KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

June 12, 2002

Alvaro A. Linero, PE
Professional Engineer Administrator
New Source Review Section
Bureau of Air Regulation
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

Subject: Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant
Newberry, Alachua County, Florida
Facility ID No. 0010087
Application for Air Construction Permit

Dear Mr. Linero:

This letter transmits four (4) copies of an application for an air construction permit for the existing Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant.

The project increases the preheater feed rate, the clinker production and handling rate, and decreases allowable emissions.

Included as an attachment to the application is a report on changes to the pyroprocessing system, detailing how the emissions reductions will be achieved.

Thank you in advance for your review of this application. Please contact me if you have any questions or require additional information.

Sincerely,

Steven C. Cullen, PE
Koogler & Associates

cc: J. Kern
D. Baldwin
C. Kirts, NED
J. Talwani, Alachua Co. EPD
P. Reynolds, Jacksonville DEP

Allowable Emissions
Florida Rock Industries

Thompson S. Baker Cement Plant – Newberry, Florida

Pollutant	Existing Emission Rate		Proposed Emission Rate		Decrease (tons/year)	Decrease
	lb/hr	tons/year	lb/hr	tons/year		
PM (kiln)	30.00	110.50	25.50	94	16.5	15%
PM_{10} (kiln)	25.50	93.93	22.08	79.9	14.0	15%
PM (cooler)	14.99	55.70	15.99	55.70	No change	
PM_{10} (cooler)	12.71	47.34	13.03	47.34	No change	
SO_2 (kiln)	28.82	108.55	17.67	64	44.6	41%
NO_x (kiln)	268.30	1018.00	250.54	980	38.0	4%
H_2SO_4 (kiln)	0.25	1.00	0.25	1.00	No change	
CO (kiln)	346.38	1288.60	276.05	1000	288.6	22%
VOC (kiln)	11.55	42.90	11.55	42.90	No Change	
TOTAL[1]		2672.59		2284.94	387.7	15%

Clinker Production	Existing Production Rate		Proposed Production Rate		Increase (tons/year)	Increase
	tons/hour	tons/year	tons/hour	tons/year		
	95.83	712,500	115	800,000	87,500	12%

[1] Total does not include PM10, because it is included with PM.
[2] 115 tons/hour is maximum per hour. Also limited to 2650 tons/day, which equals 110.42 tons/hour (24-hour average).

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Florida Rock Industries, Inc.**	
2. Site Name: **Thompson S. Baker Cement Plant – Newberry**	
3. Facility Identification Number: **0010087**	
4. Facility Location: Street Address or Other Locator: **4000 NW County Road 235** City: **Newberry** County: **Alachua** Zip Code: **32669**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Steven C. Cullen, PE** **Senior Project Engineer**
2. Application Contact Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **Florida** Zip Code: **32609**
3. Application Contact Telephone Numbers: Telephone: **(352) 377-5822** Fax: **(352) 377-7158** e-mail: **scullen@kooglerassociates.com**

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Department of
Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Florida Rock Industries, Inc.**	
2. Site Name: **Thompson S. Baker Cement Plant – Newberry**	
3. Facility Identification Number: **0010087**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **4000 NW County Road 235** City: **Newberry** County: **Alachua** Zip Code: **32669**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Steven C. Cullen, PE** **Senior Project Engineer**	
2. Application Contact Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **Florida** Zip Code: **32609**	
3. Application Contact Telephone Numbers: Telephone: **(352) 377-5822** Fax: **(352) 377-7158**	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	6-14-02
2. Permit Number:	0010087 - 006 - AC
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

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

Current construction permit number:_____

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

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

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

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[**X**] Air construction permit to construct or modify one or more emissions units.

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
Cary O. Cohrs: Vice President – Operations

2. Owner/Authorized Representative or Responsible Official Mailing Address:
Organization/Firm: **Florida Rock Industries, Inc.**
Street Address: **4000 NW CR 235**
City: **Newberry** State: **Florida** Zip Code: **32669**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
Telephone: **(352) 472-4722** Fax: **(352) 472-2449**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. 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. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature Date 6/11/02

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Steven C. Cullen, PE**
Registration Number: **45188**

2. Professional Engineer Mailing Address:
Organization/Firm: **Koogler & Associates**
Street Address: **4014 NW 13th Street**
City: **Gainesville** State: **Florida** Zip Code: **32609**

3. Professional Engineer Telephone Numbers:
Telephone: **(352) 377-5822** Fax: **(352) 377-7158**

4. 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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.

Signature

6/12/2002
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
003	Kiln System		NA
004	Clinker Handling		NA

Application Processing Fee

Check one: [ ] Attached - Amount: $_____ [X] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The project increases the preheater feed rate, the clinker production and handling rate, and decreases allowable emissions.

2. Projected or Actual Date of Commencement of Construction: **No physical construction**

3. Projected Date of Completion of Construction: **No physical construction**

Application Comment

The initial Title V Air Operation Permit (FINAL Permit No.: 0010087-002-AV) was used as a basis for this permit application.

The facility-wide conditions in Section II of the permit are not affected by this project. The emissions units common conditions in Section III, Subsections H, I, and J of the permit are not affected by this project.

The emissions units conditions are not affected by this project in:

Section III, Subsection A. EU 001- Raw Material Handling and Storage
Section III, Subsection B. EU 002- Raw Mill System
Section III, Subsection E. EU 005- Finish Grinding Operation
Section III, Subsection F. EU 006- Cement Handling, Loading, and Bagging Operation
Section III, Subsection G. EU007- Coal Handling and Grinding Operation

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **348.4 km** North (km): **3287.0**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **29° 42' 21"** Longitude (DD/MM/SS): **82° 35' 00"**			
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241**
7. Facility Comment (limit to 500 characters): **None**			

Facility Contact

1. Name and Title of Facility Contact: **Cary O. Cohrs: Vice President – Operations**
2. Facility Contact Mailing Address: Organization/Firm: **Florida Rock Industries, Inc.** Street Address: **4000 NW CR 235** City: **Newberry** State: **Florida** Zip Code: **32669**
3. Facility Contact Telephone Numbers: Telephone: **(352) 472-4722** Fax: **(352) 472-2449**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source? [X] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?
4. [ ] Major Source of Hazardous Air Pollutants (HAPs)?
5. [ ] Synthetic Minor Source of HAPs?
6. [X] One or More Emissions Units Subject to NSPS?
7. [X] One or More Emission Units Subject to NESHAP?
8. [ ] Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters): **None**

List of Applicable Regulations

Title V Core List	
NSPS Subparts F, Y, and OOO	
NESHAP Subpart LLL	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM	**A**	Not Requested	Not Requested	No Basis	None
PM10	**A**	Not Requested	Not Requested	No Basis	None
SO2	**B**	Not Requested	Not Requested	No Basis	None
NOx	**A**	Not Requested	Not Requested	No Basis	None
CO	**A**	Not Requested	Not Requested	No Basis	None
VOC	**B**	Not Requested	Not Requested	No Basis	None
SAM	**B**	Not Requested	Not Requested	No Basis	None
DIOX	**B**	Not Requested	Not Requested	No Basis	None

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
2. Facility Plot Plan: [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
3. Process Flow Diagram(s): [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
6. Supplemental Information for Construction Permit Application: [**X**] Attached, Document ID: **Attachment 1: Report on Changes** [ ] Not Applicable
7. Supplemental Requirements Comment: **None**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [X] Not Applicable to current project

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

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

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

12. Identification of Additional Applicable Requirements:
    [ ] Attached, Document ID:_____ [X] Not Applicable

13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)
    [X] Not Applicable

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

15. Compliance Certification (Hard-copy Required):
    [ ] Attached, Document ID:_____ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

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

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

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, 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. Regulated or Unregulated Emissions Unit? (Check one)

[X] 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Kiln System

4. Emissions Unit Identification Number:
ID: **003**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **1/1/00**	7. Emissions Unit Major Group SIC Code: **32**	8. Acid Rain Unit? [ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

The following pages show Title V permit conditions requested for change. All corresponding tables are also requested for change.

Section III. Emission Unit(s) and Conditions
Subsection C.: This section addresses the following emissions unit

E.U. ID No.	Brief Description
-003	Kiln System

FROM:
C.1. Capacity (Preheater). The preheater dry feed rate shall not exceed 149.9 tons per hour and 1,114,350 tons per year.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; AC01-267311/PSD-FL-228]

TO:
C.1. Capacity (Preheater). The preheater dry feed rate shall not exceed 1,360,000 tons per year. The preheater dry feed rate shall be determined as a function of the clinker production rate.

FROM:
C.2. Capacity. The maximum production rate for the kiln clinker shall not exceed 95.8 tons per hour and 2300 tons per day and 712,500 tons per year. The clinker production rate shall be determined as a function of the preheater dry feed rate.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; AC01-267311/PSD-FL-228]

TO:
C.2. Capacity. The maximum production rate for the kiln clinker shall not exceed 110.42 tons per hour (24-hour rolling average), 115.0 tons per hour (maximum per hour) and 2650 tons per day and 800,000 tons per year.

FROM:
C.4. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year, as long as the 712,500 TPY clinker limit is not exceeded.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

TO:
C.4. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year, as long as the 800,000 TPY clinker limit is not exceeded.

FROM:
C.7. Particulate Matter. Particulate Matter emissions shall not exceed 0.20 pounds per ton of dry feed to the preheater and 0.31 pounds per ton of clinker, and 30.00 lb/hr and 110.50 ton/yr.
[AC01-267311/PSD-FL-228, BACT; 40 CFR 60.62(a)(1), 40 CFR 63.1343(c)(1) subsumed].
{Permitting Note: The averaging time for Condition C.7. is based on the run time of the specified test method.}

TO:
C.7. Particulate Matter. Particulate Matter emissions shall not exceed 0.138 pounds per ton of dry feed to the preheater and 0.235 pounds per ton of clinker, and 25.90 lb/hr and 94 ton/yr.

FROM:
C.8. Particulate Matter (PM_{10}). PM_{10} emissions shall not exceed 0.17 pounds per ton of dry feed to the preheater and 0.26 pounds per ton of clinker, and 25.50 lb/hr and 93.93 ton/yr.
[AC01-267311/PSD-FL-228, BACT]

TO:
C.8. Particulate Matter (PM_{10}). PM_{10} emissions shall not exceed 0.20 pounds per ton of clinker, and 22.08 lb/hr and 79.9 ton/yr.

FROM:
C.9. Sulfur Dioxide. Sulfur dioxide emissions shall not exceed 0.18 lb/ton of dry feed to the preheater and 0.28 pounds per ton of clinker (24-hr rolling average), and 28.82 lb/hr and 108.55 ton/yr. The permittee shall submit 90 days of certified SO_2 data by July 31, 2001. The Department may revise the sulfur dioxide emissions limit to less than 0.28 lb/ton clinker based on the compliance test and continuous emission monitoring data within 120 days following receipt of this data. Any such changes will be publicly noticed.
[AC01-267311/PSD-FL-228, BACT]

TO:
C.9. Sulfur Dioxide. Sulfur dioxide emissions shall not exceed 0.16 pounds per ton of clinker, and 17.67 lb/hr (24-hr rolling average) and 64 ton/yr.

FROM:
C.10. NO_x. NO_x emissions shall not exceed 3.8 pounds per ton of clinker (30-day rolling average) after startup and until December 30, 2001. After December 30, 2001, NO_x emissions shall not exceed 2.8 pounds per ton of clinker (30-day rolling average). The permittee shall install any additional control equipment by December 30, 2001 to insure compliance with the 2.8 pounds per ton of clinker limit. The startup date was December 31, 1999.
[AC01-267311/PSD-FL-228, BACT]

TO:
C.10. NO_x. NO_x emissions shall not exceed 2.45 pounds per ton of clinker (30-day rolling average) and 270.53 lb/hr (30-day rolling average) and 980 ton/yr.

FROM:
C.11. Carbon Monoxide. Carbon Monoxide emissions shall not exceed 2.30 lb/ton of dry feed to the preheater and 3.60 pounds per ton of clinker (1-hr average), and 346.38 lb/hr and 1288.60 ton/yr.
[AC01-267311/PSD-FL-228, BACT]

TO:
C.11. Carbon Monoxide. Carbon Monoxide emissions shall not exceed 2.50 pounds per ton of clinker (24-hr rolling average), and 276.05 lb/hr (3-hr average) and 1000 ton/yr.

FROM:
C.12. VOC. VOC emissions shall not exceed 0.08 lb/ton of dry feed to the preheater and 0.12 pounds per ton of clinker (1-hr average), and 11.55 lb/hr and 42.90 ton/year.
[AC01-267311/PSD-FL-228 and BACT]

TO:
C.12. VOC. VOC emissions shall not exceed 0.107 pounds per ton of clinker (24-hr rolling average), and 11.81 lb/hr (24-hr rolling average) and 42.90 ton/year.

FROM:
C.13. Beryllium. Limit to be determined by future stack tests. The startup test date will be 03/31/01.
[0010087-003-AC/PSD-FL-228A]

TO:
~~**C.13. Beryllium.** Limit to be determined by future stack tests. The startup test date will be 03/31/01.~~

FROM:
C.14. Sulfuric Acid Mist (SAM). SAM emissions shall not exceed 0.0016 lb/ton dry feed to the preheater and 0.0025 lb/ton clinker, and 0.25 lb/hr and 1.00 ton/year.
[AC01-267311/PSD-FL-228 and BACT; and, Revised Attached Table II of 0010087-003-AC/PSD-FL-228A]

TO:
C.14. Sulfuric Acid Mist (SAM). SAM emissions shall not exceed 0.0025 lb/ton clinker, and 0.276 lb/hr and 1.00 ton/year.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Electrostatic Precipitator – High Efficiency

2. Control Device or Method Code(s): **010**

Emissions Unit Details

1. Package Unit: **Not Applicable**		
Manufacturer:	Model Number:	
2. Generator Nameplate Rating: **Not Applicable**	MW	
3. Incinerator Information: **Not Applicable**		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**364** mmBtu/hr
2. Maximum Incineration Rate: **Not Applicable** lb/hr	tons/day
3. Maximum Process or Throughput Rate: **Not Applicable**	
4. Maximum Production Rate: **115.0 TPH Clinker Production (maximum per hour)**	
5. Requested Maximum Operating Schedule:	
hours/day	days/week
weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
110.42 TPH Clinker Production (24-hour rolling average) **800,000 TPY Clinker and 1,360,000 TPY Preheater Feed**	

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-212.400, FAC	
NSPS Subpart F	
NESHAP Subpart LLL	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **E-21**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **E-21: Main Stack**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **EU 002: Raw Mill and Air Heater discharge through E-21**		
5. Discharge Type Code: **V**	6. Stack Height: **250** feet	7. Exit Diameter: **9.42** feet
8. Exit Temperature: **215** °F	9. Actual Volumetric Flow Rate: **225000** acfm	10. Water Vapor: **15%**
11. Maximum Dry Standard Flow Rate: **150000** dscfm	12. Nonstack Emission Point Height: **Not Applicable** feet	
13. Emission Point UTM Coordinates: **Not determined within 0.01 Kilometer** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **Fields 8-12 are with kiln and raw mill operating; normal conditions.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Mineral Products: Cement Manufacturing – Dry Process: Preheater/Precalciner Kiln**		
2. Source Classification Code (SCC): **3-05-006-23**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **187.71***	5. Maximum Annual Rate: **1,360,000**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **Not Applicable**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **Not Applicable**
10. Segment Comment (limit to 200 characters): ***Preheater feed rate, 24-hour rolling average for hourly rate based on clinker production rate. Not intended as a permit capacity limitation.**		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Mineral Products: Cement Manufacturing – Dry Process: Preheater/Precalciner Kiln**		
2. Source Classification Code (SCC): **3-05-006-23**	3. SCC Units: **Tons Clinker**	
4. Maximum Hourly Rate: **115.0**	5. Maximum Annual Rate: **800,000**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **Not Applicable**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **Not Applicable**
10. Segment Comment (limit to 200 characters): **110.42 tons per hour clinker production rate (24-hour rolling average).**		

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **In-Process Fuel Use: Distillate Oil: Cement Kiln**		
2. Source Classification Code (SCC): **3-90-005-02**	3. SCC Units: **1000 Gallons Burned**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**	6. Estimated Annual Activity Factor: **125**
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **141**
10. Segment Comment (limit to 200 characters): **No change requested in this application.**		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **In-Process Fuel Use: Bituminous Coal: Cement Kiln**		
2. Source Classification Code (SCC): **3-90-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **14.0**	5. Maximum Annual Rate: **122640**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **1.25**	8. Maximum % Ash: **10**	9. Million Btu per SCC Unit: **26**
10. Segment Comment (limit to 200 characters): **No change requested in this application.**		

Segment Description and Rate: Segment 5 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **In-Process Fuel Use: Tires**		
2. Source Classification Code (SCC): **3-90-012-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **4.2**	5. Maximum Annual Rate: **36792**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **Not Applicable**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **26**
10. Segment Comment (limit to 200 characters): **No change requested in this application.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**010**	**None**	**EL**
PM10	**010**	**None**	**EL**
SO2	**None**	**None**	**EL**
NOx	**None**	**None**	**EL**
CO	**None**	**None**	**EL**
VOC	**None**	**None**	**EL**
SAM	**None**	**None**	**EL**
H021	**None**	**None**	**NS**
DIOX	**None**	**None**	**EL**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **25.90** lb/hour **94** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.138 lb/ton dry feed** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.138 lb/ton x 187.71 tons/hr = 25.90 lb/hour** **@ 1,360,000 tons/yr = 94 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Preheater dry feed rate is a function of clinker production rate. These calculations are based on 110.42 tons per hour clinker production rate (24-hour rolling average) resulting in an estimated preheater dry feed rate of 187.71 tons per hour.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.138 lb/ton dry feed**	4. Equivalent Allowable Emissions: **25.90** lb/hour **94** tons/year
5. Method of Compliance (limit to 60 characters): **Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **None**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **22.08** lb/hour **79.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.20 lb/ton clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.20 lb/ton x 110.42 tons/hr = 22.08 lb/hour @ 800,000 tons/yr = 79.9 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.20 lb/ton clinker**	4. Equivalent Allowable Emissions: **22.08** lb/hour **79.9** tons/year
5. Method of Compliance (limit to 60 characters): **Method 5 for total PM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **None**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **17.67** lb/hour **64** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.16 lb/ton clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.16 lb/ton x 110.42 tons/hour = 17.67 lb/hour @ 800,000 tons/yr = 64 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.16 lb/ton clinker**	4. Equivalent Allowable Emissions: **17.67** lb/hour **64** tons/year
5. Method of Compliance (limit to 60 characters): **CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Hourly emission limit is 24-hour rolling average.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **270.53** lb/hour **980** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.45 lb/ton Clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **2.45 lb/ton x 110.42 tons/hour = 270.53 lb/hour @ 800,000 tons/yr = 980 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **2.45 lb/ton Clinker**	4. Equivalent Allowable Emissions: **270.53** lb/hour **980** tons/year
5. Method of Compliance (limit to 60 characters): **CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Hourly emission limit is 30-day rolling average.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **276.05** lb/hour **1000** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **2.50 lb/ton Clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **2.50 lb/ton x 110.42 tons/hour = 276.05 lb/hour @ 800,000 tons/yr = 1000 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **2.50 lb/ton Clinker**	4. Equivalent Allowable Emissions: **276.05** lb/hour **1000** tons/year
5. Method of Compliance (limit to 60 characters): **Method 10**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **None**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **11.81** lb/hour **42.9** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.107 lb/ton Clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.107 lb/ton x 110.42 tons/hour = 11.81 lb/hour @ 800,000 tons/yr = 42.9 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.107 lb/ton Clinker**	4. Equivalent Allowable Emissions: **11.81** lb/hour **42.9** tons/year
5. Method of Compliance (limit to 60 characters): **Method 25/25A** **(CEM for reasonable assurance only)**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **None**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **0.276** lb/hour **1.00** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0025 lb/ton Clinker** Reference: **Permittee**	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters): **0.0025 lb/ton x 110.42 tons/hour = 0.276 lb/hour @ 800,000 tons/yr = 1.00 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.0025 lb/ton Clinker**	4. Equivalent Allowable Emissions: **0.276** lb/hour **1.00** tons/year
5. Method of Compliance (limit to 60 characters): **Method 8**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **None**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **H021 – Beryllium**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **No applicable requirement** lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: **3**
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Permittee requests that references to beryllium be removed from the Title V Permit, as there is no longer an applicable requirement.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Permittee requests that references to beryllium be removed from the Title V Permit, as there is no longer an applicable requirement.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **DIOX**	2. Total Percent Efficiency of Control: **Not Applicable**
3. Potential Emissions: **0.00000014** lb/hour **0.0000006** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **1.7 x 10^{-10} gr/dscf TEQ at 7% O_2** Reference: **MACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **1.7 x 10^{-10} gr/dscf x 150000 dscfm x (20.9 – 12.0)/(20.9 – 7.0) x 60 min/hour x 1.0 lb/7000 gr = 0.00000014 lb/hour** **@ 8760 hours/yr = 0.0000006 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **None**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions: **6/14/2002**
3. Requested Allowable Emissions and Units: **1.7 x 10^{-10} gr/dscf TEQ at 7% O_2**	4. Equivalent Allowable Emissions: **0.00000014** lb/hour **0.0000006** tons/year
5. Method of Compliance (limit to 60 characters): **Method 23**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **NESHAP Subpart LLL**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10%** Exceptional Conditions: **10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **62-212.400, FAC**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 5

1. Parameter Code: **VE**	2. Pollutant(s): **Opacity**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Sick AG Environmental Monitoring** Model Number: **OMD41** Serial Number: **00035 8008**	
5. Installation Date: **12/2000**	6. Performance Specification Test Date: **1/17/2001**
7. Continuous Monitor Comment (limit to 200 characters): **COMS was recertified in July 2001** **NSPS Subpart F & NESHAP Subpart LLL**	

Continuous Monitoring System: Continuous Monitor 2 of 5

1. Parameter Code: **EM**	2. Pollutant(s): **SO2, NOx**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Sick AG Environmental Monitoring** Model Number: **GM31-3** Serial Number: **8040 8002**	
5. Installation Date: **12/2000**	6. Performance Specification Test Date: **1/17/2001**
7. Continuous Monitor Comment (limit to 200 characters): **62-212.400, FAC** **CEMS was recertified in July 2001**	

Continuous Monitoring System: Continuous Monitor 3 of 5

1. Parameter Code: **EM**	2. Pollutant(s): **THC**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Bernath Atomic GmbH & Co.** Model Number: **EuroFID Model 3010** Serial Number: **4387**	
5. Installation Date:	6. Performance Specification Test Date: **7/30/2001**
7. Continuous Monitor Comment (limit to 200 characters): **Reasonable Assurance only.**	

Continuous Monitoring System: Continuous Monitor 4 of 5

1. Parameter Code: **TEMP**	2. Pollutant(s): **Not Applicable**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Sick AG Environmental Monitoring** Model Number: **GM31-3** Serial Number: **8040 8002**	
5. Installation Date: **December 2000**	6. Performance Specification Test Date: **1/2001**
7. Continuous Monitor Comment (limit to 200 characters): **NESHAP Subpart LLL**	

Continuous Monitoring System: Continuous Monitor 5 of 5

1. Parameter Code: **FLOW**	2. Pollutant(s): **Not Applicable**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Sick AG Environmental Monitoring** Model Number: **FLSE160-350** Serial Number: **7042096**	
5. Installation Date:	6. Performance Specification Test Date: **7/20/2000**
7. Continuous Monitor Comment (limit to 200 characters): **None**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested **On file with Department**
5. Compliance Test Report: [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [**X**] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [**X**] Attached, Document ID: **Attachment 1: Report on Changes** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [**X**] Not Applicable
10. Supplemental Requirements Comment: **None**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

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).

[X] 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. Regulated or Unregulated Emissions Unit? (Check one)

[X] 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Clinker Handling

4. Emissions Unit Identification Number: ID: **004** [ ] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **1/1/00**	7. Emissions Unit Major Group SIC Code: **32**	8. Acid Rain Unit? [ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

The following pages show Title V permit conditions requested for change. All corresponding tables are also requested for change.

Subsection D.: This section addresses the following emissions unit

E.U. ID No.	Brief Description
-004	Clinker Handling

FROM:
Emissions Unit 004 identifies the Clinker Handling system. Emission Points are described as follows: (EP01)- Clinker cooler discharge and breaker conveyor, (EP02)- Clinker silos, and (EP03)- Clinker Cooler (ESP) These silos are controlled by Fabric Filters and the Clinker Cooler, by an electrostatic precipitator.

TO:
Emissions Unit 004 identifies the Clinker Handling system. Emission Points are described as follows: (EP01)- Clinker cooler discharge and breaker conveyor, (EP02)- Clinker silos (L-06), (EP04)- Clinker silos (L-08), and (EP03)- Clinker Cooler (ESP) These silos are controlled by Fabric Filters and the Clinker Cooler, by an electrostatic precipitator.

FROM:
D.1. Capacity. The maximum production rate for the kiln clinker shall not exceed 95.8 tons per hour and 2300 tons per day and 712,500 tons per year. The clinker production rate shall be determined as a function of the preheater dry feed rate.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C, AC01-267311/PSD-FL-228]

TO:
D.1. Capacity. The maximum production rate for the kiln clinker shall not exceed 110.42 tons per hour (24-hour rolling average), 115.0 tons per hour (maximum per hour) and 2650 tons per day and 800,000 tons per year.

FROM:
D.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year provided the 712,500 ton per year clinker limit is not exceeded.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., AC01-267311/PSD-FL-228]

TO:
D.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year provided the 800,000 ton per year clinker limit is not exceeded.

FROM:
D.3. Particulate Matter. Particulate Matter emissions from the Clinker Cooler shall not exceed 0.10 pounds per ton of feed (dry basis) to the preheater and 0.16 pounds per ton of clinker. The PM shall also not exceed 14.99 lbs/hr and 55.70 tons/year.
[AC01-267311/PSD-FL-228 and BACT, 40 CFR 60.62(b)(1), 40 CFR 63.1345(a)(1) subsumed].

TO:
D.3. Particulate Matter. Particulate Matter emissions from the Clinker Cooler shall not exceed 0.082 pounds per ton of feed (dry basis) to the preheater and 0.139 pounds per ton of clinker. The PM shall also not exceed 15.39 lbs/hr and 55.70 tons/year.

FROM:
D.4. Particulate Matter (PM_{10}). PM_{10} emissions from the cooler shall not exceed 0.13 pounds per ton of clinker.
[AC01-267311/PSD-FL-228 and BACT]

TO:
D.4. Particulate Matter (PM_{10}). PM_{10} emissions from the cooler shall not exceed 0.118 pounds per ton of clinker.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Electrostatic Precipitator – High Efficiency
Fabric Filters – High Temperature

2. Control Device or Method Code(s): **010, 016**

Emissions Unit Details

1. Package Unit: **Not Applicable**
   Manufacturer: Model Number:
2. Generator Nameplate Rating: **Not Applicable** MW
3. Incinerator Information: **Not Applicable**
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **Not Applicable**			mmBtu/hr
2. Maximum Incineration Rate: **Not Applicable**	lb/hr		tons/day
3. Maximum Process or Throughput Rate: **115.0 TPH (maximum per hour)**			
4. Maximum Production Rate: **Not Applicable**			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year		**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **None**			

110.42 TPH Clinker Production (24-hour rolling average)
800,000 TPY Clinker and 1,360,000 TPY Preheater Feed

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-212.400, FAC	
NSPS Subpart F	
NESHAP Subpart LLL	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **K-15, L-03, L-06, L-08**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **K-15: Clinker Cooler Stack** **L-03: Clinker Transport** **L-06: Clinker Silos** **L-08: Clinker Silos (new baghouse to be installed)**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Not Applicable**		
5. Discharge Type Code: V	6. Stack Height: **115** feet	7. Exit Diameter: **9** feet
8. Exit Temperature: **480** °F	9. Actual Volumetric Flow Rate: **160000** acfm	10. Water Vapor: **Not Applicable** %
11. Maximum Dry Standard Flow Rate: **Not Applicable** dscfm	12. Nonstack Emission Point Height: **Not Applicable** feet	
13. Emission Point UTM Coordinates: **Not Available within 0.01 Kilometer** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **K-15 is representative emission point with greatest emission rate.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Mineral Products: Cement Manufacturing – Dry Process: Clinker Cooler**		
2. Source Classification Code (SCC): **3-05-006-14**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **115.0**	5. Maximum Annual Rate: **800,000**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **Not Applicable**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **Not Applicable**
10. Segment Comment (limit to 200 characters): **110.42 tons per hour clinker production rate (24-hour rolling average).**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Mineral Products: Cement Manufacturing – Dry Process: Clinker Silos**		
2. Source Classification Code (SCC): **3-05-006-15**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **115.0**	5. Maximum Annual Rate: **800,000**	6. Estimated Annual Activity Factor: **Not Applicable**
7. Maximum % Sulfur: **Not Applicable**	8. Maximum % Ash: **Not Applicable**	9. Million Btu per SCC Unit: **Not Applicable**
10. Segment Comment (limit to 200 characters): **110.42 tons per hour clinker production rate (24-hour rolling average).**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**010, 016**	**None**	**EL**
PM10	**010, 016**	**None**	**EL**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
**(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **15.39** lb/hour **55.70** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factors: **0.082 lb/ton dry feed** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.082 lb/ton x 187.71 tons/hr = 15.39 lb/hour @ 1,360,000 tons/yr = 55.70 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Potential emissions for clinker cooler only – other emissions points are not affected by rate change. Preheater dry feed rate is a function of clinker production rate. These calculations are based on 110.42 tons per hour clinker production rate (24-hour rolling average) resulting in an estimated preheater dry feed rate of 187.71 tons per hour.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.082 lb/ton dry feed**	4. Equivalent Allowable Emissions: **15.39** lb/hour **55.70** tons/year
5. Method of Compliance (limit to 60 characters): **Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Allowable emissions for clinker cooler only – other emissions points are not affected by rate change.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **13.03** lb/hour **47.3** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **Not Applicable** [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factors: **0.118 lb/ton clinker** Reference: **Permittee**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.118 lb/ton x 110.42 tons/hr = 13.03 lb/hour @ 800,000 tons/yr = 47.3 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Potential emissions for clinker cooler only – other emissions points are not affected by rate change.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **ESCPSD**	2. Future Effective Date of Allowable Emissions: **Not Applicable**
3. Requested Allowable Emissions and Units: **0.118 lb/ton clinker**	4. Equivalent Allowable Emissions: **13.03** lb/hour **47.3** tons/year
5. Method of Compliance (limit to 60 characters): **Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Allowable emissions for clinker cooler only – other emissions points are not affected by rate change.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **10%** Exceptional Conditions: **10%** Maximum Period of Excess Opacity Allowed: **0** min/hour	
4. Method of Compliance: **Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **62-212.400, FAC** **Visible emissions for clinker cooler only – other emissions points are not affected by rate change.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: **VE**	2. Pollutant(s): **Opacity**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Sick AG Environmental Monitoring** Model Number: **OMD41** Serial Number: **00035 8010**	
5. Installation Date:	6. Performance Specification Test Date: **2/22/2001**
7. Continuous Monitor Comment (limit to 200 characters): **COMS recertified on August 9, 2001.** **NSPS Subpart F & NESHAP Subpart LLL**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested **On file with Department**
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested **On file with Department**
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested **On file with Department**
5. Compliance Test Report: [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: **Attachment 1: Report on Changes** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **None**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

Supplemental Information for Construction Permit Application

Attachment 1: Report on Changes to the Pyro Processing System

Fred W. Cohrs
598 Queen's Harbor Boulevard
Jacksonville, Florida 32225

Report on Changes to the Pyro Processing System

TSB Cement Plant, Newberry, Florida

The Preheater/Calciner and Rotary kiln supplied by Polysius Corporation and installed in 1998-1999 commenced operation at the end of 1999.
The system consisted of the following principal equipment

Dopol 4-stage preheater/calciner
Stage 1 ..... 9,000 cuft
Stage 2 .....13,000 cuft
Stage 3 ..... 11,000 cuft
Stage 4.....17,000 cuft
Calciner ..... 16,500 cuft
Total Volume ..... 66,500 cuft

Rotary kiln
Shell inside diameter ... 13'-1 ½"
Diameter inside the refractory lining ... 12'-5"
Length ... 156'-6"

The manufacturer guaranteed the minimum capacity of the kiln system at 2,300 short tons per day. The equipment supplier, either as a guarantee or a limitation gave no hourly rating, but by implication, the hourly capacity was set at 95.8 tons, assuming an uninterrupted, constant operation of 24 hrs. This hourly rate found itself into the permit application and the operating permit as an upper allowable production rate.

The construction permit was issued for a maximum NOx emission of 2.8 lbs per ton clinker, with an interim allowable limit of 3.8 lbs per hour for the initial operating period of 2 years.
In the event the emissions of NOx exceeded the 2.8 lbs/hr limit during the 2 year grace period, the permit provided that the applicant convert the preheater/calciner to a "Multistage Combustion System" (MSC), as proposed and supplied by Polysius Corp. and that this system be operative and ready for compliance testing by the end of calendar year 2001, being the end of the 2 year period after commencement of operation.
The applicant met these requirements and the revised system was accepted as being in compliance with the permit conditions in February 2002.

During the initial two year start up period, the kiln system showed evidence, that the lower emission rate of 2.8 lbs NOx per ton clinker could be achieved on a consistent basis, provided that the kiln exit gases contained an oxygen content of not more than 1%. Under stable kiln conditions, with uniform kiln feed quality and fineness and uninterrupted kiln dust return to the blending silo or directly to preheater stage 3, this operation was possible.
The need to install the MSC system was seriously questioned by the permit holder, as the capital expense was significant and a further reduction of NOx emissions was neither assured nor deemed necessary.

A decision to proceed with the addition of the MSC system to the calciner was nevertheless made to attempt achieving compliance with the lower NOx limit at higher oxygen levels than the undesirable minimums required under normal operating conditions.

Among the many significant observations made during the first two plant start-up years was the fact that the kiln operation was substantially more stable at feed rates near the top of the permitted input levels. The trend clearly indicated that the kiln system operated more efficiently at escalated production rates. When the clinker production was increased, total NOx emissions leveled out or even trended downward and showed notable reductions if expressed in lbs per ton of clinker produced.

A very explainable part of this observation lies in the basic heat requirement of the entire system, including heat losses, which become smaller at higher production rates as a percentage of the total heat requirement to convert raw mix to clinker.

MSC System – Mechanical Changes to Preheater/Calciner
A proven design for the Multi Stage Combustion System was proposed by Polysius, which added a significant amount of new volume to the system:

1. Take-off duct from calciner to mixing chamber ..... 4,300 cuft
2. Mixing chamber ..... 4,500 cuft

The additional volume created with the MSC system is ..... 8,800 cuft
This constitutes an increase of 13.2% in preheater/calciner volume.

A take-off duct from the tertiary duct to the top of the calciner provides hot air from the clinker cooler to oxidize the CO generated by the reduction of NOx. This duct also helps to more effectively distribute airflow through the system, all of which helps to boost the production capacity of the system.

The new volume created by the MSC system increases the retention time in the preheater from 2.2 seconds to 3.2 seconds. Heat transfer from the hot gas to the material to be heated/calcined improves with additional reaction time.

The operating experience since the installation of the MSC system suggests that more kiln feed be required to maintain the ideal ratio of coal input between the rotary kiln and the calciner. The ratio is important to obtain the most efficient heat consumption and therefore the lowest rate of emission of the combustion products.

To verify this theory, short-term trial runs were conducted at clinker production rates equal to a daily level of 2,650 tons. The recorded emission rates at the higher kiln output are shown in the comparison below.

Comparison of Operating Data

The changes in the emission rates under typical operating conditions depicting the three principal modes of operation are as follows.

Prior to installing the MSC system
Clinker Production: 2,200-2,300 tons per day

NOx	2.8	lbs/ton clinker
CO	3.6	lbs/ton clinker
SO2	0.28	lbs/ton clinker
PM total	0.31	lbs/ton/clinker

After installing the MSC system
Clinker Production 2,200-2,300 tons per day

NOx	2.55	lbs/ton clinker
CO	3.0	lbs/ton clinker
SO2	0.22	lbs/ton clinker
PM total	0.23	lbs/ton/clinker

After installing the MSC system
Clinker Production 2,650 tons per day

NOx	2.45	lbs/ton clinker
CO	2.5	lbs/ton clinker
SO2	0.16	lbs/ton clinker
PM total	0.17	lbs/ton/clinker

Conclusion

Due to the increased heat exchange capacity of the preheater/calciner system and its improved efficiency in converting raw feed to clinker, the permitted annual production rate should be set at 800,000 tons clinker. At this rate, the annual emissions will remain below the levels granted in the Title V operating permit.

Florida Rock Industries, Inc. has carefully evaluated the measured and projected emissions and proposes to set the limits of several pollutants at significantly lower levels under an amended Title V permit, while taking advantage of the newly installed MSC system to improve the efficiency of the available production facility.

After observing the operation of the TSB Cement Plant since its start-up over two years ago and my visit of similar plants supplied by Polysius Corp. in Europe, Central and South America and the Middle East, it is my opinion that this plant has been conservatively engineered, as is typical for systems designed by Polysius Corp. All ancillary equipment, i.e. the raw material preparation and the clinker cooling and transport systems and their associated emission controls are adequately sized for the moderate production increase proposed by Florida Rock Industries, Inc.

I therefore conclude the TSB Cement Plant kiln system to be capable of producing the proposed 110.41 TPH clinker on a sustained basis. The proposed maximum production rates of 115 tons per hour, 2650 tons per day and 800,000 tons per year are reasonable limits for this system.

June 12, 2002

Fred W. Cohrs

Fred W. Cohrs