00
	Clinker/gypsum conveyors	F-605	Baghouse	125.0	4,000	0.01 gr/acf	0.34	8,760	1.50
EU 4	Cement Storage Silos 1-9								
	Cement Silos 7-9	F-512	Baghouse	125.0	10,000	0.01 gr/acf	0.86	8,760	3.75
EU 4	Bulk Cement Loadout Units 1 & 2								
	Railcar/Truck Unit 1	B-110	Baghouse	250.0	3,000	0.01 gr/acf	0.26	8,760	1.13
	Truck Unit 2	B-210	Baghouse	250.0	3,000	0.01 gr/acf	0.26	8,760	1.13
TOTALS							13.87		44.59

Note a: Airflow reflects dscfm

SECTION II. EMISSION UNIT(S) SPECIFIC CONDITIONS

Compliance Determination

- A.15 Compliance with the emission limits in this permit shall be determined prior to the expiration date of this construction permit 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.
- A.16 Compliance testing of emissions from the slag dryer shall be conducted with the dryer operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then sources may be tested at less than that capacity; in this case subsequent source operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the permitted capacity in the permit.
- A.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.
- A.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

- A.19 The permittee shall maintain a daily log of the actual hours of dryer operation, quantity of slag processed, and fuel consumed by the slag dryer.
- A.20 An annual operation report shall be submitted to DERM by March 1 of each calendar year pursuant to Rule 62-210.370(2), F.A.C.
- A.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.).
- A.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.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

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.

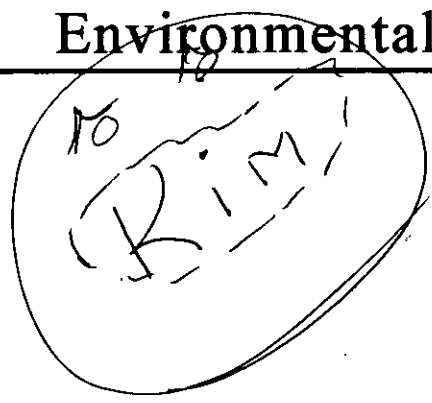
- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.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.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, 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.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology (*X*)
 - (b) Determination of Prevention of Significant Deterioration (*X*); and
 - (c) Compliance with New Source Performance Standards (*X*).
- G.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 or 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:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.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 or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 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.
- G.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.
- G.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.
- G.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.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and 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.
- G.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.

Memorandum

**Florida Department of
Environmental Protection**



TO: Howard Rhodes
THRU: Clair Fancy *[Signature]*
Al Linero *[Signature]*
FROM: Willard Hanks *[Signature]*
DATE: May 23, 1997
SUBJECT: Tarmac Pennsuco Plant
Blast Furnace Slag Facility

Attached for your approval and signature is a construction permit and Best Available Control Technology determination for a new blast furnace slag unit at Tarmac's Pennsuco Portland cement facility located in Medley, Dade County. This unit will replace one recently permitted at this facility that did not meet the performance goals of the permittee.

The proposed unit will use a new dryer and baghouse. It will have higher emissions than the one it is replacing. The proposed unit is subject to PSD. I believe the BACT for the dryer baghouse should be lower than the applicant proposed (0.02 versus 0.04 gr/dscf). This position is supported by EPA's evaluation of the application.

The applicant submitted comments on the Department's Intent to issue this permit. Their comments resulted in minor revisions to the draft permit as discussed in the Final Determination. None of the changes are considered significant.

I recommend your approval and signature of the construction permit.

WH/kt

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Blast Furnace Slag Processing Operation with Slag Dryer
Tarmac America, Inc.
PSD-FL-236 and 0250020-001-AC
Medley, Dade County

A process description is included in the Technical Evaluation and Preliminary Determination.

Following is the BACT determination proposed by the applicant:

Tarmac America, Inc. proposes to construct a blast furnace slag processing operation consisting of a slag dryer and baghouse at the Pennsuco Cement Plant in Medley, Dade County. The new dryer will replace the one recently built under permit No. PSD-FL-230. Major components of the proposed slag processing operation are a fuel storage tank, a new 125 TPH slag dryer/baghouse, and a dried slag conveying system. The slag processing system will use the existing clinker and cement storage silos, the 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 products of combustion of No. 2 fuel oil and natural gas. The emission limits requested by the applicant from the slag handling operation would result in a net emissions increase of 41.1 TPY for PM, 39.9 TPY for PM₁₀, 18.19 TPY for SO₂, 12.81 TPY for NO_x, 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 and Finishing Mill) 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

December 6, 1996

BACT REQUESTED BY THE APPLICANT

The applicant proposed the use of a baghouse with a 4.5:1 air/cloth ratio to control the emissions from the slag dryer. The requested PM emission standard is 0.04 gr/dscf. The applicant proposed to lower this standard if tests on the constructed facility showed it would consistently meet a lower limit.

BACT DETERMINATION PROCEDURE

In accordance with Rule 62-212.410, F.A.C., 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,

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

(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 properly designed baghouse to be the appropriate air pollution control device for this source. The BACT Clearinghouse Document does 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 grain per dry standard cubic foot (gr/dscf). The Department also notes that the application states that the particulate matter emissions from the No. 4 Finish Mill would be 0.01 grain 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 the use of a properly designed baghouse having an air to cloth ratio of 4.5:1 or larger filtering area. The Department believes the baghouse can meet a PM emission standard of 0.02 gr/dscf and 10 percent opacity. The Department will adjust this standard if tests on the properly maintained and operated baghouse having an air to cloth ratio of 4.5:1 or larger filtering area serving the slag dryer shows it cannot meet this standard.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Willard Hanks, Permit Engineer
A. A. Linero, P.E., Administrator, NSR Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

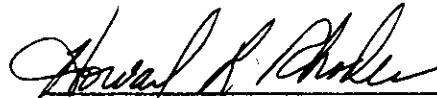
RECOMMENDED BY:



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

June 3, 1997
Date

APPROVED BY:



Howard L. Rhodes, Director
Division of Air Resources
Management

June 4, 1997
Date