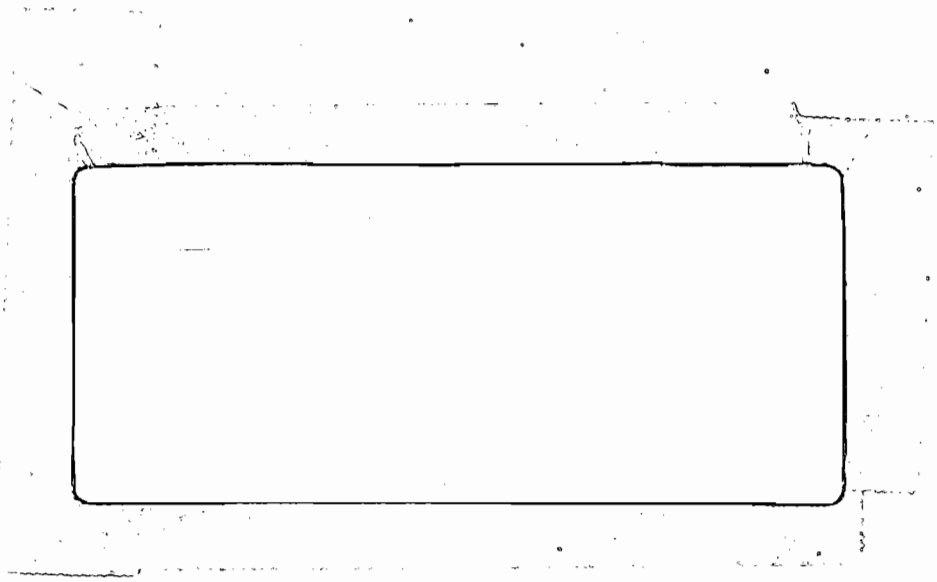


Golder Associates

APPLICATION TO INCREASE PRODUCTION FOR PENNSUCO CEMENT PLANT TITAN AMERICA, LLC *MEDLEY, FLORIDA*

Prepared For:
Titan America, LLC
455 Fairway Drive
Deerfield Beach, Florida 33441

Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

April 2005

0537511

DISTRIBUTION:
4 Copies – FDEP
2 Copies – Titan America, Inc.
2 Copies – Golder Associates Inc.

APPLICATION

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Titan America, LLC**	
2. Site Name: **Pennsuco**	
3. Facility Identification Number: **0250020**	
4. Facility Location...: Street Address or Other Locator: **11000 N.W. 121 Way** City: **Medley** County: **Dade** Zip Code: **33178**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Scott Quaas, Environmental Manager**
2. Application Contact Mailing Address... Organization/Firm: **Titan America, LLC** Street Address: **455 Fairway Drive** City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Application Contact Telephone Numbers... Telephone: **(954) 425-4165** ext. Fax: **(954) 480-9352**
4. Application Contact Email Address: **squaas@titanamerica.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	4-18-05
2. Project Number(s):	0250020-017-AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☒ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.
☐ Title V air operation permit revision.
☐ Title V air operation permit renewal.
☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.
☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this document is to modify the Pennsuco Cement Plant to increase the maximum clinker production rate from 1,642,500 to 2,190,000 TPY, and to modify the operational parameters necessary to accommodate this increase.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
026	Coal Handling System	AC1C	
027	Clinker Handling and Storage	AC1C	
010, 012, 013, 030	Finish Mill Nos. 1, 3, 4, and 6	AC1C	
028	Raw Mill and Pyroprocessing Unit	AC1C	
029	Raw Materials Handling	AC1C	
014, 015, 016	Cement Storage/Packhouse/Loadout	AC1C	

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Hardy Johnson, President, Florida Division
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Tarmac America, LLC**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(954) 481-2800** ext. Fax: **(954) 421-0296**
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. 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. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained 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 and all other requirements identified in this application to which the facility is subject. 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 the facility or any permitted emissions unit.

Signature _____ Date 3/29/05

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Hardy Johnson, President, Florida Division
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Tarmac America, LLC**
   Street Address: **455 Fairway Drive**
   City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(954) 481-2800** ext. Fax: **(954) 421-0296**
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. 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. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained 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 and all other requirements identified in this application to which the facility is subject. 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 the facility or any permitted emissions unit.

   Signature Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official Email Address:

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. 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. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained 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 and all other applicable requirements identified in this application to which the Title V source is subject. 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 the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext.**545** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

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

(1) To the best of my knowledge, there is reasonable assurance 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; and

(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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify 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 plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that 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.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further 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.

David A. Buff
Signature

4/13/05
Date

(seal)

* Attach any exception to certification statement.

Board of Professional Engineers Certificate of Authorization #00001670

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **562.8** North (km) **2861.7**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **25/52/30** Longitude (DD/MM/SS) **80/22/30**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241, 3271, 3273**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Scott Quaas, Environmental Manager**
2. Facility Contact Mailing Address... Organization/Firm: **Titan America, LLC** Street Address: **455 Fairway Drive** City: **Deerfield Beach** State: **FL** Zip Code: **33441**
3. Facility Contact Telephone Numbers: Telephone: **(954) 425-4165** ext. Fax: **(954) 480-9352**
4. Facility Contact Email Address: **squaas@titanamerica.com**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter Total - PM	A	N
Particulate Matter - PM_{10}	A	N
Nitrogen Oxides - NO_x	A	N
Sulfur Dioxide - SO_2	A	N
Carbon Monoxide - CO	A	N
Hydrochloric Acid - H106	A	N
Dioxins/Furans - DIOX	B	N
Volatile Organic Compounds - VOC	B	N
Sulfuric Acid Mist - SAM	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID Nos. Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: **TM-FI-C1** ☐ Previously Submitted, Date:_____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☒ Attached, Document ID: **TM-FI-C3** ☐ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: ☒ Attached, Document ID: **Part B**
3. Rule Applicability Analysis: ☒ Attached, Document ID: **TM-FI-CC3**
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☐ Attached, Document ID:_____
   ☒ Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements Comment

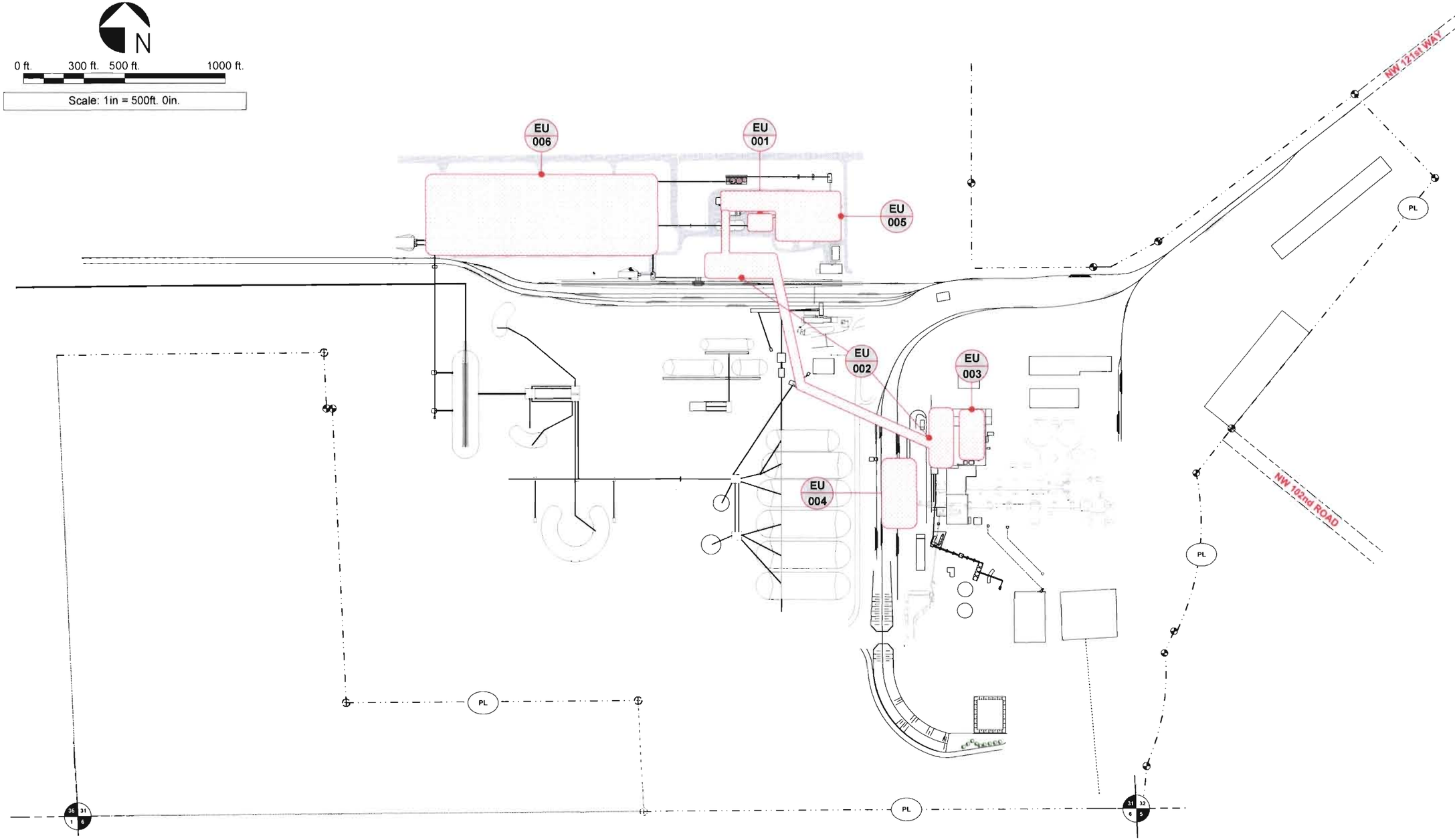
ATTACHMENT TM-FI-C1

FACILITY PLOT PLAN

N

0 ft. 300 ft. 500 ft. 1000 ft.

Scale: 1in = 500ft. 0in.



DESCRIPTION

FACILITY PLOT PLAN
PK5 CONSTRUCTION

TITLE: **PENNSUCO CEMENT**

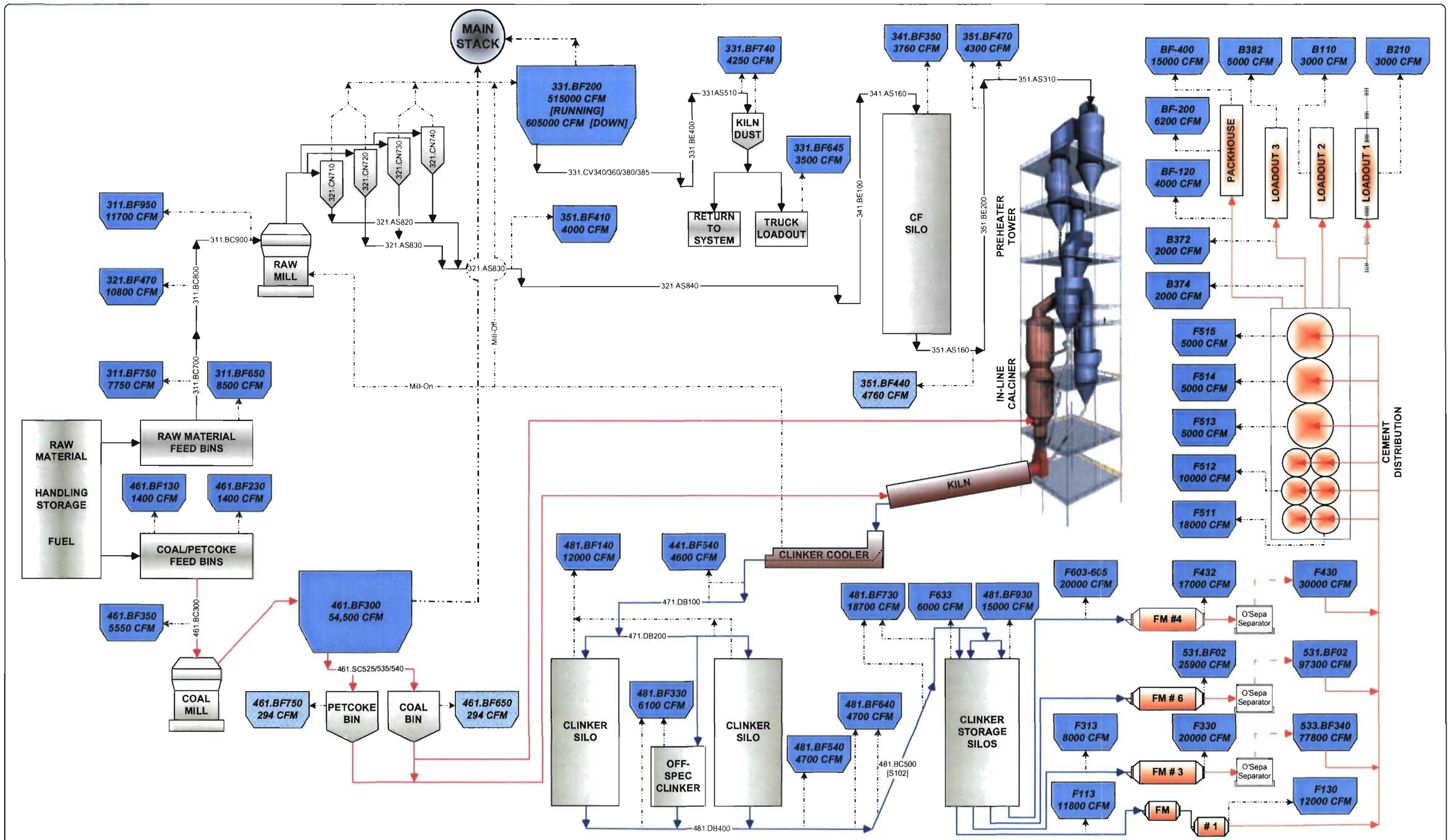
FILENAME: 0537511/4/4.4/TM-FI-C1

LAST REVISION DATE: 4/15/2005

Tarmac
A Titan America Business

ATTACHMENT TM-FI-C2

PROCESS FLOW DIAGRAM



DESCRIPTION **PROCESS FLOW DIAGRAM**	TITLE: PENNSUCO CEMENT FILENAME: FL007-CEM-PK5 FLOWDIAGRAM.VSD LAST REVISION DATE: 4/15/2005	TITAN AMERICA

ATTACHMENT TM-FI-C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

ATTACHMENT TM-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The owner or operators shall not cause, let, permit, suffer, or allow the emissions of unconfined particulate matter (PM) from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing, or handling, without taking reasonable precautions to prevent such emissions.

Titan will employ reasonable precautions to control emissions of unconfined PM. These reasonable precautions may include, but are not limited to, the following:

1. Paving and maintenance of roads, parking areas, and yards;
2. Applying water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
3. Applying asphalt, water, oil, chemicals, or other dust suppressants to unpaved roads, yards, open stockpiles, and similar activities;
4. Removing PM from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne;
5. Confining abrasive blasting where possible;
6. Landscaping and planting of vegetation;
7. Using hoods, fans, filters, and similar equipment to contain, capture, and/or vent PM;
8. Enclosing or covering of conveyor systems;
9. Storing all materials, coal, and petroleum coke at the plant under roof on compacted clay or concrete or in enclosed vessels;
10. Locating water supply lines, hoses, and sprinklers near all unenclosed materials to prevent unconfined PM emissions; and
11. Installing tire wash for bulk transport trucks leaving the plant, to remove PM from vehicle tires before traveling on the facility's access roadways.

ATTACHMENT TM-FI-CC3

RULE APPLICABILITY ANALYSIS

ATTACHMENT TM-FI-CC3

RULE APPLICABILITY ANALYSIS

FACILITY

62-210.700(1) Excess Emissions
62-210.700(4) Excess Emissions
62-210.700(5) Excess Emissions
62-210.700(6) Excess Emissions
62-296.320(4) General Visible Emissions Std.
62-296.320(4)(c) - Unconfined Emissions
Dade County – Sec. 24-17
40 CFR 63.1353(a) – NESHAPs Subpart LLL- Notifications
40 CFR 63.1353(b) – NESHAPs Subpart LLL- Notifications
40 CFR 63.1354 – NESHAPs Subpart LLL - Reporting
40 CFR 63.1355 – NESHAPs Subpart LLL - Recordkeeping
40 CFR 63 – NESHAPs Subpart A – General Provisions

COAL HANDLING SYSTEM (EU ID No. 026)

40 CFR 60.11(b) General NSPS Requirements
40 CFR 60.11(c) General NSPS Requirements
40 CFR 60.11(d) General NSPS Requirements
40 CFR 60.12 General NSPS Requirements
40 CFR 60.19 General NSPS Requirements
40 CFR 60.252(c) Subpart Y
40 CFR 60.254(a)
40 CFR 60.254(b)(2)
40 CFR 60.7 General NSPS Requirements
40 CFR 60.8 General NSPS Requirements
62-296.320(4)(a) Process Weight Table

CLINKER HANDLING AND STORAGE (EU ID No. 027)

62-296.320(4)(b) Visible Emissions
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

FINISH MILLS (EU ID Nos. 010, 012, 013, 030)

62-296.320(4)(a) Process Weight Standard
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1347 – NESHAPs Subpart LLL – Standards for Raw and Finish Mills
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring

40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

RAW MILL AND PYROPROCESSING (EU ID No. 028)

62-296.320(4)(a) Process Weight Table
62-296.407 Portland Cement Plants
62-296.507(4)(b)8 RACT Requirements for Major VOC and NO_x Emitting Facilities
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1343 – NESHAPs Subpart LLL – Standards for Kilns/Raw Mills
40 CFR 63.1344 – NESHAPs Subpart LLL – Operating Limits for Kilns/Raw Mills
40 CFR 63.1345 – NESHAPs Subpart LLL – Standards for Clinker Coolers
40 CFR 63.1347 – NESHAPs Subpart LLL – Standards for Raw and Finish Mills
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

RAW MATERIAL HANDLING (EU ID No. 029)

Rule 62-297.620(4), F.A.C. - 5% Opacity Limit in Lieu of Stack Testing
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

CEMENT STORAGE, LOADOUT AND PACKHOUSE (EU ID Nos. 014, 015, 016)

Rule 62-297.620(4), F.A.C. - 5% Opacity Limit in Lieu of Stack Testing
40 CFR 63.1342 – NESHAPs Subpart LLL – Standards: General
40 CFR 63.1348 – NESHAPs Subpart LLL – Material Handling Sources Opacity Limit
40 CFR 63.1349 – NESHAPs Subpart LLL – Performance testing
40 CFR 63.1350 – NESHAPs Subpart LLL - Monitoring
40 CFR 63.1351 – NESHAPs Subpart LLL – Compliance Dates
40 CFR 63.1356 – NESHAPs Subpart LLL – Exemption from NSPS
40 CFR 63 – NESHAPs Subpart A – General Provisions

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [1]
Coal Handling System

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
   Coal Handling System

3. Emissions Unit Identification Number: **026**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Emissions unit consists of Coal Handling System for the Pyroprocessing Operation, including coal/petcoke feed bins, coal mill, and storage bins.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (6)

   Process Enclosure

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **263,000**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	
Maximum process rate reflects coal/petroleum coke throughput.	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 026**		2. Emission Point Type Code: **3**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **See Attachment TM-EU1-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **420** feet	7. Exit Diameter: **14** feet
8. Exit Temperature: **176** °F	9. Actual Volumetric Flow Rate: **54,500** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **45,245** dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Refer to Attachment TM-EU1-C15 for point specific data. Data above reflect coal mill exit gas emitted through main stack.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Bulk Material Stockpiles: Coal.**		
2. Source Classification Code (SCC): **3-05-103-03**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **263,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum permitted 24-hour block average usage rate is 30 TPH. These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Bulk Material Conveyors; Coal.**		
2. Source Classification Code (SCC): **3-05-101-03**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **263,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum permitted 24-hour block average usage rate is 30 TPH. These rates are total for coal and petroleum coke. Maximum petroleum coke usage is 20 TPH, 24-hour block average.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.51** lb/hour **10.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Includes 0.71 lb/hr and 3.1 TPY from the baghouses, and 6.80 lb/hr and 7.1 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Table 3-3 and Appendix A of Part B.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 or 0.01 gr/dscf**	4. Equivalent Allowable Emissions: **0.71** lb/hour **3.10** tons/year
5. Method of Compliance: **EPA Method 9 Test.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to baghouses only. See Table 2-1 in Part B for calculation of potential emissions. Note that Coal Mill emissions are included in allowable for Main Stack emissions.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.59 $p^{0.62}$**	4. Equivalent Allowable Emissions: **29.6** lb/hour **116.7** tons/year
5. Method of Compliance: **EPA Method 9 Test.**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to Coal Mill only. Calculated based on maximum 24-hour block average usage rates of 30 TPH and 263,000 TPY. However, emissions from the coal mill are controlled using a baghouse to 0.01 gr/dscf.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.1** lb/hour **5.6** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See note below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **Includes 0.71 lb/hr and 3.1 TPY from the baghouses, and 2.39 lb/hr and 2.5 TPY from fugitive PM emissions. For hourly and annual emission calculations for the baghouses, see Table 2-1 in Part B. For fugitive PM emission calculations, see Table 3-3 and Appendix A of Part B.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 or 0.01 gr/dscf**	4. Equivalent Allowable Emissions: **0.71** lb/hour **3.1** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applicable to baghouses only. Note that Coal Mill emissions are included in allowable for Main Stack emissions.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. 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: **Applies to all baghouses. Coal Mill baghouse subject to 40 Part 60, Subpart Y.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0250020-016-AC. Applies to Coal Mill baghouse only (461.BF300).**	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **Permit No. 0250020-016-AC. Applies to all baghouses except Coal Mill baghouse (461.BF300). Based on Rule 62-297.620(4) in lieu of stack testing.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [1]
Coal Handling System

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [1]
Coal Handling System

Additional Requirements Comment

ATTACHMENT TM-EU1-C15

EMISSION POINT COMMENT

Attachment TM-EU1-C15. Summary of Stack Parameter Data for the Coal Handling System (EU 026)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Coal/pet coke feed bin	461.BF130	126	0.75 x 0.83	1,400	92
Coal/pet coke feed bin	461.BF230	126	0.75 x 0.84	1,400	92
Coal mill	461.BF300	420	14	54,500[a]	176
Coal mill feed	461.BF350	75	1.00 x 1.25	5,500	92
Coal bin	461.BF650	67	0.42	294	178
Pet Coke bin	461.BF750	67	0.42	294	178

[a] The coal mill vents through the plant main stack. Flow rate represents coal mill exhaust gas only.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [2]
Clinker Handling and Storage

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
   Clinker Handling and Storage

3. Emissions Unit Identification Number: **027**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Emission unit consists of Clinker Handling and Storage systems for the Pyroprocessing Operation and Clinker Silos 2, 5, 12, 17-21, 23, 26, and 28.

EMISSIONS UNIT INFORMATION
Section [2]
Clinker Handling and Storage

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (8)

   Process Enclosures

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **250 TPH (24-hour block average)**	
2. Maximum Production Rate: **2,190,000 TPY of Clinker**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

EMISSIONS UNIT INFORMATION
Section [2]
Clinker Handling and Storage

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 027**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **8 baghouse stacks. See Attachment TM-EU2-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **H**	6. Stack Height: **113** feet	7. Exit Diameter: feet
8. Exit Temperature: **250** °F	9. Actual Volumetric Flow Rate: **18,700** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **13,906** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Data presented above reflects Baghouse 481.BF730. Refer to Attachment TM-EU2-C15 for stack parameters for other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Transfer.**		
2. Source Classification Code (SCC): **3-05-006-16**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **2,190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Note: maximum rates reflect transfer of clinker. Maximum hourly rate is 24-hour block average.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Storage Silos.**		
2. Source Classification Code (SCC):	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **2,190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Rates refer to tons of clinker produced. Maximum hourly rate is 24-hour block average.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.5** lb/hour **19.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0095 gr/dscf or 0.01 gr/acf** Reference: **Manufacturer Design**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-2.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 or 0.01 gr/dscf**	4. Equivalent Allowable Emissions: **4.5** lb/hour **19.7** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **See Table 2-2 in Part B for potential emission calculations.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4.5** lb/hour **19.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed to be the same as PM emissions. See Table 2-2 in Part B for emission calculations.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 or 0.01 gr/dscf**	4. Equivalent Allowable Emissions: **4.5** lb/hour **19.7** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. 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: **Based on Permit No. 0250020-016-AC and Rule 40 CFR 63.1348.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **5** % 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: **Based on Permit No. 0250020-016-AC. Based on Rule 62-297.620(4), in lieu of stack testing for PM.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [2]
Clinker Handling and Storage

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-EU2-C15

EMISSION POINT COMMENT

Attachment TM-EU2-C15. Summary of Stack Parameter Data for the Clinker Handling and Storage System (EU 027)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Clinker silos 21-23 and 26-28	F633	130	1.0[a]	6,000	77
Clinker transfer	441.BF540	53	12 x 15	4,600	250
Clinker silos	481.BF140	185	19 x 13	12,000	250
Clinker transfer	481.BF540	44	12 x 15	4,700	250
Clinker bins	481.BF330	103	16 x 19	6,100	250
Clinker transfer	481.BF640	42	12 x 15	4,700	250
Clinker transfer	481.BF730	113	23 x 33	18,700	250
Clinker silos	481.BF930	113	20 x 30	15,000	250

[a]Diameter of round stack.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [3]
Finish Mill Nos. 1, 3, 4, and 6

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☐ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
Finish Mill Nos. 1, 3, 4, and 6

3. Emissions Unit Identification Number: **010, 012, 013, and 030**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**32**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
Emission unit consists of Finish Mill Nos. 1 (EU 010), 3 (EU 012), 4 (EU 013), and 6 (EU 030).

EMISSIONS UNIT INFORMATION
Section [3]
Finish Mill Nos. 1, 3, 4, and 6

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (12)

   Process Enclosure

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **359 TPH (24-hour block average)**	
2. Maximum Production Rate: **3,144,840 TPY**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year

6. Operating Capacity/Schedule Comment:

Individual capacities:

- **Finish Mill No. 1 - 25 TPH**
- **Finish Mill No. 3 - 84 TPH**
- **Finish Mill No. 4 - 140 TPH**
- **Finish Mill No. 6 - 110 TPH**

359 TPH

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 010, 012, 013, 030**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **12 baghouse stacks. See Attachment TM-EU3-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **85** feet	7. Exit Diameter: **4.50** feet
8. Exit Temperature: **169** °F	9. Actual Volumetric Flow Rate: **77,800** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **65,307** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack data representative of O-Sepa Separator baghouse stack on Finish Mill No. 3 (Equipment ID No. 533.BF340). Refer to Attachment TM-EU3-C15 for stack parameters for other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Grinding.**		
2. Source Classification Code (SCC): **3-05-006-17**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **359**	5. Maximum Annual Rate: **3,144,840**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum annual rate based on 8,760 hours per year of operation. Maximum hourly rate is 24-hour block average.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **24.3** lb/hour **106.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Part B, Table 2-3** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-3.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **10.65** lb/hour **46.66** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses. See Part B, Table 2-3 for emission calculations.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **13.66** lb/hour **59.83** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses 531.BF01 and 531.BF02. See Part B, Table 2-3 for emission calculations.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **24.3** lb/hour **106.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Assumed to be the same as PM emissions; see Part B, Table 2-3.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/dscf**	4. Equivalent Allowable Emissions: **10.65** lb/hour **46.66** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to all baghouses except Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses. See Part B, Table 2-3 for emission calculations.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **13.66** lb/hour **59.83** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Permit limit applies to Finish Mill No. 3, baghouse 533.BF340, and Finish Mill No. 6 baghouses 531.BF01 and 531.BF02. See Part B, Table 2-3 for emission calculations.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION
Section [3]
Finish Mill Nos. 1, 3, 4, and 6

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual visible emissions test using EPA Method 9.**	
5. Visible Emissions Comment: **BACT determination from Permit PSD-FL-236 for Finish Mill No. 4 only. Also applicable to all baghouses per Rule 62-297.620(4) in lieu of stack testing.**	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 63.1347. MACT, applicable to all Finish Mills.**	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☐ Rule ☒ Other
3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual visible emissions test using EPA Method 9.**	
5. Visible Emissions Comment: **Applies to Finish Mill No. 1. Rule 62-296.320(4)(b).**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date ____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date ____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ To be Submitted, Date (if known): ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: ____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [3]
Finish Mill Nos. 1, 3, 4, and 6

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-EU3-C15

EMISSION POINT COMMENT

Attachment TM-EU3-C15. Summary of Stack Parameter Data for the Finish Mills (EU 010, 012, 013, 030)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Finish Mill No. 1 Baghouse	F113	106	1.00	11,800	110
Finish Mill No. 1 Baghouse	F130	106	1.00	12,000	110
Finish Mill No. 3 Baghouse	F330	106	1.50	20,000	110
Finish Mill No. 3 Baghouse	F332	106	1.50	13,500	110
Finish Mill No. 3 Baghouse	533.BF340	84.6	4.50	77,800	169
Finish Mill No. 4 Baghouse	F432	106	2.00	17,000	110
Finish Mill No. 4 Baghouse	F605	106	2.00	4,000	110
Finish Mill No. 4 Baghouse	F603	106	1.00	8,000	110
Finish Mill No. 4 Baghouse	F430	106	1.00	30,000	110
Finish Mill No. 4 Baghouse	F604	106	1.00	8,000	110
Finish Mill No. 6 Baghouse	531.BF01	--	--	97,300	110
Finish Mill No. 6 Baghouse	531.BF02	--	--	25,900	110

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [4]
Raw Mill and Pyroprocessing Unit

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
Raw Mill and Pyroprocessing Unit

3. Emissions Unit Identification Number: **028**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
Pyroprocessing consists of the preheater/calciner, kiln, and cooler.

EMISSIONS UNIT INFORMATION
Section [4]
Raw Mill and Pyroprocessing Unit

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (7)

   Process Enclosure

2. Control Device or Method Code(s): **016, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **250 TPH (24-hour block average) clinker**
2. Maximum Production Rate: **2,190,000 TPY clinker**
3. Maximum Heat Input Rate: **780** million Btu/hr
4. Maximum Incineration Rate: pounds/hr
   tons/day
5. Requested Maximum Operating Schedule:
   24 hours/day **7** days/week
   52 weeks/year **8,760** hours/year
6. Operating Capacity/Schedule Comment:

Production rates relate to clinker production.

Source Description	Heat Input Rate (MMBtu/hr)
Calciner	385
Kiln	290
Total	675

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **028**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **7 baghouse stacks. See Attachment TM-EU4-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **420** feet	7. Exit Diameter: **14** feet
8. Exit Temperature: **294** °F	9. Actual Volumetric Flow Rate: **515,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Data for main stack. Representative of clinker production with raw mill operating. With raw mill down, parameters are 605,000 acfm @ 500°F. See Attachment TM-EU4-C15 for stack parameters for other sources.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Raw Material Grinding and Drying.**		
2. Source Classification Code (SCC): **3-05-006-13**	3. SCC Units: **Raw Feed Produced**	
4. Maximum Hourly Rate: **425 (dry)**	5. Maximum Annual Rate: **3,723,000 (dry)**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to raw dry feed produced from raw mill, based on 250 TPH clinker production.**		

Segment Description and Rate: Segment 2 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Kilns.**		
2. Source Classification Code (SCC): **3-05-006-06**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **2,190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to clinker production. Maximum hourly rate is 24-hour block average.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 8

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing; Dry Process; Clinker Cooler.**		
2. Source Classification Code (SCC): **3-05-006-14**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **250**	5. Maximum Annual Rate: **2,190,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Segment refers to clinker through clinker cooler.**		

Segment Description and Rate: Segment 4 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer (Bituminous Coal).**		
2. Source Classification Code (SCC): **3-90-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **30**	5. Maximum Annual Rate: **263,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **3.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **25**
10. Segment Comment: **Maximum annual rate based on 2,190,000 TPY clinker. Maximum hourly rate is 24-hour block average. Includes coal and petroleum coke.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 5 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; General-Coke.**		
2. Source Classification Code (SCC): **3-90-008-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **20.3**	5. Maximum Annual Rate: **177,828**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **5.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **28.4**
10. Segment Comment: **Refers to petroleum coke.**		

Segment Description and Rate: Segment 6 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 2 Fuel Oil with Used Oil Blend.**		
2. Source Classification Code (SCC): **3-90-005-02**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **4.86**	5. Maximum Annual Rate: **31,914**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.5**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138.8**
10. Segment Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 7 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer No. 6 Fuel Oil with Used Oil Blend.**		
2. Source Classification Code (SCC): **3-90-004-02**	3. SCC Units: **1,000 Gallons Burned**	
4. Maximum Hourly Rate: **4.44**	5. Maximum Annual Rate: **29,185**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **2.0**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **152**
10. Segment Comment:		

Segment Description and Rate: Segment 8 of 8

1. Segment Description (Process/Fuel Type): **In-process Fuel Use; Industrial Processes; Cement Kiln/Dryer; Natural Gas.**		
2. Source Classification Code (SCC): **3-90-006-02**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.68**	5. Maximum Annual Rate: **4,436**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			NS
PM	016		EL
PM_{10}	016		NS
DIOX			EL
NO_x			EL
CO			NS
VOC			NS
SAM			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **320** lb/hour **806** tons/year	4. Synthetically Limited? ☒ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Below** Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **1.28 lb SO_2/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 320 lb SO_2/hr** **0.736 lb SO_2/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 806 TPY SO_2**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **See Part B, Table 2-6.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **320 lb/hr**	4. Equivalent Allowable Emissions: **320** lb/hour tons/year
5. Method of Compliance: **SO_2 CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): ***Allowable emissions on a 24-hour average basis.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.736 lb/ton clinker**	4. Equivalent Allowable Emissions: lb/hour **806** tons/year
5. Method of Compliance: **SO_2 CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Annual limit based on 12-month rolling average.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.2 lb/MMBtu**	4. Equivalent Allowable Emissions: **810** lb/hour tons/year
5. Method of Compliance: **EPA Method 6**	
6. Allowable Emissions Comment (Description of Operating Method): **Additional SO_2 limit when liquid fuel is fired (24-hour average). Miami-Dade Co. Code, Section 24-17(2)(a).**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 4 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.8 lb/MMBtu**	4. Equivalent Allowable Emissions: **540** lb/hour tons/year
5. Method of Compliance: **EPA Method 6**	
6. Allowable Emissions Comment (Description of Operating Method): **Additional SO_2 limit when liquid fuel is fired (24-hour average). Miami-Dade Co. Code, Section 24-17(2)(a).**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **39.85** lb/hour **174.5** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Comment** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Tables 2-5 and 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 4

1. Basis for Allowable Emissions Code: **ESC PSD**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.090 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **38.3** lb/hour **167.5** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to emissions from main stack only.**	

Allowable Emissions Allowable Emissions 2 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.3 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **127.5** lb/hour **558.5** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 63.1344. For kiln only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.**	

Allowable Emissions Allowable Emissions 3 of 4

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.1 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **42.5** lb/hour **186.2** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **40 CFR 63.1345. For cooler only, based on feed to kiln. Equivalent allowable emissions are emissions out of the main stack.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **4** of **4**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **1.6** lb/hour **7.0** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to emissions from baghouses other than main stack baghouse 331.BF200.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **33.7** lb/hour **147.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Part B, Table 2-5** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Tables 2-5 and 2-6.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **ESC PSD**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.076 lb/ton dry Kiln feed**	4. Equivalent Allowable Emissions: **32.1** lb/hour **140.7** tons/year
5. Method of Compliance: **Annual Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to emissions from main stack only. See Part B, Tables 2-5 and 2-6.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **100 percent of PM**	4. Equivalent Allowable Emissions: **1.6** lb/hour **7.0** tons/year
5. Method of Compliance: **Annual Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to emissions from baghouses other than main stack baghouse 331.BF200.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **DIOX**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.46×10^{-7}** lb/hour **1.51×10^{-6}** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.4 ng/dscm @ 7% O_2** Reference: **40 CFR 63.1343(b)(3)**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.4 ng TEQ/dscm x (1 lb/454g) x (1 g/10^9 ng) x 230,911 dscf/min x (m^3/35.3 ft^3) x 60 min/hr = 3.46×10^{-7} lb/hr** **3.46×10^{-7} lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1.51×10^{-6} TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emissions are from main stack. Flow rate based on 360,637 dscfm @ 12% O_2 = 230,911 dscfm @ 7% O_2.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.4 ng/dscm @ 7% O_2**	4. Equivalent Allowable Emissions: **3.46×10^{-7}** lb/hour **1.51×10^{-6}** tons/year
5. Method of Compliance: **EPA Method 23**	
6. Allowable Emissions Comment (Description of Operating Method): **Based on limit in Permit No. 0250020-010-AC and Rule 40 CFR 63.1343(b)(3).**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **720** lb/hour **2,300** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Below** Reference:	7. Emissions Method Code: **0**

8. Calculation of Emissions:

2.88 lb NO_x/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 720 lb NO_x/hr

2.1 lb NO_x/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 2,300 TPY NO_x

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **720 lb/hr, 24-hr average**	4. Equivalent Allowable Emissions: **720** lb/hour tons/year
5. Method of Compliance: **NO_x CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed permit limit. Equivalent allowable emissions are emissions out of main stack.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **ESC PSD**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.1 lb/ton clinker**	4. Equivalent Allowable Emissions: lb/hour **2,300** tons/year
5. Method of Compliance: **NO_x CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Annual limit in lb/ton based on 12-month rolling average.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.0 lb/MMBtu**	4. Equivalent Allowable Emissions: **1,350** lb/hour **5,913** tons/year
5. Method of Compliance: **NO_x CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit based on Rule 62-296.570(4)(b)8. Maximum heat input is 675 MMBtu/hr.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **575** lb/hour **1,456** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **See Below** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **2.3 lb CO/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 575 lb CO/hr** **1.33 lb CO/ton clinker produced (annual average) x 2,190,000 TPY clinker x 1 ton/2,000 lb = 1,456 TPY CO**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **2.3 lb/ton CP**	4. Equivalent Allowable Emissions: **575** lb/hour tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable based on 24-hour block average. Annual average limit is 1.33 lb/ton clinker product.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **ESC PSD**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.33 lb/ton clinker**	4. Equivalent Allowable Emissions: lb/hour **1,456** tons/year
5. Method of Compliance: **EPA Method 10**	
6. Allowable Emissions Comment (Description of Operating Method): **Annual limit in lb/ton clinker based on 12-month rolling average.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **40** lb/hour **153** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **Permit Limit** Reference: **Permit No. 0250020-016-AC**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **0.16 lb VOC/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 40 lb/hr** **0.14 lb VOC/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 153 TPY VOC**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **40 lb/hr**	4. Equivalent Allowable Emissions: **40** lb/hour tons/year
5. Method of Compliance: **VOC CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Allowable based on 24-hour block average.**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **ESC PSD**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.14 lb/ton clinker**	4. Equivalent Allowable Emissions: lb/hour **153** tons/year
5. Method of Compliance: **VOC CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit in lb/ton clinker based on 12-month rolling average.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.70** lb/hour **11.8** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.0108 lb/ton clinker** Reference: **Vendor Information**	7. Emissions Method Code: **2**

8. Calculation of Emissions:

0.0108 lb SAM/ton clinker produced (24-hour average) x 250 TPH clinker produced (24-hour average) = 2.70 lb/hr

0.0108 lb SAM/ton clinker produced (annual average) x 2,190,000 TPY clinker produced x 1 ton/2,000 lb = 11.8 TPY SAM

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0108 lb/ton clinker**	4. Equivalent Allowable Emissions: **2.70** lb/hour **11.8** tons/year
5. Method of Compliance: **EPA Methods 5 and 8**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **COMS or EPA Method 9.**	
5. Visible Emissions Comment: **Rule 40 CFR 63.1342 for the main/common stack and 40 CFR 63.1348 for the other baghouse stacks.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **4**

1. Parameter Code: **VE**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **40 CFR 63, Subpart LLL.**	

Continuous Monitoring System: Continuous Monitor **2** of **4**

1. Parameter Code: **NO_x**	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Required by permit condition.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **3** of **4**

1. Parameter Code: **SO_2**	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☒ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Required by permit condition.**	

Continuous Monitoring System: Continuous Monitor **4** of **4**

1. Parameter Code: **VOC**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Required by permit condition.**	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-EU4-I2** ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [4]
Raw Mill and Pyroprocessing Unit

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID: _____
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID: _____
     - ☐ Previously Submitted, Date: _____
   - ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-EU4-C15

EMISSION POINT COMMENT

Attachment TM-EU4-C15. Summary of Stack Parameter Data for the Raw Mill and Pyroprocessing System (EU 028)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Kiln/Cooler/Raw Mill	331.BF200	420	14	515,000[a]	294[a]
Kiln Dust bin	331.BF740	125	1.00 x 1.25	4,250	300
Clinker Feed Blend silo	341.BF350	241	0.92 x 1.08	3,760	178
Raw feed transfer	351.BF410	84	0.92 x 1.08	4,000	178
Raw feed transfer	351.BF440	45	1.00 x 1.25	4,760	178
Raw feed transfer	351.BF470	353	1.00 x 1.25	4,100	175
Kiln Dust Truck Loadout	331.BF645	46	0.83	3,500	175

[a]When raw mill is operating; parameters are 605,000 acfm and 500°F when raw mill is down.

ATTACHMENT TM-EU4-I2

FUEL ANALYSIS OR SPECIFICATION

Attachment TM-EU4-I2. Fuel Analysis Specification

Parameter	No. 6 Residual Fuel Oil	Coal	Petroleum Coke	No. 2 Distillate Fuel Oil
Moisture	--	8.5%	12%	--
Density	8.0 lb/gal	--	--	7.2 lb/gal
Heating Value	152,000 Btu/gal	12,500 Btu/lb	14,200 Btu/lb	138,800 Btu/gal
Nitrogen	0.5%	1.1%	--	0.5%
Sulfur	2% Max	3.5%	5.5%	0.5% Max
Ash/Inorganic	0-10	20%	1.0%	0-10

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [5]
Raw Material Handling

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
   Raw Material Handling

3. Emissions Unit Identification Number: **029**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Raw material feed storage silos and handling.

EMISSIONS UNIT INFORMATION
Section [5]
Raw Material Handling

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (4)

   Process Enclosures

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **3,723,000 TPY (dry)**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

Maximum production rate represents total dry kiln feed on an annual basis.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 029**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **4 baghouses. See Attachment TM-EU5-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **H**	6. Stack Height: **92** feet	7. Exit Diameter: **1.58 x 1.58** feet
8. Exit Temperature: **92** °F	9. Actual Volumetric Flow Rate: **8,500** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **8,130** dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Stack parameters are for Baghouses 311.BF650. See Attachment TM-EU5-C15 for stack parameters of other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Raw Material Transfer**		
2. Source Classification Code (SCC): **3-05-006-12**	3. SCC Units: **Tons Transferred or Handled**	
4. Maximum Hourly Rate: **425**	5. Maximum Annual Rate: **3,723,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Process rate is material feed on a dry basis. Equivalent to 250 TPH and 2,190,000 TPY clinker production.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **18.01** lb/hour **28.63** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Applicant Request**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-7 and Part B, Appendix A. Includes 2.97 lb/hr and 13.00 TPY from baghouses, and 15.04 lb/hr and 15.63 TPY of fugitive PM emissions from raw material handling.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **2.97** lb/hour **13.0** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to the baghouses only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **8.24** lb/hour **18.48** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **2**
8. Calculation of Emissions: **See Part B, Table 2-7 and Part B, Table A-3. Includes 2.97 lb/hr and 13.00 TPY of PM emissions from the baghouses, and 5.27 lb/hr and 5.48 TPY of fugitive PM emissions from raw material handling.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.0095 gr/dscf**	4. Equivalent Allowable Emissions: **2.97** lb/hour **13.0** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method): **Applies to baghouses only.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Opacity limitation of 5 percent in lieu of stack testing; applies to baghouses only. Rule 62-297.620(4), F.A.C.**	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. 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: **Rule 62-296.320(4)(b). Applies to sources other than baghouse exhausts.**	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 63.1348 for baghouse stacks.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: ☐ Rule ☐ Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: ☐ Rule ☐ Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date ____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **See Part B** ☐ Previously Submitted, Date ____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ To be Submitted, Date (if known): ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: ____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [5]
Raw Material Handling

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-EU5-C15

EMISSION POINT COMMENT

Attachment TM-EU5-C15. Summary of Stack Parameter Data for the Raw Material Handling and Storage (EU 029)

Emission Unit	Baghouse ID No.	Stack Height (ft)	Vent Size (in)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Raw Material Feed Bins	311.BF650	92	19 x 19	8,500	92
Raw Material Feed Bins	311.BF750	17	18 x 27	7,750	92
Raw Material Feed Bins	321.BF470	100	17 x 21	10,800	108
Raw Material Feed Bins	311.BF950	68	20 x 30	11,700	108

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION
Section [6]
Cement Storage, Packhouse & Loadout

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☐ 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, a 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.

2. Description of Emissions Unit Addressed in this Section:
   Cement Storage Silos 1-12, Packhouse & Bulk Loadout Units 1-3

3. Emissions Unit Identification Number: **014, 015, and 016**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**32**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
    Original ARMS ID Nos. are 014, 016, and 015, for the Cement Silos, Packhouse, and Bulk Loadout units Nos. 1, 2, and 3, respectively.

EMISSIONS UNIT INFORMATION
Section [6]
Cement Storage, Packhouse & Loadout

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   Baghouses (13)

   Process Enclosures

2. Control Device or Method Code(s): **018, 054**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **500 TPH**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

Maximum process rate is limited by Permit No. 0250020-016-AC. See Attachment TM-EU6-B6 for maximum individual process rates.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU 014, 015, 016**		2. Emission Point Type Code: **3**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **13 baghouses. See Attachment TM-EU6-C15.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **200** feet	7. Exit Diameter: **1** feet
8. Exit Temperature: **200** °F	9. Actual Volumetric Flow Rate: **18,000** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: **45,245** dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Stack parameters are for Baghouses F-511. Refer to Attachment TM-EU6-C15 for stack parameters of other baghouses.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing Dry Process; Cement storage silos**		
2. Source Classification Code (SCC): **3-05-006-18**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **500**	5. Maximum Annual Rate: **2,400,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Hourly rate refers to combined rate to all cement silos as stated in Permit No. 0250020-016-AC. Annual rate reflects total cement production from 2,190,000 TPY of clinker production.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): **Mineral Products; Cement Manufacturing Dry Process; Cement Loadout**		
2. Source Classification Code (SCC): **3-05-006-19**	3. SCC Units: **Tons Cement Produced**	
4. Maximum Hourly Rate: **500**	5. Maximum Annual Rate: **2,400,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Hourly rate refers to combined rate to all cement Loadout units as stated in Permit No. 0250020-016-AC. Annual rate reflects total cement production from 2,190,000 TPY clinker production. Packhouse loadout rate limited to 170 tons/hr.**		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
PM_{10}	018		EL

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.13** lb/hour **31.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.01 gr/acf** Reference: **Manufacturer Info.**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-4.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **7.13** lb/hour **31.2** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.13** lb/hour **31.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.01 gr/acf** Reference:	7. Emissions Method Code: **0**
8. Calculation of Emissions: **See Part B, Table 2-4.**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **7.13** lb/hour **31.2** tons/year
5. Method of Compliance: **EPA Method 9**	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.01 gr/acf**	4. Equivalent Allowable Emissions: **0.52** lb/hour **2.26** tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method): **Emission limit applies only to Cement Silos 7-9, Baghouse F-512, per PSD-FL-236.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE05**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **5** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **5-percent opacity in lieu of stack test. Rule 62-297.620(4), F.A.C.**	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE test, EPA Method 9**	
5. Visible Emissions Comment: **40 CFR 63.1348.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-FI-C2** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **TM-EU6-I3** ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [6]
Cement Storage, Packhouse & Loadout

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: ____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: ____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: ____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: ____ ☒ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: ____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: ____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: ____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: ____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: ____
      ☐ Previously Submitted, Date: ____
   ☒ Not Applicable

Additional Requirements Comment

ATTACHMENT TM-EU6-B6

OPERATING CAPACITY COMMENT

Table TM-EU6-B6. Individual Maximum Process Rates for Cement Storage/Loadout/Packhouse (EU ID 004), Titan America, Pennsuco.

Source	Maximum Operating Hours (hr/yr)	Maximum Process Rate	
		(TPH)	(TPY) (a)
Cement Silos 1-6	8,760	500	2,400,000
Cement Silos 7-9	8,760	500	2,400,000
Cement Silo 10-12	8,760	500	2,400,000
Bulk Loadout Unit 1	8,760	500	2,400,000
Bulk Loadout Unit 2	8,760	500	2,400,000
Bulk Loadout Unit 3	8,760	500	2,400,000
Packhouse	8,760	170	1,489,200

(a) Represents hourly process rate times 8,760 hr/yr, or 2,400,000 TPY total cement production, whichever is less.

Notes:

Process rate limit for all silo's combined is 500 TPH.

Process rate limit for all loadout unit's combined is 500 TPH.

ATTACHMENT TM-EU6-C15

EMISSION POINT COMMENT

Pennsuco Cement
Cement Storage/Loadout/Packhouse Baghouse Descriptions

Attachment TM-EU6-C15.
Summary of Stack Parameter Data for the Cement Storage/Loadout/Packhouse Baghouses

Emission Unit	Baghouse ID No.	Stack Height (ft)	Stack Diameter[a] (ft)	Exhaust Flow Rate (acfm)	Exhaust Temperature (°F)
Cement Silos 1-6	F-511	200	1	18,000	200
Cement Silos 7-9	F-512	200	1	10,000	200
Cement Silo 10	F-513	200	1	5,000	200
Cement Silo 11	F-514	200	1	5,000	200
Cement Silo 12	F-515	200	1	5,000	200
Bulk Loadout - Unit 1	B-110	30	1	3,000	200
Bulk Loadout - Unit 2	B-210	30	1	3,000	200
Bulk Loadout - Unit 3	B-372	12	1	2,000	200
Bulk Loadout - Unit 3	B-374	12	1	2,000	200
Bulk Loadout - Unit 3	B-382	86	1	5,000	200
Packhouse	BF-120	30	1.5	4,000	275
Packhouse	BF-200	60	1.5	6,200	275
Packhouse	BF-400	50	1.5	15,000	250

[a] Stack for baghouses B-110 and B-210 are circular; all other baghouse stacks are rectangular. For rectangular stacks, approximate effective stack diameter is shown.

ATTACHMENT TM-EU6-I3

DETAILED DESCRIPTION
OF CONTROL EQUIPMENT

Attachment TM-EU6-I3a. Control Equipment Information for Cement Storage and Loadout Baghouses, Titan America, Pennsuco

Source ID	Baghouse ID	Manufacturer	Model No.	Number of Bags	Flow Rate (acfm)	Cloth Area (ft^2)	Air to Cloth Ratio
Cement Silos 1-6	F-511	Fuller	2 zone #78	156	18,000	1,625	11.1
Cement Silos 7-9	F-512	Norblo	156 AMT	156	10,000	2,142	4.7
Cement Silo 10	F-513	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Cement Silo 11	F-514	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Cement Silo 12	F-515	Mikropul	121S-10-20B	121	5,000	1,424	3.5
Bulk Loadout Unit 1	B-110	Norblo	120 AMT	120	3,000	1,650	1.8
Bulk Loadout Unit 2	B-210	Norblo	120 AMT	120	3,000	1,650	1.8
Bulk Loadout Unit 3 Line 1	B-372	Mikropul	36S-8-30-C	36	2,000	340	5.9
Bulk Loadout Unit 3 Line 2	B-374	Mikropul	36S-8-30-C	36	2,000	340	5.9
Bulk Loadout Unit 3 Airslide	B-382	Mikropul	121S-10-20C	121	5,000	1,424	3.5

TITAN AMERICA

Pennsuco Cement
Packhouse Baghouse Descriptions

Attachment TM-EU6-I3b.
Control Equipment Information for Packhouse

ID No:	**BF-120**	**BF-200**	**BF-400**
Model:	100TA8	144TA8	304C10
Make:	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "TA" Series Jet Pulse	FLS Airtech's Model "C" Series Jet Pulse
Design Air Volume:	4,000 acfm	6,200 acfm	15,000 acfm
Design Air Temperature:	275°F Max.	275°F Max.	250°F
Dust:	Cement	Cement	Cement
Inlet Grain Loading:	= 5.0 grains per ACF	= 5.0 grains per ACF	= 5.0 grains per ACF
Outlet Grain Loading:	0.01 grains per ACF	0.01 grains per ACF	0.01 grains per ACF
Total Filter Area:	1,047 ft^2	1,508 ft^2	3,958 ft^2
Air to Cloth Ratio:	3.82:1	4.11 to 1	3.8 to 1
Interstitial Velocity:	140 FPM	158 FPM	
Baghouse Foot Print:	6' 2½" x 6' 2½"	7' 6½" x 7' 4½"	11' - 11" x 9' - 6"
Overall Height:	23' 5" from hopper flange to top of Handrail	15' 10" from hopper flange to top of Handrail	34' – 1"
Compressed Air Used:	10 to 20 scfm @90 psig and 200 milliseconds	15 to 30 scfm @ 90 psig and 200 milliseconds	
Filter Access:	Top	Top	Side
Filter Quantity:	100 bags	144 bags	304 bags
Filter Size:	5" Diameter x 96" long	5" Diameter x 96" long	5" Diameter x 120" long
Design Pressure:	+/- 20" w.c.	+/- 20" w.c.	+/- 20" w.c.

PART B

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1.0 INTRODUCTION

Titan America Inc. (formally Tarmac) currently operates a Portland cement plant located in Medley, Dade County, Florida, near Miami. The dry process cement plant was constructed under Air Construction Permit No. 0250020-010-AC, issued by Miami-Dade County Department of Environmental Resources Management (DERM) on May 1, 2001.

In March 2004, . Titan submitted an application to modify Air Construction Permit No. 0250020-010-AC to reflect the final engineering and actual equipment installed at the Pennsuco facility. That application included the following revisions to Air Construction Permit No. 0250020-010-AC:

1. Retention of Finish Mills Nos. 1 and 2 (at that time, Titan did not intend to install Finish Mill No. 6);
2. Construction of a new O-Sepa System on Finish Mill No. 3;
3. Revisions to the new clinker storage silo transfer system; and
4. Corrections to the physical and operating parameters for a number of baghouses currently contained in the referenced Air Construction Permits to reflect the actual equipment to be installed.

On February 7, 2005, after a series of correspondence between the Florida Department of Environmental Protection (FDEP) and Titan regarding this application, Golder Associates Inc. (Golder) submitted a letter to FDEP summarizing a number of facility or operational modifications to the pending construction permit application, including the following:

1. Removal of the majority of emissions from the Coal Mill from Emission Unit 001, since these emissions are vented to the Main Stack which is part of Emission Unit 005. Since the emission limit for the Main Stack is a function of the amount of dry kiln feed, Titan requested that the Coal Mill be permitted to operate for 400 hours when the kiln was down. Emissions associated with this 400 hours of operation were retained in Emission Unit 001.
2. Removal of Baghouse Nos. K347 and K447 associated with the Clinker Handling System (Emission Unit 002).
3. Modification of the operation of the finish mills to include Finish Mill Nos. 1, 3, 4, and 6.

A draft construction permit for these modifications was issued by FDEP on April 5, 2005 (Permit No. 0250020-016-AC).

The purpose of the current application is to modify Air Construction Permit No. 0250020-016-AC to increase the permitted production rate of clinker from 1,642,500 to 2,190,000 tons per year (TPY). This will in turn increase the finished cement production rate to a maximum of 2,400,000 TPY. To accommodate the increased production rate, an increase in the permitted operating hours for several emission units will required. No change to the maximum permitted 24-hour clinker production rate of 250 tons per hour (TPH) is being requested. However, the operating hours of all sources permitted to operate less than 8,760 hours per year (hr/yr) (for example, the Finish Mills and Packhouse) have been increased to 8,760 hr/yr to accommodate the increase in annual clinker and cement production.

In order to not increase overall facility particulate matter (PM) emissions from those in Permit No. 0250020-016-AC, the PM emission limit for the main stack (coal mill and raw mill/kiln/cooler emission point) is being reduced. In addition, final baghouse specifications for the Packhouse are reflected in the application.

This report is organized into two additional sections. A project description, including emission estimates, is presented in Section 2.0. A regulatory applicability analysis is presented in Section 3.0.

2.0 PROJECT DESCRIPTION

The Pennsuco cement plant consists of the following emissions units, which are addressed in draft Air Construction Permit No. 0250020-016-AC:

Emission Unit ID No.	System	Emission Unit Description
026	Coal Handling	Coal and Pet Coke Feed Bins, Coal Mill, Coal and Pet Coke Handling and Storage System
027	Clinker Handling and Storage	Clinker Transfer from Burner Building, Clinker Silos, Clinker Transfer, and Clinker Bins
010, 012, 013, 030	Finish Mills	Finish Mills Nos. 1, 3, 4, and 6
014, 015, 016	Cement Storage, Loadout, and Packhouse	Cement Silos Nos. 1 through 12, Bulk Loadout Unit Nos. 1 through 3, and Packhouse
028	Raw Mill and Pyroprocessing Unit	Raw Mill, and Pyroprocessing System consisting of the Preheater, Calciner, Kiln, and Cooler
029	Raw Material Handling	Raw Material Storage Silos and Handling System

Each of these emission units will be modified as a result of this application. The extent of these modifications is described in the following sections, organized by emissions unit.

2.1 COAL HANDLING

Two solid fuels, coal and petroleum coke (petcoke), are utilized in the new cement plant at Titan's Pennsuco facility. Originally, these fuels were to be delivered by rail and stored in separate temporary piles. A front-end loader was to be used to transfer coal and petcoke to a dump hopper. From the dump hopper, each fuel was to be transferred to separate feed bins using conveyors.

These fuels are still delivered by rail, but now they are transferred from the railcars using a bottom-dump system, where they are gravity fed into an underground hopper and onto a belt conveyor. Two additional conveyor-to-conveyor transfer points exist between the railcar unloading operation and the Materials Storage Building. Each of these transfer points is enclosed. Inside the Materials Storage Building, coal and petcoke are transferred from the conveyor belt entering the building to an automatic stacker, where the fuel is transferred onto the storage piles inside the building.

As needed, coal or petcoke is transferred from the storage pile using an automatic reclaimer to the Coal and Petcoke Feed Bins. Subsequent transfer points associated with coal handling after the Materials Storage Building are controlled using the baghouses described in Emissions Unit 026.

Occasionally, when the Materials Storage Building is at capacity, coal is temporarily stored on the ground. A front-end loader is used to move the coal from a separate railcar unloading operation to a storage pile. As capacity is available in the Materials Storage Building, the front-end loader is used to reclaim coal from the pile and transfer it to railcars where it is processed normally (bottom-dumped from railcar and transferred to the Materials Storage Building). Up to one-third of the total coal throughput could be handled in this way.

Vehicular traffic and coal and petcoke transfer points are sources of fugitive PM emissions from the handling, transfer, and storage of coal and petcoke between the railcar unloading area and the storage building. Emission estimates for these fugitive sources are presented in Appendix A.

PM emissions from the transfer of the fuels from the Materials Storage Building to each coal feed bin are controlled using two baghouses (Equipment ID No. 461.BF130 and 461.BF230). From the feed bins, coal and petcoke are transferred to the coal mill for grinding. PM from the transfer points of the feed bins to the coal mill are controlled by using a third baghouse (Equipment ID No. 461.BF350). PM emissions from the coal grinding operation are controlled using a fourth baghouse (Equipment ID No. 461.BF300). The dust collected in baghouse 461.BF300 is recycled back to the coal mill. Ground coal/petcoke is then transferred to two coal/petcoke surge bins. PM emissions from this transfer operation are controlled using two identical baghouses (Equipment ID Nos. 461.BF650 and 461.BF750). These surge bins are used to feed the kiln and preheater/calciner.

Emission sources associated with the coal and petcoke handling and storage system are currently permitted to operate 7,884 hr/yr, with the exception of the baghouses used to control emissions from the transfer of coal/petcoke from the storage piles to the feed bins (Equipment ID Nos. 461.BF130 and 461.BF230), which are permitted to operate up to 4,000 hr/yr. Air Construction Permit No. 0250020-016-AC limits the maximum combined usage of coal/petcoke to 30 TPH on a 24-hour block average and 190,000 TPY annually. The use of petcoke only is limited to 20 TPH, 24-hour block average.

Titan is not proposing to change the configuration of the coal and petcoke handling and storage system as described in Air Construction Permit No. 0250020-016-AC. However, Titan now intends to remove the permitted limit on operating hours for all the sources associated with this emissions unit and increase the annual permitted usage of coal and petcoke from 190,000 to 263,000 TPY.

A summary of the operating parameters and proposed emission limits for each baghouse associated with Emission Unit 026 is presented in Table 2-1. A flow diagram of the revised Coal Handling emissions unit is presented in the application form, Attachment TA-FI-C2. Notice that because Titan is now requesting that the sources vented through the Main Stack be permitted to operate continuously, Titan's request in the pending permit that the Coal Mill be permitted to operate for 400 hours when the Main Stack was down, is no longer needed. As such, the Coal Mill emissions have been removed from Table 2-1, since it vents to the Main Stack and once this permit is issued can do so continuously regardless of the operational status of the pyroprocessing equipment.

2.2 CLINKER HANDLING AND STORAGE

Clinker from the pyroprocessing unit will be cooled in the new Clinker Cooler. From the Clinker Cooler, the clinker is stored in one of two clinker storage silos then conveyed to one of twelve clinker storage silos.

Titan does not intend to modify the process or control equipment associated with this emission unit as part of this application. Titan does request that the permitted hours of operation for the emission sources and baghouses associated with this emissions unit not be limited. Additionally, Titan requests that the permitted maximum annual clinker throughput of this emission unit be increased from 1,942,500 to 2,190,000 TPY.

A summary of the operating parameters and emission rates associated with the requested modifications to the Clinker Handling and Storage System is presented in Table 2-2.

2.3 FINISH MILLS

The permitted finish mills include a number of conveyors used to transfer clinker in and out of one or a series of ball mills. The ground clinker from the ball mills is transferred to a cement separator for sizing of the product, using an air classification system. The processed clinker, now in a granular or

powdered form, may then be cooled or sent directly to storage. Baghouses are used to control PM emissions from the conveyor systems and from the grinding operations.

The pending draft Air Construction Permit application includes Finish Mill Nos. 1, 3, 4, and 6, and limits the hours of operation of each finish mill to 7,884 hr/yr. Titan is now requesting to increase the annual hours of operation for each finish mill to 8,760 hr/yr.

A summary of the operating parameters and emission rates associated with the Finish Mills is presented in Table 2-3. Note, that other than the change in annual operating hours, the information presented in Table 2-3 has not changed from the pending construction permit.

2.4 CEMENT STORAGE, LOADOUT AND PACKHOUSE

Cement from the finish mills will be sent to storage silos. From the storage silos the cement will be transferred to one of several operations for delivery, including a combination rail/truck load out, two truck loadouts, or a bagging operation. The configuration of process equipment, as described in draft Air Construction Permit No. 0250020-016-AC, will not be changed as a result of this application, except for the following final engineering and actual equipment installed for the packhouse changes at the Pennsuco facility.:

- The Packhouse will have three (3) dust collectors instead of one;
- The Packhouse will be permitted to operate 8,760 hr/yr; and
- The maximum production rate for the Packhouse will increase to 170 TPH as a 24-hour block average.

A summary of the operating parameters and emission rates associated with the Cement Storage, Loadout, and Packhouse is presented in Table 2-4.

2.5 RAW MILL AND PYROPROCESSING UNIT

Titan is not proposing to change the configuration of the Raw Mill and Pyroprocessing Unit, as described in draft Air Construction Permit No. 0250020-016-AC. The PM emission limit for the Main Stack for the Raw Mill and Pyroprocessing Unit in the pending Air Construction Permit application is 0.125 pounds per ton (lb/ton) of dry kiln feed (DKF) and 53.13 lb/hr. This corresponds to an hourly dry kiln feed rate of 425 TPH.

Titan is requesting to increase the amount of clinker produced by this facility from 1,642,500 to 2,190,000 TPY, which is equivalent to 3,723,000 TPY of DKF. Titan is not requesting an increase in the kiln process feed rate of 425 TPH (dry basis) on a 24-hour block average basis. To maintain overall facility annual PM emissions at or below currently permitted rates, Titan will accept a PM emission limit for the Main Stack of 0.090 lb/ton of DKF. As shown in Table 2-5, potential hourly and annual PM emissions using this emission limit are 38.3 lb/hr and 167.5 TPY, respectively.

A summary of the Main Stack emission rates associated with the Kiln/Cooler/Raw Mill is presented in Table 2-6. Short-term (24-hour average) and annual emissions of sulfur dioxide, carbon monoxide, and volatile organic compounds will not increase over those in the draft Air Construction Permit No. 0250020-016-AC. However, it is proposed to increase the annual nitrogen oxides emissions to 2,300 TPY, based on the increase in clinker production. Even with this increase in annual emissions, the equivalent annual average emission factor for nitrogen oxides will decrease from 2.36 lb/ton clinker to 2.10 lb/ton clinker. The permitted short-term (24-hour average) nitrogen oxides emission limit of 720 lb/hr will not increase.

2.6 RAW MATERIAL HANDLING

Titan is not proposing to change the configuration of the Raw Material Handling operation as described in the pending draft permit, except for the deletion of the Lime/Gypsum Silo. However, Titan is requesting to increase the permitted annual process rate of raw materials from 3,260,000 to 3,723,000 TPY (dry). To accommodate this increase, Titan requests that the process equipment associated with this emission unit be permitted to operate continuously.

Fugitive PM emissions are generated from the handling of cement additives and limestone. Previously, 200,000 TPY of additives were required to produce 1,642,500 TPY of clinker. To produce 2,190,000 TPY of clinker, 266,700 TPY of additives will be required. Fugitive PM emissions from material transfer operations and vehicular traffic are estimated in Tables A-1 and A-3, respectively. Fugitive PM emissions from material transfer operations for limestone are estimated in Table A-1.

Table 2-1. Coal Handling System (EU ID No. 026) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate acfm	Exhaust Flow Rate dscfm	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] gr/dscf	lb/hr	TPY
Coal/pet coke feed bin	461.BF130	New	8,760	1,400	1,339	92	0.0095	0.11	0.48
Coal/pet coke feed bin	461.BF230	New	8,760	1,400	1,339	92	0.0095	0.11	0.48
Coal mill feed	461.BF350	New	8,760	5,500	5,261	92	0.01	0.45	1.98
Coal mill	461.BF300	New	8,760	54,500	45,245	176	0.01	N/A[b]	N/A[b]
Coal bin	461.BF650	New	8,760	294	243	178	0.0095	0.02	0.09
Pet coke bin	461.BF750	New	8,760	294	243	178	0.0095	0.02	0.09
						Revised Potential Emission Rates =		**0.71**	**3.10**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

[b] The existing emission limit for the Main Stack (see Tables 2-5 and 2-6 for emissions from the Raw Mill and Pyroprocessing) of 0.090 lb/ton of dry clinker product includes emissions from the Coal Mill, which are also vented through the Main Stack.

Table 2-2. Clinker Handling and Storage System (EU ID No. 027) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate acfm	Exhaust Flow Rate dscfm	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] gr/dscf	gr/acf	lb/hr	TPY
Clinker transfer	441.BF540	New	8,760	4,600	3,421	250	0.0095	--	0.28	1.22
Clinker Silos	481.BF140	New	8,760	12,000	8,924	250	0.0095	--	0.73	3.18
Clinker transfer	481.BF540	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
Clinker bins	481.BF330	New	8,760	6,100	4,536	250	0.0095	--	0.37	1.62
Clinker transfer	481.BF640	New	8,760	4,700	3,495	250	0.0095	--	0.28	1.25
Clinker transfer	481.BF730	New	8,760	18,700	13,906	250	0.0095	--	1.13	4.96
Clinker Silos 21-23 & 26-28	F633	Existing	8,760	6,000	--	77	--	0.01	0.51	2.25
Clinker silos	481.BF930	New	8,760	15,000	11,155	250	0.0095	--	0.91	3.98
							Revised Potential Emission Rates =		**4.50**	**19.70**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Table 2-3. Finish Mills (EU ID Nos. 010, 012, 013, and 030) Potential Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equipment ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate acfm	Exhaust Flow Rate dscfm	Temperature (°F)	Potential PM/PM_{10} Emission Rate[a] gr/dscf	gr/acf	lb/hr	TPY
Finish Mill No. 1 Baghouse	F113	Existing	8,760	11,800	--	--	--	0.01	1.01	4.43
Finish Mill No. 1 Baghouse	F130	Existing	8,760	12,000	--	--	--	0.01	1.03	4.51
Finish Mill No. 3 Baghouse	F330	Existing	8,760	20,000	--	--	--	0.01	1.71	7.51
Finish Mill No. 3 Baghouse	F332	Existing	8,760	13,500	--	--	--	0.01	1.16	5.07
Finish Mill No. 3 Baghouse	533.BF340	New	8,760	77,800	65,307	169	0.0095	--	5.32	23.29
Finish Mill No. 4 Baghouse	F432	Existing	8,760	17,000	--	--	--	0.01	1.46	6.38
Finish Mill No. 4 Baghouse	F605	Existing	8,760	4,000	--	--	--	0.01	0.34	1.50
Finish Mill No. 4 Baghouse	F603	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00
Finish Mill No. 4 Baghouse	F430	Existing	8,760	30,000	--	--	--	0.01	2.57	11.26
Finish Mill No. 4 Baghouse	F604	Existing	8,760	8,000	--	--	--	0.01	0.69	3.00
Finish Mill No. 6 Baghouse	531.BF01	New	8,760	97,300	80,905	--	0.0095	--	6.59	28.86
Finish Mill No. 6 Baghouse	531.BF02	New	8,760	25,900	21,536	--	0.0095	--	1.75	7.68
							Revised Potential Emission Rates =		**24.31**	**106.49**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

Pennsuco Cement
Cement Storage/Loadout/Packhouse Baghouse Descriptions

Table 2-4. Cement Storage/Loadout/Packhouse (EU ID Nos. 014, 015, and 016) Potential Emission Rates: **2,400,000 TPY Cement**

Emission Unit	Baghouse ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate (acfm)	Potential PM/PM10 Emission Rate[a]		
					gr/acf	lb/hr	TPY
Cement Silos 1-6	F-511	Existing	8,760	18,000	0.01	1.54	6.76
Cement Silos 7-9	F-512	Existing	8,760	10,000	0.01	0.86	3.75
Cement Silo 10	F-513	Existing	8,760	5,000	0.01	0.43	1.88
Cement Silo 11	F-514	Existing	8,760	5,000	0.01	0.43	1.88
Cement Silo 12	F-515	Existing	8,760	5,000	0.01	0.43	1.88
Bulk Loadout - Unit 1	B-210	Existing	8,760	3,000	0.01	0.26	1.13
Bulk Loadout - Unit 2	B-110	Existing	8,760	3,000	0.01	0.26	1.13
Bulk Loadout - Unit 3	B-372	Existing	8,760	2,000	0.01	0.17	0.75
Bulk Loadout - Unit 3	B-374	Existing	8,760	2,000	0.01	0.17	0.75
Bulk Loadout - Unit 3	B-382	Existing	8,760	5,000	0.01	0.43	1.88
Packhouse	BF-120	New	8,760	4,000	0.01	0.34	1.50
Packhouse	BF-200	New	8,760	6,200	0.01	0.53	2.33
Packhouse	BF-400	New	8,760	15,000	0.01	1.29	5.63
				Revised Potential Emission Rates =		7.13	31.24

[a] PM_{10} emission rate calculated as 100 percent of PM emissions.

Table 2-5. Raw Mill and Pyroprocessing Unit System (EU ID No. 028) Potential PM/PM_{10} Emission Rates: **2,190,000 TPY Clinker**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate acfm	Exhaust Flow Rate dscfm	Temperature (°F)	Potential PM Emission Rate gr/dscf	Potential PM Emission Rate lb/hr	Potential PM Emission Rate TPY	Potential PM_{10} Emission Rate lb/hr	Potential PM_{10} Emission Rate TPY
Kiln/Cooler/Raw Mill[d]	331.BF200	New	8,760	515,000	360,637	294	[a]	38.3 [d]	167.5 [d]	32.1 [b,d]	140.7 [b,d]
Kiln Dust Bin	331.BF740	New	8,760	4,250	2,953	300	0.0095	0.24	1.05	0.24 [c]	1.05 [c]
Clinker Feed Blend Silo	341.BF350	New	8,760	3,760	3,112	178	0.0095	0.25	1.11	0.25 [c]	1.11 [c]
Raw Feed Transfer	351.BF410	New	8,760	4,000	3,310	178	0.0095	0.27	1.18	0.27 [c]	1.18 [c]
Raw Feed Transfer	351.BF440	New	8,760	4,760	3,939	178	0.0095	0.32	1.40	0.32 [c]	1.40 [c]
Raw Feed Transfer	351.BF470	New	8,760	4,100	3,409	175	0.0095	0.28	1.22	0.28 [c]	1.22 [c]
Kiln Dust Truck Loadout	331.BF645	New	8,760	3,500	2,910	175	0.0095	0.24	1.04	0.24 [c]	1.04 [c]
						Revised Potential Emission Rates =		**39.85**	**174.54**	**33.73**	**147.73**
						Revised Potential Emission Rates without Kiln/Cooler/Raw Mill =		**1.6**	**7.0**	**1.6**	**7.0**

[a] Emission rate based on an emission factor of 0.090 lb/ton of dry kiln feed. See Table 2-6.

[b] PM_{10} emission rate calculated as 84 percent of PM emission rate.

[c] PM_{10} emission rate calculated as 100 percent of PM emission rate.

[d] Includes emissions from the Coal Mill (EU ID No. 001) when the Kiln/Cooler/Raw Mill and Coal Mill are operating simultaneously.

Table 2-6. Dry Kiln, Cooler, and Raw Mill (EU ID No. 028) Potential Emissions Vented from the Main Stack: **2,190,000 TPY Clinker**

	Proposed Increase in Production						
			Emission Rate		Current Permit Limits		
Pollutant	Emission Factor	Activity Factor	lb/hr	TPY	lb/ton[b]	lb/hr	TPY
		24-Hour					
Particulate Matter (PM)[a]	0.090 lb/ton DKF	425 TPH DKF	38.3	--	0.125	50	--
Particulate Matter (PM10)[a]	84% of PM	--	32.1	--	84% of PM	42	--
Sulfur Dioxide	1.28 lb/ton CP	250 TPH CP	320	--	1.28	320	--
Nitrogen Oxides	2.88 lb/ton CP	250 TPH CP	720	--	2.88	720	--
Carbon Monoxide	2.3 lb/ton CP	250 TPH CP	575	--	2.30	576	--
Volatile Organic Compounds	0.16 lb/ton CP	250 TPH CP	40	--	0.16	40	--
Sulfuric Acid Mist	0.0108 lb/ton CP	250 TPH CP	2.7	--	0.0108	2.24	--
Dioxin/Furan	0.4 ng/dscm TEQ	230,911 dscf/min[c]	3.46E-07	--	--	--	--
		Annual Average					
Particulate Matter (PM)[a]	0.090 lb/ton DKF	3,723,000 TPY DKF	--	167.5	0.125	--	175
Particulate Matter (PM10)[a]	84% of PM	--	--	140.7	84% of PM	--	147
Sulfur Dioxide	0.736 lb/ton CP	2,190,000 TPY CP	--	806	0.98	--	806
Nitrogen Oxides	2.1 lb/ton CP	2,190,000 TPY CP	--	2,300	2.38	--	1,953
Carbon Monoxide	1.33 lb/ton CP	2,190,000 TPY CP	--	1,456	1.77	--	1,457
Volatile Organic Compounds	0.14 lb/ton CP	2,190,000 TPY CP	--	153	0.189	--	155
Sulfuric Acid Mist	0.0108 lb/ton CP	2,190,000 TPY CP	--	11.8	0.0108	--	8.68
Dioxin/Furan	3.46E-07 lb/hr	8,760 hr/yr	--	1.51E-06	--	--	--

DKF = Dry Kiln Feed
CP = Clinker Production
TPH = tons per hour
TPY = tons per year

[a] Includes Coal Mill (EU ID No. 001) emissions during concurrent operation of Kiln/Cooler/Raw Mill and Coal Mill.

[b] 24-hour limits are based on 250 TPH clinker production rate.

[c] Flow rate @ 7% O_2.

Table 2-7. Raw Material Handling and Storage System (EU ID No. 006) Potential Emission Rates: **2,190,000 TPY**

Emission Unit	Equip. ID No.	New or Existing	Operating Hours (hr/yr)	Exhaust Flow Rate		Temperature	Potential PM/PM_{10} Emission Rate[a]		
				acfm	dscfm	(°F)	gr/dscf	lb/hr	TPY
Raw Material Feed Bins	311.BF650	New	8,760	8,500	8,130	92	0.0095	0.66	2.90
Raw Material Handling	311.BF750	New	8,760	7,750	7,413	92	0.0095	0.60	2.64
Raw Material Handling	321.BF470	New	8,760	10,800	10,039	108	0.0095	0.82	3.58
Raw Material Handling	311.BF950	New	8,760	11,700	10,876	108	0.0095	0.89	3.88
						Revised Potential Emission Rates =		**2.97**	**13.00**

[a] PM_{10} emission rate calculated as 100 percent of PM emission rate.

3.0 SOURCE APPLICABILITY

3.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The new dry process cement plant at Pennsuco is subject to the provisions of Title 40, Part 63, Subpart LLL, National Emission Standards for Hazardous Air Pollutants (NESHAPs) from the Portland Cement Manufacturing Industry. The NESHAPs is applicable to all Portland cement manufacturing plants that are major or area sources of HAPs. At this time, Titan America is not refuting the presumption that the Pennsuco is a major source of HAPs, although future testing may demonstrate that is an area source.

Subpart LLL establishes emission limits for brownfield sites and for greenfield sites. Pennsuco is a brownfield site since kilns were in operation at the site prior to March 24, 1998. Subpart LLL sets emission limits for PM, opacity, and dioxin/furan for kilns and in-line kilns/raw mills located at brownfield sites. PM and opacity limits are set for clinker coolers, while opacity limits are set for all raw mills and finish mills, and for material handling points (each raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; and raw material dryer).

3.2 NEW SOURCE PERFORMANCE STANDARDS

The kiln, cooler, raw mill, finish mills, clinker handling and storage system, and cement storage/packhouse/loadout system at Pennsuco are potentially subject to 40 CFR 60, Subpart F, New Source Performance Standards for Portland Cement Plants. However, 40 CFR 63, Subpart LLL, contains a provision that exempts any affected source subject to Subpart LLL from meeting the NSPS in 40 CFR 60, Subpart F. Therefore, the NSPS in Subpart F are not applicable to the Pennsuco facility.

The Coal Handling system included in Air Construction Permit No. 0250020-016-AC is subject to 40 CFR 60, Subpart Y, New Source Performance Standards for Coal Preparation Plants. Subpart Y states that the opacity shall not exceed 20 percent for coal processing, conveying, storage, transfer, and loading systems. These requirements will also apply to the revised Coal Handling system described in this application.

3.3 FLORIDA EMISSION STANDARDS

The State of Florida emission limiting standards potentially applicable to the Pennsuco cement plant are contained in Rules 62-296.407 and 62-296.701 of the Florida Administrative Code (F.A.C.). Paragraph (1) of Rule 62-296.407 applies to existing kilns and coolers, therefore paragraph (1) does not apply to the new dry process kiln and cooler. Paragraph (2) limits particulate matter emissions to 0.3 lb/ton of feed for new kilns and 0.1 lb/ton of feed for new coolers. Paragraph (3) states that the test method for particulate emissions shall be EPA Method 5. These requirements will apply to the dry process cement plant described in this application.

The Pennsuco plant is not located in a particulate matter air quality maintenance area or in the area of influence of such an air quality maintenance area, therefore Rule 62-296.701 does not apply.

3.4 MODIFICATION/PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW

3.4.1 REQUIREMENTS

Federal Prevention of Significant Deterioration (PSD) requirements are contained in Title 40, Code of Federal Regulations (CFR), Part 52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted PSD regulations (Chapter 62-212.400, F.A.C.) that essentially are identical to the federal regulations. PSD regulations require that all new major stationary sources or major modifications to existing major sources of air pollutants regulated under the Clean Air Act (CAA) be reviewed and a construction permit issued. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by EPA and PSD approval authority in Florida has been granted to FDEP.

A "major facility" is defined under Florida's PSD regulations as any one of 28 named source categories that has the potential to emit 100 TPY or more of any pollutant regulated under the CAA, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under the CAA. A "source" is defined as an identifiable piece of process equipment or emissions unit. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant, considering the application of control equipment and any other federally enforceable limitations on the source's capacity. A "major modification" is defined under PSD regulations as a change at an existing major stationary facility that increases emissions by greater than significant amounts. PSD significant emission rates are shown in Table 3-1.

3.4.2 PSD APPLICABILITY

Titan has previously obtained air construction permits for the new dry process cement plant. Titan is now seeking to modify the latest revision of those permits. Since Titan is seeking to relax federally enforceable conditions on production capacity and operating hours contained in a previous construction permit, PSD applicability for the proposed modification must be determined "as though construction had not yet commenced on it" (Rule 62-212.400(2)(g), F.A.C.). Therefore, the revised potential-to-emit of the modified facility must be compared to the original "baseline" PSD emissions for the existing cement plant, as presented in the original June 1998 air permit application.

The revised potential-to-emit for the new cement plant emission units are presented in Tables 2-1 through 2-7. A summation of potential emissions from the material handling point sources is presented in Table 3-2. This summation includes emissions from all emission units except for the kiln/cooler/raw mill (Main Stack) emissions and the quantifiable fugitive emissions from the facility.

Fugitive dust emissions from the Coal Handling System and Raw Material Handling System associated with the new cement plant will be affected by the proposed modification, as compared to the original June 1998 application. This is due to an increase in the coal/petcoke throughput from 190,000 to 263,000 TPY, as reflected in Permit No. 0250020-016-AC and an increase in raw material throughput from 3,200,000 TPY (dry) to 3,723,000 TPY (dry). Estimated future potential fugitive dust emissions from these sources are summarized in Table 3-3. Detailed calculations are presented in Appendix A. These calculations are based on the same methodology and equations used in the 1998 application.

The revised PSD source applicability analysis is presented in Table 3-4. The PSD baseline emissions are the same as those included in the 1998 application for the new cement plant. For convenience, the basis of these emissions is repeated in Appendix B.

The PSD applicability analysis includes the slag dryer. At the time of the 1998 application, the new slag dryer at Titan Pennsuco was under a construction permit. Since it had just recently started operations, its PSD baseline future emissions are equivalent to its allowable or potential emissions. The basis for these emissions is presented Appendix B. Titan will not operate the slag dryer in the future.

As shown in Table 3-4, the revised PSD applicability analysis shows the net change in emissions of all PSD regulated pollutants is below the respective PSD significant emission rates. As a result, the proposed modification is not subject to PSD review.

Table 3-1. PSD Significant Emission Rates and *De Minimis* Monitoring Concentrations

Pollutant	Significant Emission Rate (TPY)	De Minimis Monitoring Concentration[a] ($\mu g/m^3$)
Sulfur Dioxide	40	13, 24-hour
Particulate Matter [PM(TSP)]	25	NA
Particulate Matter (PM_{10})	15	10, 24-hour
Nitrogen Dioxide	40	14, annual
Carbon Monoxide	100	575, 8-hour
Volatile Organic Compounds (Ozone)	40	100 TPY[b]
Lead	0.6	0.1, 3-month
Sulfuric Acid Mist	7	NM
Total Fluorides	3	0.25, 24-hour
Total Reduced Sulfur	10	10, 1-hour
Reduced Sulfur Compounds	10	10, 1-hour
Hydrogen Sulfide	10	0.2, 1-hour
Mercury	0.1	0.25, 24-hour
MWC Organics	3.5×10^{-6}	NM
MWC Metals	15	NM
MWC Acid Gases	40	NM
MSW Landfill Gases	50	NM

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is less than *de minimis* monitoring concentrations.

NA = Not applicable.
NM = No ambient measurement method established; therefore, no *de minimis* concentration has been established.
$\mu g/m^3$ = micrograms per cubic meter.
MWC = Municipal waste combustor
MSW = Municipal solid waste

[a] Short-term concentrations are not to be exceeded.
[b] No *de minimis* concentration; an increase in VOC emissions of 100 TPY or more will require a monitoring analysis for ozone.

Sources: 40 CFR 52.21.
Rule 62-212.400, F.A.C.

Table 3-2. Future Maximum Annual Emissions from Material Handling Point Sources, Tarmac, Pennsuco: **2,190,000 TPY Clinker**

Emission Unit ID	Emission Source	Baghouse ID	Emission Basis	Potential Annual PM Emission Rate (TPY)	Potential Annual PM_{10} Emission Rate (TPY)
026	Coal Handling/Coal Mill System	6 baghouses	See Table 2-1	3.10	3.10
027	Clinker Handling and Storage	8 Baghouses	See Table 2-2	19.70	19.70
010, 012, 013, 030	Finish Mill Nos. 1, 3, 4, and 6	12 baghouses	See Table 2-3	106.49	106.49
014, 015, 016	Cement Storage, Packhouse, & Loadout	13 Baghouses	See Table 2-4	31.24	31.24
028	Raw Mill and Pyroprocessing without Kiln/Cooler/Raw Mill	6 Baghouses	See Table 2-5	7.00	7.00
029	Raw Material Handling and Storage	4 Baghouses	See Table 2-7	13.00	13.00
			Total	180.53	180.53

Table 3-3. Summary of Quantifiable Fugitive Emissions for the New Cement Plant, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
Coal Handling Facilities - Drop Operations[b]	0.17	0.059	0.163	0.057
Coal Handling Facilities-Vehicular Traffic[c]	6.91	2.42	6.64	2.33
Raw Material Blending Area - Drop Operations[b]	1.62	0.57	1.56	0.55
Raw Material Blending Area - Vehicular Traffic[d]	14.01	4.91	13.48	4.72
Total	22.71	7.96	21.84	7.65

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

[b] See Table A-1.

[c] See Table A-2.

[d] See Table A-3.

Table 3-4. Net Change in Emissions and PSD Significant Emission Rates, Tarmac Cement Plant Modification: **2,190,000 TPY Clinker**

	PSD Baseline Emissions (TPY)						Future Potential Emissions (TPY)						
Pollutant	Kiln No. 2	Kiln No. 3	Material Handling Point Sources	Slag Dryer	Material Handling Fugitive Sources	Total	New Raw Mill Preheater/ Calciner/Kiln/ Cooler	Material Handling Point Sources	Material Handling Fugitive Sources	Total	Net Increase in Emissions (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Applies?
Particulate Matter [PM(TSP)]	33.15	112.01	167.87	9.12	43.96	366.1	167.5	180.5	22.7	370.7	4.6	25	No
Particulate Matter (PM_{10})	28.18	94.09	167.87	9.12	15.39	314.6	140.7	180.5	8.0	329.2	14.5	15	No
Sulfur Dioxide	14.38	1,399.76	--	18.19	--	1,432.3	806	--	--	806	-626.4	40	No
Nitrogen Dioxide	435.09	1,836.06	--	12.81	--	2,284.0	2,300	--	--	2,300	15.5	40	No
Carbon Monoxide	52.65	1,312.25	--	3.20	--	1,368.1	1,456	--	--	1,456	88.3	100	No
Votatile Organic Compounds	7.03	123.13	--	0.34	--	130.5	153	--	--	153	22.8	40	No
Sulfuric Acid Mist	0.61	256.58	--	0.078	--	257.27	11.8	--	--	11.8	-245.4	7	No
Lead	0.00757	0.03096	--	0.00080	--	0.0393	0.0465	--	--	0.0465	0.0071	0.6	No
Mercury	0.00458	0.01875	--	0.00027	--	0.0236	0.0149	--	--	0.0149	-0.0087	0.1	No

NEG = Negligible.

4.0 SUMMARY OF PERMIT LIMITS FOR MAIN STACK

The following table presents a summary of the proposed permit limitations for the Main Stack (kiln/cooler/raw mill/coal mill). Short-term emissions are in terms of lb/hr limitations, while the annual limits are in terms of lb/ton clinker on a 12-month rolling average basis.

Air Pollutant Standards and Terms
Titan America LLC
Portland Cement Plant and Associated Equipment

Facility ID No. 0250014
Air Permit No. 0250020-017-AC
(Revision of Permit No. 0250020-016-AC)

Emission Unit ID No. 028 - Kiln/Cooler/Raw Mill System (Dry Process Technology)

EU ID No.	Description	Pollutant ID	Fuels, [2]	Allowable Emissions [3], (5)			Equivalent Emissions	Basis
				Hourly (lb/hr)	Averaging Period	12-Month Rolling Average	TPY [4], (5)	
-028	Kiln/Cooler/Raw Mill	PM	coal/pet coke/oil/gas	38.3	3-hr avg. [6]	0.090 lb/ton $kiln_{ph}$ feed *	167.5	Avoid PSD
		PM10	coal/pet coke/oil/gas	32.1	3-hr avg. [6]	0.076 lb/ton $kiln_{ph}$ feed *	140.7	Avoid PSD
		SO2	coal/pet coke/oil/gas	320	24-hr avg. [7]	0.736 lb/ton of clinker	806	Avoid PSD
		NOx	coal/pet coke/oil/gas	720	24-hr avg. [7]	2.1 lb/ton of clinker	2300	Avoid PSD
		CO	coal/pet coke/oil/gas	575	3-hr avg. [6]	1.33 lb/ton clinker	1456	Avoid PSD
		VOC	coal/pet coke/oil/gas	40	24-hr avg. [7]	0.14 lb/ton clinker	153	Avoid PSD
		Dioxin/Furan	coal/pet coke/oil/gas	3.46E-07	3-hr avg. [6]	---	1.51E-06	MACT
		VE	coal/pet coke/oil/gas	---	---	10% opacity	---	MACT

ALLOWABLE OPERATING RATES

		Kiln/Cooler/Raw Mill	
Hours of operation per year	Hours	8,760	
Kiln preheater feed rate ($kiln_{ph}$)*	TPH	425	(1-hour average)
Kiln Heat Input	MMBtu/hr	675	(24-hour average)
Clinker Production [1]	TPH	250	(24-hour average)
Cooler throughput rate	TPH	250	(24-hour average)

NOTES
[1] Based on the maximum preheater feed rate of 425 TPH (dry) and a conversion factor of 0.588, the maximum clinker production rate is 250 TPH. (425 TPH, kiln ph x 0.588 = 250 TPH, clinker)
[2] Fuel combustion as specified in Specific Condition No. __ .
[3] Compliance Units. This facility shall demonstrate compliance based on these standards.
[4] "Equivalent Emissions" represent annual emissions based on operation at the maximum permitted emissions and production rates. "Equivalent Emissions" are listed for informational purposes, PSD applicability, and recordkeeping/tracking purposes.
[5] The original air construction permit for the new dry process cement plant is Permit No. 0250020-010-AC. Table 1-2 was modified by Permit No. 250020-016-AC.
[6] Based upon the time period for the specified test method.
[7] Based upon CEMS data.

APPENDIX A

FUTURE FUGITIVE DUST EMISSIONS

Table A-1. Estimated Future Fugitive Dust Emissions from Drop Type Operations, Tarmac America, Pennsuco.

SOURCE	Type of Type of Operation[a]	M Moisture Content (%)	U Wind Speed[b] (MPH)	Emission Factor	Activity Factor	Maximum Annual PM Emissions (tons/yr)	PM_{10} Size Multiplier[d]	Maximum Annual PM_{10} Emissions (tons/yr)
COAL HANDLING FACILITIES								
Railcar Unloading for Temporary Storage	Batch Drop	7.2	8.8	0.00111 lbs/ton	87,000 TPY[e]	0.048	0.35	0.017
Temporary Coal Pile to Railcar	Batch Drop	7.2	8.8	0.00111 lbs/ton	87,000 TPY[e]	0.048	0.35	0.017
Railcar Unloading	Batch Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
Conveyor to Conveyor Transfer	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
Conveyor to Conveyor Transfer	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
Conveyor to Stacker Transfer (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
Stacker to Storage Pile (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	7.2	1.3	0.00009 lbs/ton	263,000 TPY[c]	0.012	0.35	0.004
					Subtotal	0.170		0.059
RAW MATERIALS BLENDING AREA								
ADDITIVES:								
Raw Material Unloading	Batch Drop	2.0	8.8	0.00667 lbs/ton	266,700 TPY	0.890	0.35	0.311
Choke Feed Hopper/Conveyor	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700 TPY	0.074	0.35	0.026
Conveyor to Conveyor Transfer	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700 TPY	0.074	0.35	0.026
Conveyor to Stacker Transfer (inside building	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700 TPY	0.074	0.35	0.026
Stacker to Storage Pile (inside building)	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700 TPY	0.074	0.35	0.026
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	2.0	1.3	0.00056 lbs/ton	266,700 TPY	0.074	0.35	0.026
LIMESTONE:								
Aggregate Plant Conveyor to Storage Pile (inside building)	Continuous Drop	7.0	1.3	0.00010 lbs/ton	3,716,452 TPY[f]	0.179	0.35	0.063
Reclaimer to Conveyor Belt (inside building)	Continuous Drop	7.0	1.3	0.00010 lbs/ton	3,716,452 TPY[f]	0.179	0.35	0.063
					Subtotal	1.62		0.57
Total						1.79		0.63

[a] Batch Drop and Continuous Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). $E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

[b] Based on the average wind speed measured at Miami Internation Airport of 8.8 mph unless the transfer point is enclosed in which case the minimum windspeed for which the equation maintains an "A" Quality Rating, 1. 3 mph, was used.

[c] Based on future maximum coal throughput.

[d] PM_{10} Size Multiplier is based on particles < 10 micrometers.

[e] One-third of total coal throughput could go to temporary storage pile before being placed in storage building.

[f] Based on 3,723,000 TPY total dry kiln feed, minus additives (266,700 TPY), and adjusting for moisture content of kiln feed of 7%.

Table A-2. Estimation of Future Emissions For Vehicle Traffic for Temporary Outside Storage of Coal When the Coal Storage Building is Full
Tarmac America, Pennsuco Facility.

General Data	Travel from Railcar to Pile (Unloading of Railcar for Temporary Outdoor Storage)		Travel from Pile to Railcar (Reloading of Railcar for Normal Inside Storage)		Total
	Front End Loader (loaded)	Front End Loader (unloaded)	Front End Loader (loaded)	Front End Loader (unloaded)	
Vehicle Data					
Description	Coal	Coal	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	10	10	
Vehicle weight (W), tons:					
Loaded	55.5	--	55.5	--	
Unloaded	--	47.5	--	47.5	
Vehicle number of wheels (w)	4	4	4	4	
Vehicle miles traveled (VMT)- Annual [a]	716	716	895	895	
General/ Site Characteristics					
Days of precipitation > or = 0.01 inch (p) Annually	120	120	120	120	
Silt content (s), % [b]	12	12	12	12	
Particle size multiplier, PM (k)	1.00	1.00	1.00	1.00	
Particle size multiplier, PM10 (k)	0.35	0.35	0.35	0.35	
Emission Control Data					
Emission control method	- -	- -	- -	- -	
Emission control removal efficiency, %	0	0	0	0	
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	10.18	9.13	19.30
Controlled (Final) EF,lb/VMT- Annual	10.18	9.13	10.18	9.13	19.30
Calculated PM10 Emission Factor (EF)					
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	3.56	3.19	6.76
Controlled (Final) EF,lb/VMT- Annual	3.56	3.19	3.56	3.19	6.76
Estimated Emission Rate (ER)					
Particulate Matter (PM) Emission Rate					
lbs/hr [c]	3.50	3.14	4.38	3.93	6.64
TPY	3.64	3.27	4.55	4.08	6.91
Particulate Matter 10 (PM10) Emission Rate					
lbs/hr [c]	1.23	1.10	1.53	1.37	2.33
TPY	1.28	1.14	1.59	1.43	2.42

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3)^0.7 x (w/4)^0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Annual VMT calculated as follows:

Railcar Unloading (Travel Between Railcar Unloading Area and Temporary Storage Pile)

Annual VMT = 263,000 TPY coal/8 tons (bucket capacity of front-end loader) x 1/3 (amount of coal handled this way) x 300 ft travel (railcar unloading area to pile) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 716 miles/year

Railcar Reloading (Travel Between Temporary Storage Pile and Railcar Loading Area)

Annual VMT = 263,000 TPY coal/8 tons (bucket capacity of front-end loader) x 1/3 (amount of coal handled this way) x 375 ft travel (pile to railcar loading area) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 895 miles/year

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

Table A-3. Estimation of Future Emissions For Vehicle Traffic for Limestone and Additive Handling
Tarmac America, Pennsuco Facility.

General Data	Travel Between Temporary Storage Pile at Truck Unloading Area and Hopper		Total
	Front End Loader (loaded)	Front End Loader (unloaded)	
Vehicle Data			
Description	Additives	Additives	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual [a]	2,904	2,904	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), % [b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM10 (k)	0.35	0.35	
Emission Control Data			
Emission control method	Daily Watering	Daily Watering	
Emission control removal efficiency, %	50	50	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	19.30
Controlled (Final) EF,lb/VMT- Annual	5.09	4.56	9.65
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	6.76
Controlled (Final) EF,lb/VMT- Annual	1.78	1.60	3.38
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr [c]	7.10	6.37	13.48
TPY	7.39	6.63	14.01
Particulate Matter 10 (PM10) Emission Rate			
lbs/hr [c]	2.49	2.23	4.72
TPY	2.59	2.32	4.91

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3)^0.7 x (w/4)^0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Annual VMT calculated as follows:

Annual VMT = 266,700 TPY/8 tons (bucket capacity of front-end loader) x 400 ft travel (truck unloading area to pile) x 1 mile/5,280 feet x 1.15 (factor to account for pile maintenance activities) = 2,904 miles/year

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

APPENDIX B

BASIS OF ORIGINAL BASELINE EMISSION CALCULATIONS FROM JUNE 1998 APPLICATION

Table B-1. Annual Baseline 1996-1997 Emissions From Kilns, Tarmac

Pollutant	Emission Factor		Reference	Activity Factor[a]		Baseline Emissions (tons/yr)
			Kiln No. 2			
Particulate Matter (TSP)	8.67	lb/hr	1	7,646.5	hr/yr	33.15
Particulate Matter (PM10)	85	% of PM	2	--		28.18
Sulfur dioxide	3.76	lb/hr	1	7,646.5	hr/yr	14.38
Nitrogen Oxides	113.8	lb/hr	3	7,646.5	hr/yr	435.09
Carbon monoxide	13.77	lb/hr	1	7,646.5	hr/yr	52.65
Volatile Organic Compounds	1.84	lb/hr	1	7,646.5	hr/yr	7.03
Sulfuric acid mist	0.16	lb/hr	4	7,646.5	hr/yr	0.61
Lead	9.20E-05	lb/ton clinker	5	164,619	tons clinker	0.0076
Mercury	5.57E-05	lb/ton clinker	5	164,619	tons clinker	0.0046
			Kiln No. 3			
Particulate Matter (TSP)	28.88	lb/hr	6	7,756.0	hr/yr	112.01
Particulate Matter (PM_{10})	84	% of PM	2	--		94.09
Sulfur dioxide	360.95	lb/hr	6	7,756.0	hr/yr	1,399.76
Nitrogen Oxides	473.45	lb/hr	6	7,756.0	hr/yr	1,836.06
Carbon monoxide	338.38	lb/hr	7	7,756.0	hr/yr	1,312.25
Volatile Organic Compounds	31.75	lb/hr	7	7,756.0	hr/yr	123.13
Sulfuric acid mist	66.16	lb/hr	8	7,756.0	hr/yr	256.58
Lead	9.20E-05	lb/ton clinker	5	673,096	tons clinker	0.0310
Mercury	5.57E-05	lb/ton clinker	5	673,096	tons clinker	0.0187

[a] Based on average of 1996-1997 actual operation.

References:

1. Based on average of 12/11/95 and 4/16/97 compliance tests for Kiln No. 2.
2. From AP-42, for kiln with ESP control, Section 11.6.
3. Based on permit limit for Kiln No. 2, since actual emission have been in excess of this limit.
4. Based on average of 4/16/97 compliance tests for Kiln No. 2.
5. Based on source testing of Kiln No. 3 on January 10, 1992.
6. Based on average of all source tests on Kiln No. 3 during the period Janaury 1996 through December 1997.
7. Based on source test conducted on 11/22/94 on Kiln No.3.
8. Based on source tests conducted on 11/22/94 and 12/12/95 on Kiln No. 3.

Table B-2. Annual 1996-1997 Baseline Emissions From Material Handling Point Sources, Tarmac

Emission Source	Point ID	Baghouse ID	Emission Basis	Emission Factor	Activity Factor[a]	Baseline PM/PM_{10} Emissions (TPY)
Coal Handling System	003	G-509, G-521, G-527, G-576 G-578, G-580, G-582	0.01 gr/acf; 50,000 acfm	4.29 lb/hr	7,756.0 hr/yr	16.62
Cooler No. 2	005	K-232	Stack Tests[b]	16.15 lb/hr	7,646.5 hr/yr	61.75
Cooler No. 3	007	K-332	Stack Tests[b]	9.32 lb/hr	7,756.0 hr/yr	36.14
Dust Insufflation System - Kiln 2	--	K-181	0.01 gr/acf; 3,000 acfm	0.26 lb/hr	7,646.5 hr/yr	0.98
Dust Insufflation System - Kiln 3	--	K-383, K-396	0.01 gr/acf; 10,000 acfm	0.86 lb/hr	7,756.0 hr/yr	3.32
Clinker Handling/Stg - Kilns 1 & 2 Silos 1, 2, 4, 5, 11 and 12	008	K-147, K-247[c]	0.01 gr/acf; 3,000 acfm	0.26 lb/hr	7,646.5 hr/yr	0.98
Clinker Handling/Stg - Kiln 3 Silos 1, 4, 11, 17-23, 26-28	009	K-347, K-447, K-521, K-522, K-633[d]	0.01 gr/acf; 9,500 acfm	0.81 lb/hr	7,756.0 hr/yr	3.16
Finish Mill No. 1	010	F-130, F-113	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	4,881.0 hr/yr	4.98
Finish Mill No. 2	011	F-230, F-213	0.01 gr/acf; 23,800 acfm	2.04 lb/hr	6,072.5 hr/yr	6.19
Finish Mill No. 3	012	F-313, F-330, F-332	0.01 gr/acf; 41,500 acfm	3.56 lb/hr	4,546.0 hr/yr	8.09
Finish Mill No. 4	013	F-430, F-432, F-603, F-604, F-605	0.01 gr/acf; 67,000 acfm	5.74 lb/hr	3,876.0 hr/yr	11.13
Cement Silos #1-#12	014	F-511, F-512, F-513, F-514, F-515	0.01 gr/acf; 43,000 acfm	3.69 lb/hr	6,072.5 hr/yr	11.19
Cement Distribution-Rail/Truck	015	B-110, B-210, B-372, B-374, B-382	0.01 gr/acf; 15,000 acfm	1.29 lb/hr	2,721.5 hr/yr	1.75
Cement Distribution-Packhouse	016	B-621	0.01 gr/acf; 12,000 acfm	1.03 lb/hr	3,080.5 hr/yr	1.58
					Total	167.87

[a] Based on average of 1996-1997 actual operation.

[b] Based on average of April 1997 and December 1997 stack tests.

[c] Only one baghouse operates at any one time.

[d] Baghouses K347 and K447 do not operate at the same time.

Table B-3. Maximum Emissions From Slag Dryer, Tarmac

Parameter	No. 2 Fuel Oil	Natural Gas
OPERATING DATA[a]		
Operating Time	3,120 hr/yr	3,120 hr/yr
Heat Input Rate	57.48 MMBtu/hr	57.48 MMBtu/hr
Heat Value	140,000 MMBtu/gal	1000 Btu/scf
Hourly Fuel Use	410.6 gal/hr	57,480 scf/hr
Annual Fuel Use	1,280,983 gal/yr	179.34 MMscf/yr
Max Sulfur Content	0.2 Wt%	0.01 gr/scf

	Fuel Oil			Natural Gas		
		Maximum Emissions			Maximum Emissions	
Pollutant	Emission Factor[b]	lb/hr	TPY	Emission Factor[b]	lb/hr	TPY
EMISSION DATA						
PM/PM_{10}	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12	0.02 gr/dscf ; 34,100 dscfm	5.85	9.12
SO_2	142*S lb/Mgal[c]	11.66	18.19	0.60 lb/MMscf	0.034	0.054
NO_x	20 lb/Mgal	8.21	12.81	140.00 lb/MMscf	8.05	12.55
CO	5 lb/Mgal	2.05	3.20	35.00 lb/MMscf	2.01	3.14
NMVOC	0.2 lb/Mgal	0.082	0.13	3.83 lb/MMscf	0.22	0.34
Sulfuric Acid Mist	0.1225 lb/Mgal	0.050	0.08	NA	--	--
Lead-Total	8.9E-06 lb/MMBtu	5.12E-04	7.98E-04	NA	--	--
Mercury	3.0E-06 lb/MMBtu	1.72E-04	2.69E-04	NA	--	--
Beryllium	2.5E-06 lb/MMBtu	1.44E-04	2.24E-04	NA	--	--

Note: NA = not applicable.

[a]Fuel oil use is based on 140,000 Btu/gal for 0.2% S oil. Heat Input Rate is based on 0.48 MMBtu/ton and 150 ton/hr throughput

[b]Emission factors are based on AP-42 5th Edition, Tables 1.3-2, 1.3-4, and 1.3-11 for oil use and and 1.4-1 and 1.4-3 for gas. NMVOC factor for gas is reduced by 34% to reflect presence of methane.

[c]"S" denotes the weight % sulfur in fuel oil; max sulfur content = 0.2%

Table B-4. Summary of Quantifiable Fugitive Emissions, Tarmac

Source	Estimated Annual Emissions (TPY)		Estimated Hourly Emissions (lb/hr)[a]	
	PM	PM_{10}	PM	PM_{10}
Coal Handling Facilities-Batch Drop	0.28	0.1	0.32	0.11
Coal Handling Facilities-Vehicular Traffic	23.97	8.39	23.05	8.07
Raw Materials Blending-Batch Drop	3.52	1.23	3.39	1.19
Raw Materials Blending-Vehicular Traffic	14.34	5.02	13.79	4.83
Insufflation Area-Batch Drop	0.22	0.08	0.21	0.07
Insufflation Area-Vehicular Traffic	1.63	0.57	1.57	0.55
Total	43.96	15.39	42.33	14.82

Notes:

[a] Based on average hourly emissions assuming 2,080 hr/yr actual operation.

Table B-5. Estimated Baseline Fugitive Dust Emissions from Drop Type Operations, Tarmac

SOURCE	Type of Operation[a]	M Moisture Content (%)	U Wind Speed (MPH)	Emission Factor	Activity Factor[b]	Maximum Annual PM Emissions (tons/yr)	PM_{10} Size Multiplier[c]	Maximum Annual PM_{10} Emissions (tons/yr)
COAL HANDLING FACILITIES								
Railcar Unloading	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
Temporary Storage Pile to Active Storage Pile	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
Active Storage Pile to Loading Hopper	Batch Drop	7.2	8.8	0.00111 lbs/ton	165,841 TPY	0.092	0.35	0.032
					Subtotal	0.28		0.10
RAW MATERIALS BLENDING AREA								
Raw Material unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.7610	0.35	0.616
Raw Materials Pile to Blending Location	Batch Drop	1.0	8.8	0.01761 lbs/ton	200,000 TPY	1.7610	0.35	0.616
					Subtotal	3.52		1.23
INSUFFLATION AREA								
Truck Loading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	0.1101	0.35	0.039
Truck Unloading	Batch Drop	1.0	8.8	0.01761 lbs/ton	12,500 TPY	0.1101	0.35	0.039
					Subtotal	0.2201		0.08
Total						4.02		1.41

[a] Batch Drop Emission Factors are computed from AP-42 (US EPA, 1995) Section 13.2.4-3(1). $E = 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$ lb/ton

[b] Based on average two year period, 1996-1997.

[c] PM_{10} Size Multiplier is based on particles < 10 micrometers.

Table B-6. Estimation of Baseline Emissions For Vehicle Traffic in the Coal Handling System, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Coal	Coal	
Vehicle Speed (S), mph- Average	10	10	
Vehicle weight (W), tons:			
Loaded	55.5	--	
Unloaded	--	47.5	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual[a]	2,483	2,483	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	10.18	9.13	
Controlled (Final) EF,lb/VMT- Annual	10.18	9.13	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	3.56	3.19	
Controlled (Final) EF,lb/VMT- Annual	3.56	3.19	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	12.15	10.90	23.05
TPY	12.64	11.33	23.97
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	4.25	3.81	8.07
TPY	4.42	3.97	8.39

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Based on 165,841 TPY (average of 1996-1997 coal throughput) of coal transported 550 ft, empty half the time, full the remaining time.
Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.

Table B-7. Estimation of Baseline Emissions For Vehicle Traffic in the Raw Material Blending Area, Tarmac

General Data	Front End Loader (loaded)	Front End Loader (unloaded)	Total
Vehicle Data			
Description	Dry Feed	Dry Feed	
Vehicle Speed (S), mph- Average	5	5	
Vehicle weight (W), tons:			
Loaded	50	--	
Unloaded	--	40	
Vehicle number of wheels (w)	4	4	
Vehicle miles traveled (VMT)- Annual[a]	3,267	3,267	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	--	--	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	4.73	4.05	
Controlled (Final) EF,lb/VMT- Annual	4.73	4.05	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	1.66	1.42	
Controlled (Final) EF,lb/VMT- Annual	1.66	1.42	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	7.43	6.36	13.79
TPY	7.73	6.61	14.34
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	2.60	2.22	4.82
TPY	2.70	2.31	5.02

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a]Based on 200,000 TPY (1996-1997 average throughput) of Raw Materials transported 750 ft, empty half the time, full the remaining time.

Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b]Tarmac Information.

[c]Assumes 2,080 hr/yr operation.

Table B-8. Estimation of Baseline Emissions For Vehicle Traffic in the Insufflation Area, Tarmac

General Data	Truck (loaded)	Truck (unloaded)	Total
Vehicle Data			
Description	Clinker Dust	Clinker Dust	
Vehicle Speed (S), mph- Average	3	3	
Vehicle weight (W), tons:			
Loaded	25.75	--	
Unloaded	--	13.75	
Vehicle number of wheels (w)	10	10	
Vehicle miles traveled (VMT)- Annual[a]	704	704	
General/ Site Characteristics			
Days of precipitation > or = 0.01 inch (p) Annually	120	120	
Silt content (s), %[b]	12	12	
Particle size multiplier, PM (k)	1.00	1.00	
Particle size multiplier, PM_{10} (k)	0.35	0.35	
Emission Control Data			
Emission control method	- -	- -	
Emission control removal efficiency, %	0	0	
Calculated PM Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	2.82	1.82	
Controlled (Final) EF,lb/VMT- Annual	2.82	1.82	
Calculated PM10 Emission Factor (EF)			
Uncontrolled EF, lb/VMT - Annual	0.99	0.64	
Controlled (Final) EF,lb/VMT- Annual	0.99	0.64	
Estimated Emission Rate (ER)			
Particulate Matter (PM) Emission Rate			
lbs/hr[c]	0.95	0.61	1.57
TPY	0.99	0.64	1.63
Particulate Matter (PM_{10}) Emission Rate			
lbs/hr[c]	0.33	0.22	0.55
TPY	0.35	0.22	0.57

Emission Factor (EF) Equations

Uncontrolled EF (UEF) Equation:

UEF(lb/VMT) = k x 5.9 x (s/12) x (S/30) x (W/3 ^ 0.7 x (w/4) ^ 0.5 x ((365 - p)/365)

Controlled (Final) EF (CEF) Equation:

CEF(lb/VMT) = UEF (lb/ton) x (100 - Removal efficiency (%))

Source: AP-42, Section 13.2.2, Unpaved Roads, January, 1995.

[a] Based on 12,500 (1996-1997 average throughput) TPY of clinker dust transported 3,100 ft, empty half the time, full the remaining time.

Annual mileage increased by 15 % to account for additional travel due to pile maintenance activities.

[b] Tarmac Information.

[c] Assumes 2,080 hr/yr operation.