**Memorandum**

# Florida Department of Environmental Protection

TO: Michael G. Cooke, Director DARM

Through: Trina L. Vielhauer, Chief BAR

Through: A.A. Linero, P.E., Program Administrator, South Permitting Section

From: Cindy Mulkey

DATE: February 17, 2006

SUBJECT: Florida Rock Industries, Inc. – Finish Mill Throughput Rate Increase
DEP File No. 0010087-018-AC

Attached is the Final Permit for Florida Rock Industries authorizing an increase in the finish mill throughput from 136 tons per hour of cement to 150 tons per hour at the existing Thompson S. Baker Cement Plant near Newberry in Alachua County.

No emissions limit or production increases were requested by FRI due to this project. No production equipment or control devices will be changed or affected. No changes are requested in the amount of fuel use or raw materials subjected to pyroprocessing in the preheater/calciner, kiln, or clinker cooler. Particulate emissions from the baghouses will remain unchanged and fugitive emissions due to increased truck traffic from the limestone quarry to the limestone/gypsum storage area are estimated to be less than 1 ton per year. Neither a Determination of Best Available Control Technology (BACT) nor an air quality analysis was required for this project.

We issued the draft permit November 14, 2005 and a public notice was made on January 26, 2006 in *The High Springs Herald.* No comments were received for this project.

Accordingly, I recommend your approval.

AAL/cem

Attachments

# FINAL DETERMINATION

## Florida Rock Industries, Inc.

## Thompson S. Baker Cement Plant

## Finish Mill Throughput Rate Increase

## DEP File No. 0010087-018-AC

On November 14, 2004 the Florida Department of Environmental Protection (Department) distributed an "Intent to Issue Air Construction Permit" to allow an increase in the finish mill throughput rate at the Florida Rock Industries Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County.

The package included the Department's Draft Air Construction Permit, the "Intent to Issue Air Construction Permit," the "Technical Evaluation and Preliminary Determination," and the "Public Notice of Intent to Issue Air Construction Permit". The Department sent copies of the package to various persons, agencies, and municipalities including those who had asked that they be informed of any Department permitting activities related to the subject facility. Florida Rock Industries, Inc. published the Public Notice in *The High Springs Herald* on January 26, 2006 and provided to the Department the required proof of publication.

The Department received no comments or petitions for administrative hearings on the Draft Air Construction Permit. The final action is to issue the Air Construction Permit as drafted.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
**NOTICE OF PERMIT**

In the Matter of an
Application for Permit by:

Mr. Chris Horner, Plant Manager
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

DEP File No. 0010087-018-AC
Thompson S. Baker Cement Plant
Alachua County

/

Enclosed is the Final Permit Number 0010087-018-AC authorizing an increase in the finish mill throughput from 136 tons per hour of cement to 150 tons per hour at the existing Thompson S. Baker Cement Plant near Newberry in Alachua County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were sent by U.S. Mail or electronic mail before the close of business on 2/17/06 to the person(s) listed:

Chris Horner, FRI*
Henry Gotsch, FRI
John Koogler, P.E. Koogler & Associates
Chair, Alachua County Commission
Chris Bird, Alachua County EMD
John Glanzer, Mayor, City of Newberry
Lowell Garrett, City of Newberry
Jim Little, EPA
Chris Kirts, DEP NED

**Clerk Stamp**

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

(Clerk) 2/17/06 (Date)

# Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

**PERMITTEE**

Florida Rock Industries
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

Permit No. 0010087-018-AC
Expires: December 31, 2006
Finish Mill Throughput Rate Increase

**PROJECT AND LOCATION**

This permit authorizes an increase in the finish mill throughput rate from 136 tons per hour to 150 tons per hour of cement at the existing Thompson S. Baker Cement Plant in Alachua County. The facility is on County Road 235 approximately 2.5 miles northeast of Newberry, Florida. The map coordinates are: UTM Zone 17, 346.8 km East and 3287.0 km North.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the work specified in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit supplements all other air construction and operation permits for the subject emissions unit and does not alter any requirements from such previously issued air permits.

**APPENDICES**

The following appendices are attached as part of this permit.

Appendix GC - Construction Permit General Conditions

Michael G. Cooke, Director
Division of Air Resources Management

Effective Date: 2/17/06

## FACILITY DESCRIPTION

Florida Rock Industries, Inc. (FRI) owns and operates the Thompson S. Baker Cement Plant in Newberry, Alachua County. The facility consists of raw material handling and storage, a raw mill system, kiln system, clinker handling, finish grinding operations, cement handling, loading and bagging operations, and coal handling and grinding operations.

The kiln is presently permitted to produce 2,650 tons per day of clinker, 800,000 tons per year, with a peak hourly clinker production limit of 115 tons per hour. The finish mill is presently permitted at an hourly process rate of 136 tons per hour of cement. (0010087-006-AC).

## PROJECT

The project as requested is to increase the finish mill process rate from 136 tons per hour to 150 tons per hour of cement. The following emissions units are affected by this permit.

| ID No. | Emission Unit Description |
|---|---|
| 005 | Finish Grinding Operations. Emissions Unit 005 identifies the Finish Grinding Operations. Fabric filters control particulate matter emissions. Emission Points are identified as follows: (EP02) – Clinker to Finish Mill – M-08, (EP03) - Finish Mill Air Separator – N-09, (EP04) – Finish Mill – N-12, (EP05) – Cement Handling in Finish Mill – N-19, (EP06) – Cement Storage Silos – Q-25, (EP07) – Cement Storage Silos – Q-26. |

## REGULATORY CLASSIFICATION

Regulatory classification and applicable requirements are listed in the applicable Title V Operation Permit and the previously-issued construction permit.

Title III HAPS: This facility has the potential to emit 10 tons per year or more of any one hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, and is therefore considered a major source of hazardous air pollutants.

Title V: This facility emits or has the potential to emit more than 100 tons per year of carbon monoxide (CO), and nitrogen oxides ($NO_X$) and is therefore a Title V major source of air pollutants.

PSD: The project is located in an area designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "portland cement plant", which is one of the 28 Prevention of Significant Deterioration (PSD) source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400 F.A.C., PSD.

NSPS: This facility is subject to 40 CFR 60, Subpart OOO (New Source Performance Standards For Nonmetallic Mineral Processing Plants) adopted and incorporated by reference in Rule 62-204.800, F.A.C.

This facility is subject to 40 CFR 60, Subparts A, F and Y (Standards of Performance for New Stationary Sources – General Provisions, Standards of Performance for Portland Cement Plants and Standards of Performance for Coal Preparation Plants) adopted and incorporated by reference in Rule 62-204.800, F.A.C. Certain requirements from Subpart F are replaced by requirements from 40 CFR 63, Subpart LLL.

NESHAP: This facility is subject to the "Existing Major Source" provisions of 40 CFR 63 Subparts A and LLL (National Emission Standards for Hazardous Air Pollutants – General Provisions; and National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

## RELEVANT DOCUMENTS

- Original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC) issued in December 1996 (as amended in August 2001). Also known as PSD-FL-228;
- Current Title V Operation Permit 0010087-002-AV issued January 11, 2002;
- Construction Permit modification (PSD –FL-228C and 0010087-006-AC) issued on December 11, 2002;
- Application submitted by Florida Rock, received July 29, 2005;
- Department's Request for Additional Information, dated August 26, 2005;
- Response to Request for Additional Information submitted by Koogler & Associates, received September 2, 2005; and
- Department's Technical Evaluation and Final Determination dated November 14, 2005.

## GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify or operate this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection ("Department"), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to the Compliance Authority.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590. The phone number is 904/807-3300 and the fax number is 904/448-4363.

3. General Conditions: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403, F.S. [Rule 62-4.160, F.A.C.]

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

5. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Title V Permit: This permit authorizes construction of the proposed project and initial operation to determine compliance with Department rules. Upon completion of construction of this project, a Title V operation permit revision is required for regular operation of the new equipment. The permittee shall apply for a revised Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

## EU 003. KILN SYSTEM

This section of the permit addresses the following emissions unit:

| ID No. | Emission Unit Description |
|---|---|
| 005 | Finish Grinding Operations. Emissions Unit 005 identifies the Finish Grinding Operations. Fabric filters control particulate matter emissions. Emission Points are identified as follows: (EP02) – Clinker to Finish Mill – M-08, (EP03) - Finish Mill Air Separator – N-09, (EP04) – Finish Mill – N-12, (EP05) – Cement Handling in Finish Mill – N-19, (EP06) – Cement Storage Silos – Q-25, (EP07) – Cement Storage Silos – Q-26. |

### ADMINISTRATIVE REQUIREMENTS

Previous Permit Conditions: This permit authorizes an increase in the finish mill process rate from 136 tons per hour to 150 tons per hour of cement. The following conditions are in addition to or replace those of the previous air construction permits. Unless otherwise specified, the emissions unit remains subject to all applicable conditions from previous air construction permits. [Rule 62-4.070(3), F.A.C.]

### CONSTRUCTION ACTIVITIES

Finish Mill Process Rate Increase: No physical construction activities will be conducted in association with an increase in the finish mill process rate. [Application]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

G.14 The permittee shall comply with the following:

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

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

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

## TABLE II

### ALLOWABLE EMISSIONS

| Stack # | Description | Grain Loading | OPACITY |
|---|---|---|---|
| | Emission Unit 1: Raw Material<br>Process Rate = 1,331,000 TPY Dry Feed | | |
| Fugitive | Material Processing | | 10 |
| Fugitive | Handling and Storage | | 10 |
| Fugitive | Crusher | | 15 |
| | Emission Unit 2: Raw Mill System<br>Process Rate = 255 TPH Recycle Dust plus Raw Meal (peak) | | |
| E-28 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| G-07 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| H-08 | Raw meal + recycle dust to preheater | 0.01 gr/dscf | 5 |
| | Emission Unit 3: Kiln System<br>Process Rate = 364 MMBTU/hr heat input | | |
| E-21 | Kiln Operations (ESP) | | 10 |
| E-21 | In-process fuel: coal | | 10 |
| E-21 | In-process fuel: petroleum coke | | 10 |
| E-21 | In-process fuel: fly ash | | 10 |
| E-21 | In-process fuel: natural gas | | |
| E-21 | In-process fuel: tires | | 10 |
| | Petroleum coke (25% of total heat input), tires (30 % of total heat input), fly ash (5% of total heat input). | | |
| | Emission Unit 4: Clinker Handling<br>115 TPH Clinker (peak) | | |
| L-03 | Clinker Cooler Discharge and Breaker | 0.01 gr/dscf | 5 |
| L-06 | Clinker into Clinker Silos | 0.01 gr/dscf | 5 |
| K-15 | Clinker Cooler (ESP) | | 10 |
| | Emission Unit 5: Finish Grinding Operations<br>Process Rate = **150** TPH **Cement** | | |
| M-08 | Clinker to Finish Mill | 0.01 gr/dscf | 5 |
| N-09 | Finish Mill Air Separator | 0.01 gr/dscf | 5 |
| N-12 | Finish Mill | 0.01 gr/dscf | 5 |
| N-19 | Cement Handling in Finish Mill | 0.01 gr/dscf | 5 |
| Q-25 | Cement Storage Silos | 0.01 gr/dscf | 5 |
| Q-26 | Cement Storage Silos | 0.01 gr/dscf | 5 |
| | Emission Unit 6: Cement Handling<br>Process Rate = 500 TPH Cement Unloading | | |
| Q-14 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| Q-17 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| Q-21 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| R-12 | Cement Bagging Operation | 0.01 gr/dscf | 5 |
| | Emission Unit 7: Coal Handling and Grinding<br>Process Rate = 14 TPH Pulverized Coal, Petroleum Coke, and Fly Ash | | |
| S-17 | Coal and Petroleum Coke Mill | 0.01 gr/dscf | 5 |
| S-21 | Pulverized Coal and Petroleum Coke, and Fly Ash Storage Bin | 0.01 gr/dscf | 5 |
| Fugitive | Coal, Petroleum Coke, Fly Ash Handling and Storage | | 5/20 |

**SENDER: *COMPLETE THIS SECTION***

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

***COMPLETE THIS SECTION ON DELIVERY***

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Denise Suggs C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

FEB 24 2006

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7000 1670 0013 3110 0543

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7000 1670 0013 3110 0543

**U.S. Postal Service**
**CERTIFIED MAIL RECEIPT**
*(Domestic Mail Only; No Insurance Coverage Provided)*

OFFICIAL USE

| | |
|---|---|
| Postage | $ |
| Certified Fee | |
| Return Receipt Fee (Endorsement Required) | |
| Restricted Delivery Fee (Endorsement Required) | |

Postmark Here

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

PS Form 3800, May 2000 See Reverse for Instructions

**FLORIDA ROCK INDUSTRIES INC**
CEMENT GROUP / 4000 N.W. CR 235 / P.O. Box 459 / Newberry, FL 32669 / (352) 472-4722



January 27, 2006

Ms. Cindy Mulkey
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400

RE: Proof of publication of public notice; Facility 0010087, Permit No. 0010087-018-AC
Florida Rock Industries, Inc.—Thompson S. Baker Cement Plant

Dear Ms. Mulkey:

Enclosed is an affidavit providing proof of publication; the legal notice appeared in the newspaper yesterday. If you have any questions, please call me at 352-472-4722, ext. 121.

Sincerely,
FLORIDA ROCK INDUSTRIES, INC.

Henry Gotsch
Environmental Manager

The High Springs Herald

High Springs, Florida
Published Weekly

STATE OF FLORIDA
COUNTY OF ALACHUA

Before the undersigned authority personally appeared DOT COULLIETTE who on oath says that he/she is an EDITORIAL ASSISTANT of *The High Springs Herald*, a weekly newspaper published at High Springs in Alachua County, Florida; that the attached copy of advertisement, being a **PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT,** was published in said newspaper in the issue of **January 26, 2006**.

Affiant further says that *The High Springs Herald* is a newspaper published at High Springs, in said Alachua County, Florida, and that the said newspaper has heretofore been continually published in said Alachua County, Florida, each week and has been entered as periodicals matter at the post office in High Springs, in said Alachua County, Florida for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Dot Coulliette
(Signature of Affiant)

Sworn to and subscribed before me
this 26th day of January, 2006.

Carol D Short
(Signature of Notary Public)

CAROL D. SHORT
Notary Public, State of Florida
My comm. expires Nov. [illegible] 2007
No. DD 269014

**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

Florida Department of Environmental Protection
DEP File No.: 0010087-018-AC

Florida Rock Industries, Inc.
Thompson S. Baker Cement Plant - Newberry
Alachua County

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Rock Industries, Inc. (FRI) to allow an increase in the finish mill throughput rate at the Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County. The previously issued Best Available Control Technology (BACT) determination applies to the facility. The applicant's name and address are: Florida Rock Industries, Inc., 4000 NW County Road 235, Post Office Box 459, Newberry, Florida 32699.

Historically FRI has produced AASHTO and masonry types of cement. Recently FRI has added ASTM type cement to its line of available products. ASTM allows a limestone content of up to 5%, as opposed to the 1% limestone allowed by AASHTO. Cement with higher limestone content (therefore lower clinker content) is easier to grind in the mill. This, along with kiln operation that minimizes the calcium-silicate crystal size which makes the clinker easier to grind, allows for a faster grinding process, therefore more product through the finish mill system. Although a slight increase in cement production could be realized due to this project, a cement process rate increase was not requested.

No emissions limit or production increases were requested by FRI due to this project. No production equipment or control devices will be changed or affected. No changes are requested in the amount of fuel use or raw materials subjected to pyroprocessing in the preheater/calciner, kiln, or clinker cooler. Particulate emissions from the baghouses will remain unchanged and fugitive emissions due to increased truck traffic from the limestone quarry to the limestone/gypsum storage area are estimated to be less than 1 ton per year.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: (904) 807-3233
Fax: (904) 448-4363

The complete project file includes the technical evaluation, Draft Air Construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968, for additional information.

Publish January 26, 2006

## Mulkey, Cindy

**From:** Henry Gotsch [HGotsch@Flarock.com]
**Sent:** Tuesday, January 10, 2006 3:04 PM
**To:** Mulkey, Cindy
**Subject:** RE: Notice of intent to issue for FM hourly production increase (0010087-018-AC)

Cindy:

I'm about to forward the notice for publication. I see two changes I'd like the published notice to include:

1. On the first line, the word "to" between Permit and Florida.
2. The post office box is 459, rather than 45.

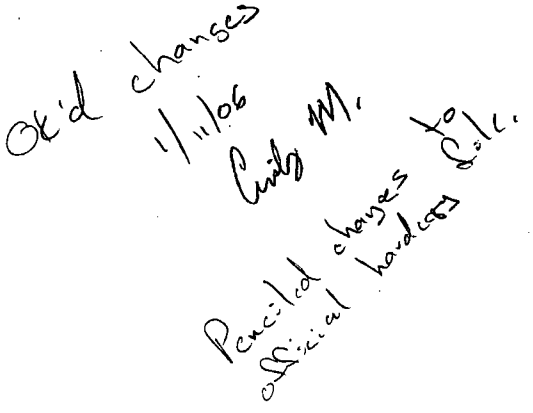
These two changes are shown in red in this cut and paste of the first paragraph from the NOI.

*The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Rock Industries, Inc. (FRI) to allow an increase in the finish mill throughput rate at the Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County. The previously issued Best Available Control Technology (BACT) determination applies to the facility. The applicant's name and address are: Florida Rock Industries, Inc., 4000 NW County Road 235, Post Office Box 459, Newberry, Florida 32699.*

Do you have any objection to me making these two changes on the Word version of the Notice you sent me?

Thanks.

Henry




-----Original Message-----
**From:** Mulkey, Cindy [mailto:Cindy.Mulkey@dep.state.fl.us]
**Sent:** Friday, November 18, 2005 4:02 PM
**To:** Henry Gotsch
**Subject:** RE: Notice of intent to issue for FM hourly production increase (0010087-018-AC)

Here you go.

**Memorandum**

Florida Department of
Environmental Protection

TO: Trina Vielhauer

THRU: Al Linero

FROM: Cindy Mulkey

DATE: November 9, 2005

SUBJECT: Florida Rock Industries (FRI) - Newberry
Finish Mill Throughput Rate Increase
DEP File No. 0010087-0018-AC

Attached is the public notice package for the finish mill throughput rate increase at the existing Florida Rock Industries Cement Plant in Newberry. The project as proposed includes an increase in finish mill throughput from 136 tons per hour cement to 150 tons per hour cement.

Historically FRI has produced AASHTO and masonry types of cement. Recently FRI has added ASTM type cement to its product line. ASTM allows a limestone content of up to 5 %, as opposed to the 1% limestone allowed by AASHTO. Limestone is easier to grind in the mill; therefore cement containing additional limestone (therefore lower clinker content) is ground more quickly. This, along with kiln operation that minimizes the calcium-silicate crystal size which makes the clinker easier to grind, allows for a faster grinding process, therefore more product through the finish mill system.

No emissions limit or production increases were requested by FRI due to this project. No production equipment or control devices will be changed or affected. Particulate emissions from the baghouses will remain unchanged, and fugitive emissions due to increased truck traffic from the limestone quarry to the limestone/gypsum storage area are estimated to be less than 1 ton per year.

We recommend your approval of the attached Intent to Issue.

AAL/cem

Attachments

# Department of Environmental Protection

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

Jeb Bush
Governor

Colleen M. Castille
Secretary


November 14, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris Horner, Plant Manager
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 457
Newberry, Florida 32399

RE: DEP File No.: 0010087-018-AC
Finish Mill Throughput Rate Increase
Thompson S. Baker Cement Plant

Dear Mr. Horner:

Enclosed is one copy of the Draft Air Construction Permit for the Thompson S. Baker Cement Plant on County Road 235, in Newberry, Alachua County. The Department's Intent to Issue Air Construction Permit, the "Public Notice of Intent to Issue Air Construction Permit", and the Technical Evaluation and Preliminary Determination are also included.

The "Public Notice" must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of Publication, i.e. newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in denial of the permit modification. The Department reserves the right to publish the Public Notice at anytime. If the Department publishes the Public Notice, the applicant is relieved of this responsibility.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, Program Administrator, at the letterhead address. If you have any questions regarding this matter, please call Cindy Mulkey at 850/921-8968 or Mr. Linero at 850/921-9523.

Sincerely,

Trina L Vielhauer

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/cm

Enclosures

In the Matter of a
Permit Application by:

Florida Rock Industries, Inc.
4000 N.W. CR 235
Post Office Box 459
Newberry, Florida 32669

DEP File No. 0010087-018-AC
Finish Mill Throughput Rate Increase
Thompson S. Baker Cement Plant
Alachua County

/

**INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of DRAFT Permit attached) for the proposed action, detailed in the Technical Evaluation and Preliminary Determination, for the reasons stated below.

The permittee, Florida Rock Industries (FRI), owns and operates the Thompson S. Baker Cement in Newberry, Alachua County. On July 28, 2005 the Department received an application from FRI for a construction permit to allow an increase in the finish mill throughput rate. On September 2, 2005 the Department received a response to a Request for Additional Information.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to allow the described throughput increase.

The Department intends to issue this air construction permit modification based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C, you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published as soon as possible one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit action for a period of 14 (fourteen) days from the date of publication of Public Notice of Intent to Issue Air Construction Permit.

Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 11/14/05 to the person(s) listed:

Chris Horner, FRI*
Henry Gotsch, FRI
William Proses, P.E. Koogler & Associates
Chair, Alachua County Commission
Chris Bird, Alachua County EMD
John Glanzer, Mayor, City of Newberry
Lowell Garrett, City of Newberry
Jim Little, EPA
Chris Kirts, DEP NED

Clerk Stamp

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

(Clerk) 11/14/05 (Date)

# PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection
DEP File No.: 0010087-018-AC

Florida Rock Industries, Inc.
Thompson S. Baker Cement Plant - Newberry
Alachua County

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Rock Industries, Inc. (FRI) to allow an increase in the finish mill throughput rate at the Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County. The previously issued Best Available Control Technology (BACT) determination applies to the facility. The applicant's name and address are: Florida Rock Industries, Inc., 4000 NW County Road 235, Post Office Box 457, Newberry, Florida 32699.

Historically FRI has produced AASHTO and masonry types of cement. Recently FRI has added ASTM type cement to its line of available products. ASTM allows a limestone content of up to 5 %, as opposed to the 1% limestone allowed by AASHTO. Cement with higher limestone content (therefore lower clinker content) is easier to grind in the mill. This, along with kiln operation that minimizes the calcium-silicate crystal size which makes the clinker easier to grind, allows for a faster grinding process, therefore more product through the finish mill system. Although a slight increase in cement production could be realized due to this project, a cement process rate increase was not requested.

No emissions limit or production increases were requested by FRI due to this project. No production equipment or control devices will be changed or affected. No changes are requested in the amount of fuel use or raw materials subjected to pyroprocessing in the preheater/calciner, kiln, or clinker cooler. Particulate emissions from the baghouses will remain unchanged and fugitive emissions due to increased truck traffic from the limestone quarry to the limestone/gypsum storage area are estimated to be less than 1 ton per year.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and

participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: (904) 807-3233
Fax: (904) 448-4363

The complete project file includes the technical evaluation, Draft Air Construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968, for additional information.

**PERMITTEE**

Florida Rock Industries
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

Permit No. 0010087-018-AC
Expires: December 31, 2006
Finish Mill Throughput Rate Increase

**PROJECT AND LOCATION**

This permit authorizes an increase in the finish mill throughput rate from 136 tons per hour to 150 tons per hour of cement at the existing Thompson S. Baker Cement Plant in Alachua County. The facility is on County Road 235 approximately 2.5 miles northeast of Newberry, Florida. The map coordinates are: UTM Zone 17, 346.8 km East and 3287.0 km North.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the work specified in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit supplements all other air construction and operation permits for the subject emissions unit and does not alter any requirements from such previously issued air permits.

**APPENDICES**

The following appendices are attached as part of this permit.

Appendix GC - Construction Permit General Conditions

Michael G. Cooke, Director
Division of Air Resources Management

## FACILITY DESCRIPTION

Florida Rock Industries, Inc. (FRI) owns and operates the Thompson S. Baker Cement Plant in Newberry, Alachua County. The facility consists of raw material handling and storage, a raw mill system, kiln system, clinker handling, finish grinding operations, cement handling, loading, and bagging operations, and coal handling and grinding operations.

The kiln is presently permitted to produce 2,650 tons per day of clinker, 800,000 tons per year, with a peak hourly clinker production limit of 115 tons per hour. The finish mill is presently permitted at an hourly process rate of 136 tons per hour of cement. (0010087-006-AC).

## PROJECT

The project as requested is to increase the finish mill process rate from 136 tons per hour to 150 tons per hour of cement. The following emissions units are affected by this permit.

| ID No. | Emission Unit Description |
|---|---|
| 005 | Finish Grinding Operations. Emissions Unit 005 identifies the Finish Grinding Operations. Fabric filters control particulate matter emissions. Emission Points are identified as follows: (EP02) – Clinker to Finish Mill – M-08, (EP03) - Finish Mill Air Separator – N-09, (EP04) – Finish Mill – N-12, (EP05) – Cement Handling in Finish Mill – N-19, (EP06) – Cement Storage Silos – Q-25, (EP07) – Cement Storage Silos – Q-26. |

## REGULATORY CLASSIFICATION

Regulatory classification and applicable requirements are listed in the applicable Title V Operation Permit and the previously-issued construction permit.

Title III HAPS: This facility has the potential to emit 10 tons per year or more of any one hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, and is therefore considered a major source of hazardous air pollutants.

Title V: This facility emits or has the potential to emit more than 100 tons per year of carbon monoxide (CO), and nitrogen oxides ($NO_X$) and is therefore a Title V major source of air pollutants.

PSD: The project is located in an area designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "portland cement plant", which is one of the 28 Prevention of Significant Deterioration (PSD) source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400 F.A.C., PSD.

NSPS: This facility is subject to 40 CFR 60, Subpart OOO (New Source Performance Standards For Nonmetallic Mineral Processing Plants) adopted and incorporated by reference in Rule 62-204.800, F.A.C.

This facility is subject to 40 CFR 60, Subparts A, F and Y (Standards of Performance for New Stationary Sources – General Provisions, Standards of Performance for Portland Cement Plants and Standards of Performance for Coal Preparation Plants) adopted and incorporated by reference in Rule 62-204.800, F.A.C. Certain requirements from Subpart F are replaced by requirements from 40 CFR 63, Subpart LLL.

NESHAP: This facility is subject to the "Existing Major Source" provisions of 40 CFR 63 Subparts A and LLL (National Emission Standards for Hazardous Air Pollutants – General Provisions; and National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing

## RELEVANT DOCUMENTS

- Original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC) issued in December 1996 (as amended in August 2001). Also known as PSD-FL-228;
- Current Title V Operation Permit 0010087-002-AV issued January 11, 2002;
- Construction Permit modification (PSD –FL-228C and 0010087-006-AC) issued on December 11, 2002;
- Application submitted by Florida Rock, received July 29, 2005;
- Department's Request for Additional Information, dated August 26, 2005;
- Response to Request for Additional Information submitted by Koogler & Associates, received September 2, 2005; and
- Department's Technical Evaluation and Final Determination dated November 14, 2005.

## GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify or operate this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection ("Department"), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to the Compliance Authority.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the Northeast District Office at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256-7590. The phone number is 904/807-3300 and the fax number is 904/448-4363.

3. General Conditions: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403, F.S. [Rule 62-4.160, F.A.C.]

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

5. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Title V Permit: This permit authorizes construction of the proposed project and initial operation to determine compliance with Department rules. Upon completion of construction of this project, a Title V operation permit revision is required for regular operation of the new equipment. The permittee shall apply for a revised Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

## EU 003. KILN SYSTEM

This section of the permit addresses the following emissions unit:

| ID No. | Emission Unit Description |
|---|---|
| 005 | Finish Grinding Operations. Emissions Unit 005 identifies the Finish Grinding Operations. Fabric filters control particulate matter emissions. Emission Points are identified as follows: (EP02) – Clinker to Finish Mill – M-08, (EP03) - Finish Mill Air Separator – N-09, (EP04) – Finish Mill – N-12, (EP05) – Cement Handling in Finish Mill – N-19, (EP06) – Cement Storage Silos – Q-25, (EP07) – Cement Storage Silos – Q-26. |

### ADMINISTRATIVE REQUIREMENTS

Previous Permit Conditions: This permit authorizes an increase in the finish mill process rate from 136 tons per hour to 150 tons per hour of cement. The following conditions are in addition to or replace those of the previous air construction permits. Unless otherwise specified, the emissions unit remains subject to all applicable conditions from previous air construction permits. [Rule 62-4.070(3), F.A.C.]

### CONSTRUCTION ACTIVITIES

Finish Mill Process Rate Increase: No physical construction activities will be conducted in association with an increase in the finish mill process rate. [Application]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

G.14 The permittee shall comply with the following:

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

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

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

## TABLE II

### ALLOWABLE EMISSIONS

| Stack # | Description | Grain Loading | OPACITY |
|---|---|---|---|
| | Emission Unit 1: Raw Material<br>Process Rate = 1,331,000 TPY Dry Feed | | |
| Fugitive | Material Processing | | 10 |
| Fugitive | Handling and Storage | | 10 |
| Fugitive | Crusher | | 15 |
| | Emission Unit 2: Raw Mill System<br>Process Rate = 255 TPH Recycle Dust plus Raw Meal (peak) | | |
| E-28 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| G-07 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| H-08 | Raw meal + recycle dust to preheater | 0.01 gr/dscf | 5 |
| | Emission Unit 3: Kiln System<br>Process Rate = 364 MMBTU/hr heat input | | |
| E-21 | Kiln Operations (ESP) | | 10 |
| E-21 | In-process fuel: coal | | 10 |
| E-21 | In-process fuel: petroleum coke | | 10 |
| E-21 | In-process fuel: fly ash | | 10 |
| E-21 | In-process fuel: natural gas | | |
| E-21 | In-process fuel: tires | | 10 |
| | Petroleum coke (25% of total heat input), tires (30 % of total heat input), fly ash (5% of total heat input). | | |
| | Emission Unit 4: Clinker Handling<br>115 TPH Clinker (peak) | | |
| L-03 | Clinker Cooler Discharge and Breaker | 0.01 gr/dscf | 5 |
| L-06 | Clinker into Clinker Silos | 0.01 gr/dscf | 5 |
| K-15 | Clinker Cooler (ESP) | | 10 |
| | Emission Unit 5: Finish Grinding Operations<br>Process Rate = **150 TPH Cement** | | |
| M-08 | Clinker to Finish Mill | 0.01 gr/dscf | 5 |
| N-09 | Finish Mill Air Separator | 0.01 gr/dscf | 5 |
| N-12 | Finish Mill | 0.01 gr/dscf | 5 |
| N-19 | Cement Handling in Finish Mill | 0.01 gr/dscf | 5 |
| Q-25 | Cement Storage Silos | 0.01 gr/dscf | 5 |
| Q-26 | Cement Storage Silos | 0.01 gr/dscf | 5 |
| | Emission Unit 6: Cement Handling<br>Process Rate = 500 TPH Cement Unloading | | |
| Q-14 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| Q-17 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| Q-21 | Cement Silo Load-out | 0.01 gr/dscf | 5 |
| R-12 | Cement Bagging Operation | 0.01 gr/dscf | 5 |
| | Emission Unit 7: Coal Handling and Grinding<br>Process Rate = 14 TPH Pulverized Coal, Petroleum Coke, and Fly Ash | | |
| S-17 | Coal and Petroleum Coke Mill | 0.01 gr/dscf | 5 |
| S-21 | Pulverized Coal and Petroleum Coke, and Fly Ash Storage Bin | 0.01 gr/dscf | 5 |
| Fugitive | Coal, Petroleum Coke, Fly Ash Handling and Storage | | 5/20 |

# TECHNICAL EVALUATION
# AND
# PRELIMINARY DETERMINATION

Florida Rock Industries, Inc.
Thompson S. Baker Cement Plant

Portland Cement Manufacturing Facility
Finish Mill Throughput Rate Increase

Alachua County

DEP File No. 0010087-018-AC

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation

November 14, 2005

## I. APPLICATION INFORMATION

### APPLICANT NAME AND ADDRESS

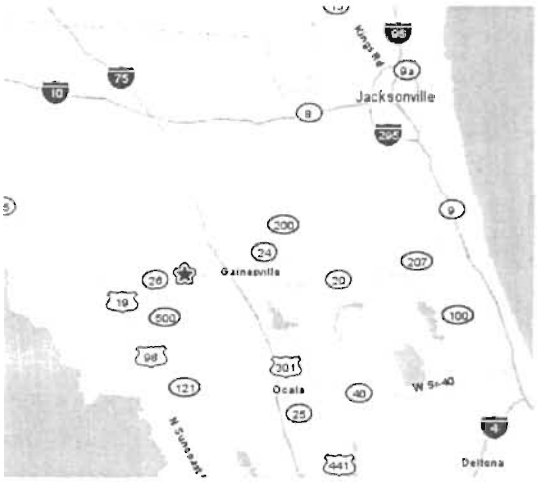
Florida Rock Industries, Inc
4000 NW CR 235
Newberry, Florida 32669
Authorized Representative: Chris Horner, Plant Manager

### PROCESSING SCHEDULE

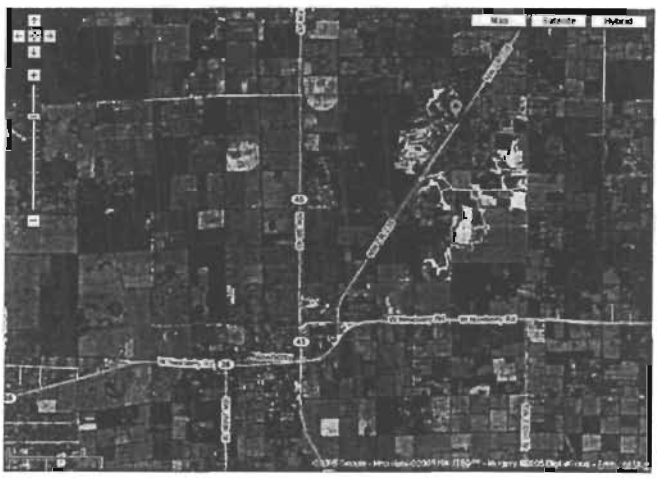
- Received Air Construction Permit Applications July 29, 2005;
- Additional information requested August 26, 2005;
- Received additional information September 2, 2005;
- Intent to Issue Air Construction Permit distributed November 14, 2005.

### FACILITY DESCRIPTION AND LOCATION

Florida Rock Industries, Inc. (FRI) owns and operates the Thompson S. Baker Cement Plant on Alachua County Road 235, 2.5 miles northeast of Newberry, Alachua County. The plant has a current capacity of 2,650 tons of clinker per day. A second kiln was approved in June 2005. The location of the Thompson S. Baker Cement Plant is shown in the figures below. The UTM coordinates of the Florida Rock facility are Zone 17, 346.8 km East and 3287.0 km North.




**Location of Newberry**



**Location of Thompson S. Baker Cement Plant**

### FACILITY CLASSIFICATION CODE (SIC)

Major Group No. 32, Clay, Glass, and Concrete Products
Industry Group No. 324 Cement, Hydraulic
Industry No. 3241 Cement, Hydraulic

### REGULATORY CATEGORIES

Regulatory classification and applicable requirements are listed in the Title V Operation Permit and the previously-issued construction permit.

*Title III HAPS:* The facility has the potential to emit 10 tons per year or more of any one hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants,

and is therefore considered a major source of hazardous air pollutants.

*Title IV*: The facility does not operate any units subject to the Acid Rain provisions of the Clean Air Act.

*Title V:* The facility is a Title V or "Major Source" of air pollution because the potential emissions of at least one regulated pollutant exceed 100 tons per year or because it is a major source of HAPS. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides ($NO_X$), particulate matter ($PM/PM_{10}$), sulfur dioxide ($SO_2$), and volatile organic compounds (VOC). Rule 62-212.200, Florida Administrative Code (F.A.C.).

*PSD:* The facility is located in an area designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "portland cement plant", which is one of the 28 Prevention of Significant Deterioration (PSD) source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400 F.A.C., PSD. Per Table 212.400-2, "Regulated Air Pollutants – Significant Emission Rates", any further modifications at the facility resulting in emissions increases greater than 40 TPY of $NO_X$ or $SO_2$, 7 TPY of sulfuric acid mist (SAM), 25/15 TPY of $PM/PM_{10}$, 3 TPY of fluorides, 1200 pounds per year (lb/yr) of lead or 200 lb/yr of mercury require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

*NSPS:* This facility is subject to 40 CFR 60, Subparts A, F, Y, and OOO (Standards of Performance for New Stationary Sources – General Provisions, Standards of Performance for Portland Cement Plants, and Standards of Performance for Coal Preparation Plants, and New Source Performance Standards For Nonmetallic Mineral Processing Plants) adopted and incorporated by reference in Rule 62-204.800, F.A.C. Certain requirements from Subpart F are replaced by requirements from 40 CFR 63, Subpart LLL.

*NESHAP:* This facility is subject to the "Existing Major Source" provisions of 40 CFR 63 Subparts A and LLL (National Emission Standards for Hazardous Air Pollutants – General Provisions; and National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

FRI must submit an application to revise the present Title V operation permit to incorporate the conditions of the proposed air construction permit prior to its expiration.

## II. EXISTING FACILITY

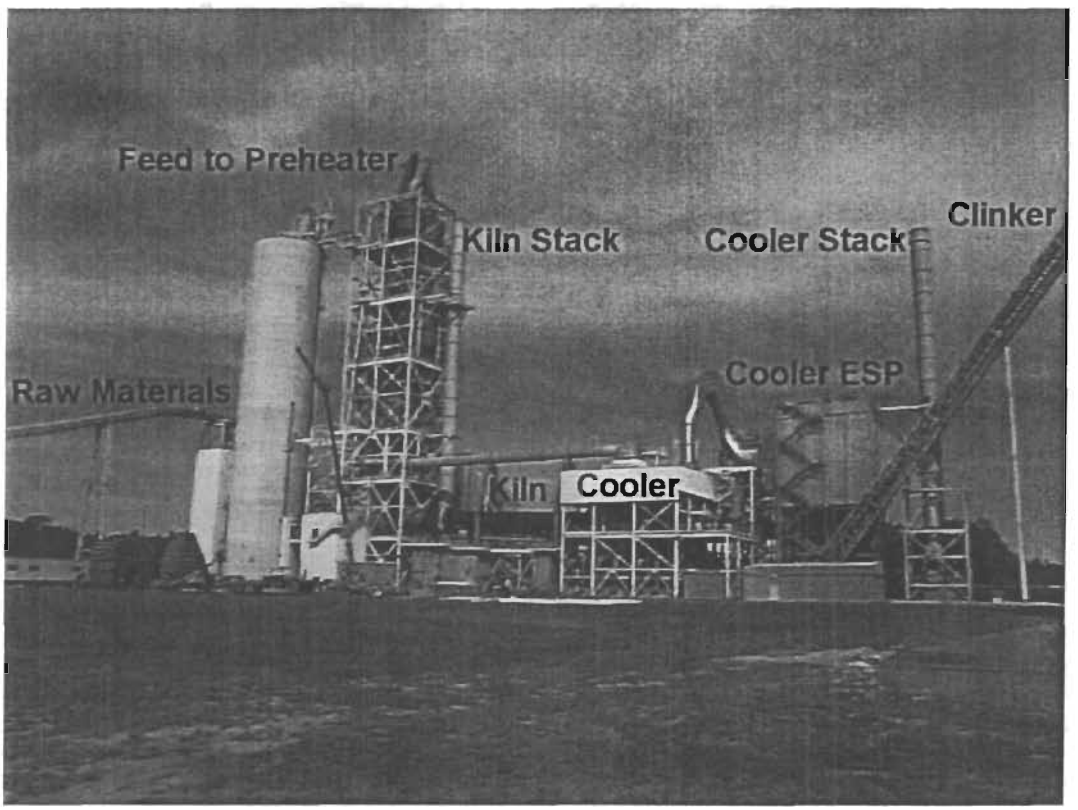
### ORIGINAL PROJECT

The Florida Department of Environmental Protection ("Department") issued a permit to FRI in December 1996 to construct the existing facility. The plant employs the modern dry process technology including a preheater and calciner along with indirect firing. The dry process preheater/calciner (PH/C) kiln is the most fuel-efficient cement pyroprocessing technology currently in use in the United States.

FRI completed construction of the basic plant in late Fall of 1999. The permit was modified in 2001 and 2002 to incorporate the final $NO_X$ control plan, a VOC continuous emission monitoring system (CEMS), final emission limits and final production limits. The plant is presently permitted to make 2650 tons per day (TPD) of clinker with an hourly production rate of 110 TPH (115 TPH peak) and an annual production limit of 800,000 TPY.

The major equipment at the plant includes the PH/C kiln, a clinker cooler, raw mill, finish mill, silos, conveyers, and particulate control/dust collection and recycling equipment. The cement product is stored in silos and is shipped in bags or in bulk by rail or truck.

Following is a photograph of the constructed plant taken in 2001. Some additional components, visible on the ground, are related to a subsequent project to convert the calciner to a multi-stage combustion (MSC) calciner to facilitate $NO_X$ control and tire introduction.




**Florida Rock Industries' Cement Plant in Newberry, Florida**

**PRESENT EMISSION LIMITS**

The following table lists the present emission limits for the Finish Grinding Operations.

**Emissions – Florida Rock Industries, Newberry, Alachua County**

| Emission Unit 5: Finish Grinding Operations<br>Process Rate = 136 TPH Cement Output | | | |
|---|---|---|---|
| Stack # | Description | Grain Loading | Opacity |
| M-08 | Clinker to Finish Mill | 0.01 gr/dscf | 5 |
| N-09 | Finish Mill Air Separator | 0.01 gr/dscf | 5 |
| N-12 | Finish Mill | 0.01 gr/dscf | 5 |
| N-19 | Cement Handling in Finish Mill | 0.01 gr/dscf | 5 |
| Q-25 | Cement Storage Silos | 0.01 gr/dscf | 5 |
| Q-26 | Cement Storage Silos | 0.01 gr/dscf | 5 |

## III. APPLICANT REQUEST

No increases in permitted production rates or emissions limitations are requested with this application.

The Department received an application from FRI on July 29, 2005 requesting an increase in the finish mill throughput rate. Additional information in support of the application was received on September 2, 2005. The finish mill currently operates with a maximum hourly throughput rate of 136 tons per hour of cement. The request is to increase this rate to 150 tons per hour of cement. Particulate emissions from each of the emissions points in the FRI finish grinding operation described above are controlled by baghouses. No changes are requested in the amount of fuel use or raw materials subjected to pyroprocessing in the preheater/calciner, kiln, or clinker cooler.

During the finish grinding process clinker, limestone, and gypsum are ground and mixed together in predetermined amounts to produce different "types" of Portland cement. According to FRI, changes in the types of cement being produced, along with better overall kiln operation have resulted in mixtures that are more readily ground as described in more detail below. This translates into less grinding which means more product can be fed through the finish mill system in an equal amount of time.

The Newberry plant has historically produced AASHTO type cement which allows up to 1 % limestone in the finished product, and masonry type cement which contains up to 20 % limestone. The plant is now also producing ASTM type cement which allows up to 5 % limestone. Because limestone is considerably easier to grind than clinker, the slight decrease in the clinker fraction (due to the increase in limestone) results in a mixture that is more readily ground by the mill.

Kiln operation has an impact on certain clinker properties which in turn, can also have an affect on the grinding process. According to an article by Smart et.al, "Clinker with small crystals and sharp boundaries is easy to grind and gives the cement higher early strength. Crystal growth is influenced strongly by the heat transfer from the flame, favorable conditions being rapid heating from calcining to sintering temperature and sudden quench in the cooler to freeze the crystal structure."[1] Optimization of kiln operation at FRI due to experience gained over time and better burner technology has apparently increased the grindability of the clinker produced by this kiln.

As stated earlier, no increases in permitted production rates or emissions limitations are requested with this application. The plant is operated with hourly, daily, and annual clinker production limitations. The cement handling operation is limited by a process rate of 500 TPH cement unloading. The increase in the finish mill throughput rate alone could effectively increase cement production over short periods, but overall cement production would still be limited by clinker production. The increase in the limestone fraction of the cement could result in an overall increase in cement production, however the facility is not requesting an increase in the cement handling process rate.

This throughput rate increase gives the facility flexibility in managing their stored materials and improves the efficiency of the grinding process. The facility may also realize an increase in capital gains due to the cheaper limestone fraction entering some of the cement and less energy spent on grinding.

## IV. POTENTIAL EFFECTS OF PROJECT ON EMISSIONS

### PARTICULATE MATTER

Particulate Emissions from the Baghouses: An increase in the finish mill throughput rate could mean an increase in the amount of particulates created within the finish mill system due to the increased amount of materials being ground.

Particulate emissions from the baghouses controlling the finish mill are based on an outlet grain loading of 0.01 grains per dry standard cubic foot and the air flow through the baghouses. As outlined in the information supplied by Koogler & Associates for FRI, outlet grain loading should remain unchanged assuming that the characteristics of the particulate matter in the gas stream remain unchanged, and that the baghouses' air-to-cloth ratios are in an acceptable range, and they are properly maintained[2]. An increase in the inlet grain loading does not mean an increase in outlet grain loading.

Also included in the submittal by Koogler & Associates is a letter from GE confirming the filter bags at the FRI, Newberry plant will achieve 0.01 gr/dscf based on good maintenance, control and operating practices, regardless of an inlet grain loading increase.[3]

There is no reason to expect PM emissions increases from the baghouses caused by an increase in the finish mill throughput rate.

Fugitive Particulate Emissions: Greater amounts of limestone being added to the cement will result in increased truck traffic from the quarry to the gypsum/limestone storage area. Fugitive particulate matter emissions, due to the extra truck traffic at the facility, are estimated to be well below one ton per year.

Limestone mined at the quarry contains approximately 10 % moisture when received at the plant storage area. As a result, almost no fugitive emissions will be realized from the handling of the additional limestone.

The project will result in negligible amounts of fugitive particulate emissions and will not cause a significant net emissions increase requiring PSD review and a BACT determination.

## V. CONCLUSION

An increase in FRI's finish mill throughput rate will result in increased efficiency of the grinding process, while allowing FRI more flexibility in the final handling and management of their stored materials used for the final cement mixture.

No production or emissions increases of any consequence will result in this throughput rate change.

The Department concludes that the proposed projects will not cause or contribute to a violation of ambient air quality standards or allowable increases.

Conditions incorporating the proposed changes are shown in the attached draft permit for this modification.

*Cindy Mulkey, Permit Engineering Specialist*

*A. A. Linero P.E., Program Administrator*

## VI. REFERENCES

[1] Article. Smart, F.P., P.J. Mullinger, and Barrie Jenkins, "A Perpect Model?: The correct modeling of the combustion process in rotary kilns can help lower costs, increase profits, and reduce the environmental impact", *Cement Americas*, 1998.

[2] Response to Additional Information, Koogler, J., Koogler & Associates to Al Linero, FDEP. *Florida Rock Industries, Inc., Finish Mill Throughput Increase,* September 1, 2005.

[3] Letter, Winston, A., GE to Henry Gotsch, FRI. *Filter Bag Efficiency*, August 31, 2005.

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Angel Hunt
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7001 0320 0001 3692 4101

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

**U.S. Postal Service**
**CERTIFIED MAIL RECEIPT**
*(Domestic Mail Only; No Insurance Coverage Provided)*

OFFICIAL USE

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|---|---|
| Postage | $ |
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| Return Receipt Fee (Endorsement Required) | |
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Postmark Here

7001 0320 0001 3692 4101

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Post Office Box 459
Newberry, Florida 32669

PS Form 3800, January 2001 See Reverse for Instructions

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

KA 187-04-12
September 1, 2005

*Via UPS Ground Delivery*

Mr. Al Linero, P.E.
Division of Air Resources
Dept. of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400



***SUBJECT:*** ***Florida Rock Industries, Inc.***
***Thomas S. Baker Cement Plant - Newberry***
***DEP File No. 0010087-018-AC***
***Finish Mill Throughput Increase***

Dear Al:

In response to your Request for Additional Information dated August 26, 2005, the following information is provided:

1. **Regarding additional limestone transported from quarry to gypsum storage area:**

Limestone is already transported to this storage area, which is known as the "Covered Limestone and Gypsum Storage Area" that appeared on drawing page 8 of 14 submitted with the original Line 1 application. A copy of that page is attached. There is no silo.

At present, about one truckload of limestone is transported to the storage area each day. To be conservative, as more ASTM-type cement is produced, the increased use of limestone (FRI has always made masonry cement with 20% limestone and AASHTO-type cement with 1 % limestone) could eventually add an average of five truckloads per day of limestone to what is already moved from the quarry to the gypsum/limestone storage area.

Road dust is controlled by sweepers and water sprinkling. During the permitting of Kiln 2, measurements of road silt were made at the plant demonstrating a silt loading of 0.14 grams per square meter. This factor can be used in conjunction with the vehicle miles traveled (VMT) to deliver the additional limestone to estimate the fugitive particulate matter emissions generated.

The travel distance from the quarry to the covered storage area is about 850 feet. Assuming five trucks per day, 365 days per year, the one-way travel distance will be about 300 miles per year. The fugitive emissions from a loaded truck (at 40 tons), using the EPA emission factor equation, will be 0.709 lb/VMT and emissions from an empty truck (at 16 tons) will be 0.179 lb/VMT. At 300 miles per year for full trucks and 300 miles per year for empty trucks, the annual fugitive particulate matter emissions will be about 0.13 tons per year; a negligibly increase.

Limestone is mined below or near the groundwater interface at this cement plant. The material is received in the plant with about 10% moisture. As shown by the attached drawing, the material is dumped from the truck into the storage area and out-loaded from storage into a hopper by front-end loader. No appreciable emissions will result from the handling as the result of the 10% moisture.

**2. Regarding the "change in the cement produced by FRI...":**

The cement produced by FRI is of AASHTO, ASTM, and masonry types. ASTM allows up to 5% limestone, versus the 1 % AASHTO allows. The slight decrease in the clinker fraction with the ASTM cement makes it easier for the mill to grind. Also, better kiln operation minimizes the size of the calcium-silicate crystals produced in the sintering process, which makes the clinker easier to grind. (See attached article from Cement Americas)

**3. Regarding "emissions from the finish mill":**

The particulate matter emissions from the finish mill are a function of the particulate matter concentration in the gas streams discharged from the baghouses (0.01 grains per dry standard cubic foot) and the air flow through the baghouses which is controlled by fans. The fans associated with the finish mill will not change, hence there will be no change in the air flow rate through the associated baghouses regardless of the planned change in material throughput of the finish mill.

Regarding the expected particulate matter concentration in the gas stream discharged from the baghouse, this concentration is not a function of the particulate matter loading to the baghouse. This of course assumes that the characteristics of the particulate matter in the gas air stream going to the baghouse remain essentially the same, that the air-to-cloth ratio of the baghouse is in an acceptable range, and that the baghouse is properly maintained. In this case, the characteristics of the particulate matter in the air stream to the baghouses are unchanged, the air-to-cloth ratio of the baghouses are in an acceptable range (as demonstrated by the initial compliance test on the baghouses and the ongoing performance of these baghouses), and FRI has demonstrated a very effective O/M program.

Regarding the fact that the expected particulate matter concentration in the stack gas stream discharge from a baghouse is independent of the inlet dust loading (0.01 grains per dry standard cubic foot, in this case), baghouse suppliers will guarantee a particulate matter discharge concentration (grains per dry standard cubic foot) at a specified air-to-cloth ratio (a measure of the baghouse size) without having information on the particulate matter concentration on the air stream entering the baghouse. This, and many, many compliance tests on baghouses, is demonstration that the particulate matter concentration at the discharge of a baghouse is independent of the dust loading at the baghouse inlet. Also, see the attached letter from the BHA division of General Electric.

Given the facts that the air flows through the baghouses will remain unchanged, the characteristics of the particulate matter in the air streams to the baghouses remain unchanged and the air-to-cloth ratio of the baghouse is in an acceptable range, it can be concluded that there will be no change in the particulate matter emissions from the baghouses.

To the best of my knowledge, there is reasonable assurance that the air pollution emission unit and the air pollution control equipment described in this letter when properly operated and maintained, will comply with all applicable standards for control of air pollution emissions found in the Florida statutes and rules of the Department of Environmental Protection.

If there are questions regarding this information, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES, INC.

John B. Koogler, Ph.D., P.E.

JBK/lt

cc: Cindy Malkey, FDEP (Tallahassee)
Henry Gotsch, FRI Newberry
Bill Proses
C. Kirts, DEP

# Attachments

POLYSIUS
DIVISION OF KRUPP USA, INC.
ATLANTA, GA.

# FLORIDA ROCK CEMENT PLANT

## – NEWBERRY , FLORIDA –

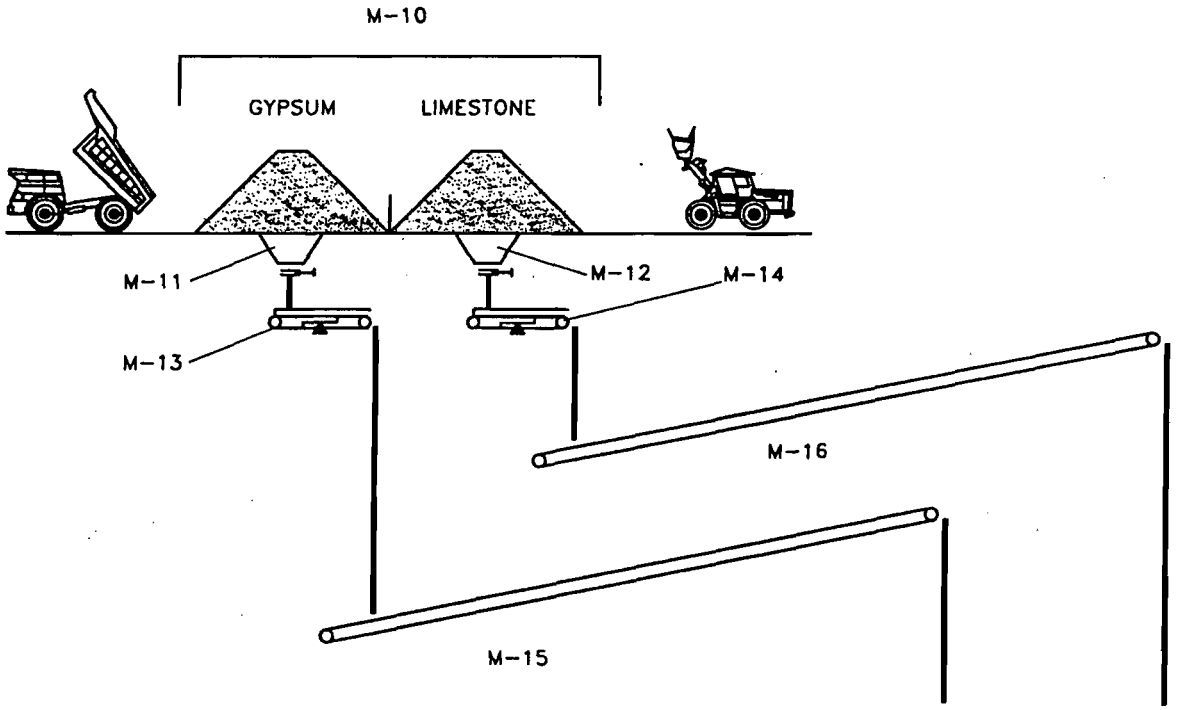
PROJECT No.: 6823-2200
PAGE: 8 of 14
DATE: 11-29-94

## CAPACITY: 750,000 STPY

## – COVERED ~~CLINKER~~ AND GYPSUM STORAGE –

| No. | REVISION DATE |
|---|---|
| 1 | 01-15-95 |
| 2 | 02-07-95 |
| 3 | |

## FLOW CHART




TO CEMENT GRINDING

PAGE 9

## DESCRIPTION

GYPSUM PILE CAPACITY : 3,000 ST
LIMESTONE PILE CAPACITY : 3,000 ST

I/CONTRCTS/PROJECTS/ACAD/PLANT/FLOWSHTS/327487-8

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# A Perpect Model?: The correct modeling of the combustion process in rotary kilns can help lower costs, increase profits, and reduce the environmental impact

Jan 1, 1998 12:00 PM
Dr. J.P. Smart, Dr. P.J. Mullinger, and Dr. Barrie Jenkins

Whatever the plant, kiln configurations are process dependent and vary greatly. The required process temperatures differ considerably, and secondary air temperatures are highly variable as is the firing system employed. This also is often in combination with a wide range of fuel types.

Optimizing the energy consumption of the kiln involves both fossil fuel and electrical energy, and this article is principally concerned with the former. Optimization encompasses minimizing fuel consumption, unburnts, NOx, SO2, and clinker grinding energy.



Clinker with small crystals and sharp boundaries is easy to grind and gives the cement higher early strength. Crystal growth is influenced strongly by the heat transfer from the flame, favorable conditions being rapid heating from calcining to sintering temperature and sudden quench in the cooler to freeze the crystal structure. These conditions are produced by a flame with a high heat flux close to the burner nozzle. Flames with very flat heat transfer profiles give slow rates of heating and large crystals. The resultant clinker is harder to grind and produces cement with poor early strength.

To compensate and meet market requirements, the raw mix is sometimes adjusted, the kiln burnt harder, and the cement ground finer, thus increasing the energy consumption in both the kiln and the grinding mill.

The difference in energy consumption in the kiln and grinding mill between clinker produced by an optimized flame and that produced by a poor flame can be as much as 10%. A poor flame heat flux profile, therefore, imposes a high economic cost as well as a significant increase in atmospheric emissions.

Physical modeling of flames Despite the growth in computer modeling, physical modeling is still the most effective method for determining flame length and shape in rotary kilns. Acid/alkali modeling was developed by Sir William Hawthorne at MIT in the late 1930s and is used to model the combustion process in rotary kilns where fuel/air mixing determines the flame characteristics.

A physical model of the cooler, hood, and kiln is constructed to an appropriate scale in clear acrylic plastic. The fuel is represented by dilute caustic soda solution containing phenolphthalein indicator, while the combustion air is represented by dilute hydrochloric acid. The concentration of the alkali and the stoichiometric ratio of alkali to acid is chosen to represent the correct air/fuel requirement for the particular fuel. The flow of acid is adjusted to simulate different excess air levels, hence determining the relationship between flame length and excess air. The phenolphthalein becomes colorless at the boundary where the mixing is complete, thus the model flame envelope is defined by the colored region. The aerodynamics of the full-size system are reproduced on the physical model thus allowing an accurate simulation of the fuel/air mixing characteristics, and hence the flame length, under representative conditions.

These model results must be corrected since the model is run under isothermal conditions. However, in kilns, considerable changes in temperature usually occur as combustion takes place. This results in a reduction in the gas density and an increase in volume, giving a longer flame in the kiln than in the model. For most practical purposes, the model flame length has only to be

corrected for the density changes.

NOx assessments The NOx formation in kiln flames is generally via both thermal and fuel routes (for coal, oil, and petroleum coke, all of which contain fuel nitrogen). Owing to the high flame temperatures that often occur above 2,000 degrees C, thermal NOx is generally the dominant mechanism and typically accounts for around 70% of the total NOx emission dependent on secondary air preheat temperature.

*In gas-fired kilns, fuel NOx is absent, so all the NOx is thermal.* However, the absence of the fuel variety in gas-fired kilns does not necessarily lead to a reduction in emissions, since gas-flame oxygen concentration and the residence time in the high-temperature zones influence the final thermal NOx emissions.

The formation of NOx is complex and still not a well understood process. Consequently, the modeling of this process is very difficult. Some of the models currently available are capable of predicting the trends in NOx formation with change in flame conditions and fuel type, but the accuracy is poor and sometimes little better than order of magnitude. Currently, the most reliable of methods of predicting NOx emissions from full-scale flames is by empirical scale up from test flames. Fuel and Combustion Technology (FCT) has achieved good results using the data from the test work undertaken by The International Flame Research Foundation for the CEMFLAM I Consortium.

In addition, for prediction of NOx in rotary kilns, FCT utilizes a customized version of the FACSIMLE kinetic package produced by AEA Technology. This version consists of a suite of closely related programs for the modeling of complex steady-state and time-dependent chemical reactions, including an extensive NOx modeling capability.

To allow for acceptable predictions to be made in industrial combustion processes, the company has modified the code to take account of gas temperature-time history and fuel/air mixing, which is generated from the associated physical and heat transfer modeling. To date, results have been encouraging, with predictions of emissions from an existing "dead-burned" dolomite kiln being within 10% of measured values. Further validation of this program over a broad range of combustion processes is currently being undertaken.

Validation of modeling It is one thing to produce an effective method and quite another to ensure that its predictions are correct and in agreement with experimental observations. Consequently, considerable effort has been made to validate these computer models. The method is to make detailed comparisons between predictions and experiments; to interpret whatever discrepancies are discovered in terms of computational inaccuracies, inadequacies of the assumptions and imprecisions of measurement; and then to implement improvements that result finally in the reduction of the discrepancies to acceptably small values.

In the real world Modeling can be used to solve problems with existing kilns, optimize the performance of existing kilns, assess the effect of fuel or other process changes in advance of the changes being made or optimize the design of a new plant.

Typically more than one modeling technique is used for a particular application because each technique provides only part of the answer. Within the kiln itself, acid/alkali modeling is used to simulate the combustion, while the zone method of heat transfer is used to predict heat transfer from the flame to the product.

For flash calciners, both techniques can be used together with CFD modeling of the particle trajectories and residence times. The major benefits are reduced costs and increased profits for the kiln operator with reduced environmental impact. The former is attributable to reduced fuel consumption, improved refractory life, and shorter downtime, with potentially greater sales resulting from longer production runs and improved product quality. The reduced emissions are the result of reduced flue gas volumes and less unburned fuel.

GE Energy

8800 East 63rd Street
Kansas City, Missouri 64133
USA

T 800 821 2222
T 816 356 8400
F 816 353 1873

August 31, 2005

Florida Rock
4000 New CR 235
Newberry, Fl. 32669

Attn: Henry Gotsch
Subj: Filter Bag Efficiency

Dear : Henry

The following will confirm or conversation earlier today. The finish mill/ separator dust collector at your Newberry, Florida plant equipped with 16 oz. Duo-Density Polyester felt filter bags will meet or exceed .01 gr/dscf. This achievement is based on good maintenance, control and operating practices.

Increase in inlet grain loading does not mean an increase in outlet grain loading. When grain loading increases the efficiency of the fabric can be manipulated by changes in cleaning controls. Although efficiencies can be maintained filter bag life may suffer slightly.

Sincerely,
Andy Winston

GE ENERGY

Department of
Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

August 26, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris Horner, Plant Manager
Florida Rock Industries, Inc.
4000 NW CR 235
Newberry, Florida 32669

Re: Request for Additional Information
DEP File No. 0010087-018-AC
Finish Mill Throughput Increase

Dear Mr. Horner:

On July 29, 2005 the Department received Florida Rock Industries' (FRI) application for an air construction permit modification to allow the use of natural gas, upgrade the kiln burner, and to allow a finish mill throughput increase. The requests to use natural gas and upgrade the kiln burner are being processed in another permit (0010087-015-AC). The Department requests the additional information below regarding the finish mill throughput increase.

Pursuant to Rules 62-4.055, and 62-4.070 F.A.C., Permit Processing, the Department requests submittal of the additional information prior to processing the application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Some amount of limestone will now be transported from the quarry to a silo in the gypsum storage area. The limestone, reportedly, will be "wet" coming from the quarry and FRI has assumed no added emissions of unconfined particulates associated with this activity. Estimate the amount of limestone to be transported and stored in the gypsum silo, and estimate the number of trucks needed for the movement of the limestone. Will there be appreciable amounts of fugitive dust as a result of the additional truck traffic and handling of the limestone? Describe in more detail the process by which the limestone will be transferred from the trucks to the gypsum silo. Describe how the existing gypsum silos will handle the "wet" limestone. Please provide diagrams of this process.

Describe the change to the cement produced by FRI and explain why it is easier to grind.

According to the application, emissions from the finish mill will not increase as a result of the finish mill throughput increase. It seems logical that if there is no overall increase in clinker or cement production that, on an annual basis, no increase in PM emissions would result with an increase in throughput to the finish mill. However, PM emissions from the

finish mill are estimated based on an emission factor (0.01 gr/dscf) and the flow through the system (dscfm). Assuming that this emission factor is related to the maximum loading on the baghouse, it would seem that the emission factor may require adjustment with an increase in maximum throughput. Please explain the method of selection of this emission factor. Explain why the emission factor should remain unchanged with an increase in throughput and possible change in maximum loading to the baghouse.

We will forward any comments received from other agencies as soon as we receive them. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call Cindy Mulkey at 850/921-8968.

Sincerely,

A.A. Linero 8/26

A.A. Linero, Program Administrator
Bureau of Air Regulation
New Source Review Section

AAL/cm

cc: Henry Gotsch, FRI
Chris Kirts, DEP NED
William Proses, Koogler and Associates
Chair, Alachua County Commission

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Newberry, Florida 32669

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery AUG 31 2005

D. Is delivery address different from item 1? ☐ No
If YES, enter delivery address below:

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7001 0320 0001 3692 2336

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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**CERTIFIED MAIL RECEIPT**
*(Domestic Mail Only; No Insurance Coverage Provided)*

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Postmark Here

7001 0320 0001 3692 2336

Mr. Chris Horner
Florida Rock Industries, Inc.
4000 NW CR 235
Newberry, Florida 32669

PS Form 3800, January 2001 See Reverse for Instructions

**FLORIDA ROCK INDUSTRIES INC**
CEMENT GROUP / 4000 N.W. CR 235 / P.O. Box 459 / Newberry, FL 32669 / (352) 472-4722

July 28, 2005

Ms. Cindy Mulkey
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400



RE: Application for construction-modification permit to allow use of natural gas, upgrade of burner, and finish-mill throughput increase.
Facility 0010087, Permit no. 0010087-009-AV
Florida Rock Industries, Inc.—Thompson S. Baker Cement Plant

Dear Ms. Mulkey:

Florida Rock Industries, Inc., is submitting an application for construction-modification permit to allow use of natural gas, upgrade of burner, and finish-mill throughput increase.

Thank you for your consideration of this application. If you have any questions, please call me at (352) 472-4722, ext. 121.

Sincerely,
FLORIDA ROCK INDUSTRIES, INC.

Henry Gotsch

Henry Gotsch
Environmental Manager

cc: Chris Kirts, NEP

# Department of Environmental Protection

## Division of Air Resource Management

RECEIVED
JUL 29 2005
BUREAU OF AIR REGULATION

## 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: **Florida Rock Industries, Inc.** | |
| 2. Site Name: **Thompson S. Baker Cement Plant - Newberry** | |
| 3. Facility Identification Number: **0010087** | |
| 4. Facility Location...<br>Street Address or Other Locator: **4000 NW County Road 235**<br>City: **Newberry** County: **Alachua** Zip Code: **32699** | |
| 5. Relocatable Facility?<br>☐ Yes ☒ No | 6. Existing Title V Permitted Facility?<br>☒ Yes ☐ No |

**Application Contact**

| |
|---|
| 1. Application Contact Name: **William A. Proses, P.E.** |
| 2. Application Contact Mailing Address...<br>Organization/Firm: **Koogler and Associates, Inc.**<br>Street Address: **4014 NW 13th Street**<br>City: **Gainesville** State: **FL** Zip Code: **32609** |
| 3. Application Contact Telephone Numbers...<br>Telephone: **( 352 ) 317 - 1030** ext. Fax: **( 813 ) 920 - 9539** |
| 4. Application Contact Email Address: |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | 7-29-05 |
| 2. Project Number(s): | 0010087-018-AC |
| 3. PSD Number (if applicable): | |

**APPLICATION INFORMATION**

| | |
|---|---|
| 4. Siting Number (if applicable): | |

## APPLICATION INFORMATION

### Purpose of Application

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

**Air Construction Permit**

[X] 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 Air Construction permit is to expand the selection of fuels to include natural gas, to be fired in the existing Raw Mill Air Heater and Cement Kiln, and to change the kiln burner from the current Polysius model to a Unitherm Mono Airduct System (MAS) rotary kiln burner.**

**This application also requests an increase in Finish Mill throughput to 150 tph from the current limit of 136 tph.**

## APPLICATION INFORMATION

**Scope of Application**

| Emissions Unit ID Number | Description of Emissions Unit | Air Permit Type | Air Permit Proc. Fee |
|---|---|---|---|
| 002 | Raw Mill System | AV | 0 |
| 003 | Kiln System | AV | 0 |
| 005 | Finish Grinding Operation | AV | 0 |
| | No processing fee required. Reference SIP 62-4.050(4)2. | | |
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**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 : **Chris Horner, Plant Manager**

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Florida Rock Industries, Inc. - Thompson S. Baker Cement Plant**
   Street Address: **4000 NW CR 235**
   City: **Newberry** State: **FL** Zip Code: **32669**

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(352) 472 - ~~4277~~ 4722** ext. **130** Fax: **(352 ) 472 - 2449**

4. Owner/Authorized Representative Email Address: **chrish@flarock.com**

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 7/28/05 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: **William A. Proses, P.E.**
   Registration Number: **52080**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Koogler and Associates, Inc.**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **FL** Zip Code: **32609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 317 - 1030** ext. Fax: **(813) 920 - 9539**
4. Professional Engineer Email Address: **wproses@kooglerassociates.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.*

William A. Proses — 7/27/05

Signature — Date

(seal)

* Attach any exception to certification statement.

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

| | | | |
|---|---|---|---|
| 1. Facility UTM Coordinates...<br>Zone **17** East (km) **346.9**<br>North (km) **3,285.0** | | 2. Facility Latitude/Longitude...<br>Latitude (DD/MM/SS) **29/41/27**<br>Longitude (DD/MM/SS) **82/34/57** | |
| 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 : **None** | | | |

**Facility Contact**

| |
|---|
| 1. Facility Contact Name: **O. Henry Gotsch, P.E.** |
| 2. Facility Contact Mailing Address...<br>Organization/Firm: **Florida Rock Industries, Inc.**<br>Street Address: **4000 NW CR 235**<br>City: **Newberry** State: **FL** Zip Code: **32669** |
| 3. Facility Contact Telephone Numbers:<br>Telephone: **(352) 472 - 4722** ext. Fax: **(352) 472 - 2449** |
| 4. Facility Contact Email Address: **hgotsch@flarock.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...<br>Organization/Firm:<br>Street Address:<br>City: State: Zip Code: |
| 3. Facility Primary Responsible Official Telephone Numbers...<br>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:

NESAP Subpart LLL: National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry

NSPS Subpart F: Standards of Performance for Portland Cement Plants

NSPS Subpart Y: Standards of Performance for Coal Preparation Plants

NSPS Subpart OOO: Standards of Performance for Non-Mineral Processing Plants

**FACILITY INFORMATION**

**List of Pollutants Emitted by Facility**

| 1. Pollutant Emitted | 2. Pollutant Classification | 3. Emissions Cap [Y or N]? |
|---|---|---|
| **PM** | **A** | **N** |
| **PM10** | **A** | **N** |
| **$SO_2$** | **B** | **N** |
| **NOx** | **A** | **N** |
| **CO** | **A** | **N** |
| **VOC** | **B** | **N** |
| **SAM** | **B** | **N** |
| **DIOX** | **B** | **N** |
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## B. EMISSIONS CAPS N/A

**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 No.s Under Cap (if not all units) | 4. Hourly Cap (lb/hr) | 5. Annual Cap (ton/yr) | 6. Basis for Emissions Cap |
|---|---|---|---|---|---|
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| | | | | | |

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
**NONE**

## 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:_____ [x] Previously Submitted, Date: (1)
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:_____ [x] Previously Submitted, Date: (1)
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:_____ [x] Previously Submitted, Date: (1)

**Additional Requirements for Air Construction Permit Applications**

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

**FACILITY INFORMATION**

**Additional Requirements for FESOP Applications NA**

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 NA**

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**

**(1) Submitted with previous applications**

## 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.

## 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.)

   [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.

**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. Description of Emissions Unit Addressed in this Section: **Raw Mill System**

3. Emissions Unit Identification Number: **002**

| 4. Emissions Unit Status Code: **A** | 5. Commence Construction Date: **N/A** | 6. Initial Startup Date: **11/20/99** | 7. Emissions Unit Major Group SIC Code: **32** | 8. Acid Rain Unit? [ ] Yes [X] No |
|---|---|---|---|---|

9. Package Unit:
   Manufacturer: **N/A** Model Number:

10. Generator Nameplate Rating: MW

Emissions Unit Comment: **Emission unit is limited operation under authority of permit 0010087-009-AV. Natural gas will be added to the fuels to be burned in the Raw Mill Air Heater at a maximum rate of 0.039 MCF per hour and 341.6 MCF natural gas per year.**

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:
**Fabric Filters - High Temperature**
**Fabric Filters - Medium Temperature**

2. Control Device or Method Code(s): **016, 017**

## B. EMISSIONS UNIT CAPACITY INFORMATION

**(Optional for unregulated emissions units.)**

**Emissions Unit Operating Capacity and Schedule**

| | |
|---|---|
| 1. Maximum Process or Throughput Rate: **212 TPH** | |
| 2. Maximum Production Rate: **N/A** | |
| 3. Maximum Heat Input Rate: **40** million Btu/hr | |
| 4. Maximum Incineration Rate: pounds/hr **N/A**<br>tons/day | |
| 5. Requested Maximum Operating Schedule:<br>hours/day **24** | days/week **7** |
| weeks/year **52** | hours/year **8760** |
| 6. Operating Capacity/Schedule Comment:<br>**None** | |

## 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: **E-28, E-29, G-07, H-08** | 2. Emission Point Type Code: **3** | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **E-28: Recycle Dust and Raw Material to Homogenization Silo** **E-29: Recycle Dust Airlift** **G-07: Recycle Dust and Raw Meal to Homogenization Silo** **H-08: Raw Meal and Recycle Dust to Preheater** | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Raw Mill and Air Heater discharge through E-21 of EU 003** | | |
| 5. Discharge Type Code: **V** | 6. Stack Height: **225** feet | 7. Exit Diameter: **2.2** feet |
| 8. Exit Temperature: **200** °F | 9. Actual Volumetric Flow Rate: **15,000** acfm | 10. Water Vapor: **2** % |
| 11. Maximum Dry Standard Flow Rate: **11,800** dscfm | 12. Nonstack Emission Point Height: **N/A** 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: **G-07 is representative emission point with grearest emission rate.** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION

**Segment Description and Rate:** Segment **1** of **3**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **Mineral Products : Cement Manufacturing - Dry Process : Raw Material Grinding** | | |
| 2. Source Classification Code (SCC): **3-05-006-13** | 3. SCC Units: **Tons Processed** | |
| 4. Maximum Hourly Rate: **212** | 5. Maximum Annual Rate: **1,857,120** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **N/A** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **N/A** |
| 10. Segment Comment: **None** | | |

**Segment Description and Rate:** Segment **2** of **3**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **In-Process Fuel Use : Distilate Oil : General** | | |
| 2. Source Classification Code (SCC): **3-90-005-89** | 3. SCC Units: **1000 Gallons Burned** | |
| 4. Maximum Hourly Rate: **0.28** | 5. Maximum Annual Rate: **2486** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **0.05** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **141** |
| 10. Segment Comment: **None** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION

**Segment Description and Rate:** Segment 3 of 3

| 1. Segment Description (Process/Fuel Type):<br>**In-Process Fuel Use : Natural Gas : General** | | |
|---|---|---|
| 2. Source Classification Code (SCC):<br>**3-05-006-02** | 3. SCC Units: **Million Cubic Feet Processed** | |
| 4. Maximum Hourly Rate:<br>**0.039** | 5. Maximum Annual Rate:<br>**341.64** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur:<br>**N/A** | 8. Maximum % Ash:<br>**N/A** | 9. Million Btu per SCC Unit:<br>**1025** |
| 10. Segment Comment:<br>**None** | | |

**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/PM10** | **017** | **None** | **EL** |
| **SO2** | **None** | **None** | **EL** |
| **NOX** | **None** | **None** | **EL** |
| **CO** | **None** | **None** | **EL** |
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## 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: **99%** |
| 3. Potential Emissions: **2.29** lb/hour **10.0** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.01 gr/dscf** Reference: Permit No. **BACT** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **0.01 gr/dscf x 26680 dscfm x 60 min/hr x 1 lb/7,000 gr = 2.29 lb/hr @ 8,760 hours/year = 10.0 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.01 gr/dscf** | 4. Equivalent Allowable Emissions: **2.29** lb/hour **10.0** tons/year |
| 5. Method of Compliance: **Method 5** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **62-212.400, FAC** | |

## 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: **SO2** | 2. Total Percent Efficiency of Control: **NA** |
| 3. Potential Emissions: **2.16** lb/hour **9.44** tons/year | 4. Synthetically Limited? ☐ Yes [x] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.05 % S** Reference: Permit No. **BACT** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **0.05 % S x 280 gal/hr X 7.7 lb/gal x 2 SO2/S = 2.16 lb/hr @8760 hr/yr = 9.44 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.05 % S** | 4. Equivalent Allowable Emissions: **2.16** lb/hour **9.44** tons/year |
| 5. Method of Compliance: **Fuel Certification by Supplier** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **62-212.400, FAC** | |

## 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: **NOx** | 2. Total Percent Efficiency of Control: **NA** |
| 3. Potential Emissions: **5.60** lb/hour **24.5** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **20 lb/1000 gal** Reference: Permit No. **AP-42 Table 1.3-1** | 7. Emissions Method Code: **4** |
| 8. Calculation of Emissions: **20 lb./1000 gal x 280 gal/hr = 5.60 lb/hr @ 8,760 hours/year = 24.5 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **20 lb/1000 gal** | 4. Equivalent Allowable Emissions: **5.60** lb/hour **24.5** tons/year |
| 5. Method of Compliance: **CEM - See EU 003** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **62-212.400, FAC** | |

## 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: **NA** |
| 3. Potential Emissions: **1.40** lb/hour **6.1** tons/year | 4. Synthetically Limited? ☐ Yes [x] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **5 lb/1000 gal** Reference: Permit No. **AP-42 Table 1.3-1** | 7. Emissions Method Code: **4** |
| 8. Calculation of Emissions: **5 lb/1000 gal x 280 gal/hr = 1.40 lb/hr @ 8,760 hours/year = 6.1 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **5 lb/1000 gal** | 4. Equivalent Allowable Emissions: **1.40** lb/hour **6.1** tons/year |
| 5. Method of Compliance: **Method 10** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **62-212.400, FAC** | |

## 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: **VE05** | 2. Basis for Allowable Opacity: [x] Rule [ ] Other |
| 3. Allowable Opacity:<br>Normal Conditions: **5 %** Exceptional Conditions: **5 %**<br>Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: **Method 9** | |
| 5. Visible Emissions Comment: **62-212.400, FAC**<br>**Baghouses** | |

**Visible Emissions Limitation:** Visible Emissions Limitation _ of _

| | |
|---|---|
| 1. Visible Emissions Subtype: | 2. Basis for Allowable Opacity: [ ] Rule [ ] Other |
| 3. Allowable Opacity:<br>Normal Conditions: Exceptional Conditions:<br>Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: | |
| Visible Emissions Comment: | |

## H. CONTINUOUS MONITOR INFORMATION NA

***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...<br>Manufacturer:<br>Model Number: | Serial Number: |
| 5. Installation Date: | 6. Performance Specification Test Date: |
| 6. Continuous Monitor Comment: | |

**EMISSIONS UNIT INFORMATION**
**Section [1] of [3]**

## 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:_____ ☒ Previously Submitted, Date (1)

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: 4_____ ☐ 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: _____ ☒ Previously Submitted, Date (1)

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 (1)
   ☐ 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 (1)
   ☐ 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: **Will be submitted in accordance with Rule 62-297, FAC**
   _____
   ☐ 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: _____ [x] Not Applicable

**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** **NA**

1. Identification of Applicable Requirements
   ☐ Attached, Document ID:_____
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 [2] of [3]**

## 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.)

   [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.

**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. Description of Emissions Unit Addressed in this Section: **Kiln System**

3. Emissions Unit Identification Number: **003**

| 4. Emissions Unit Status Code: **A** | 5. Commence Construction Date: **N/A** | 6. Initial Startup Date: **1/1/00** | 7. Emissions Unit Major Group SIC Code: **32** | 8. Acid Rain Unit? [ ] Yes [x] No |
|---|---|---|---|---|

9. Package Unit:
   Manufacturer: **N/A** Model Number:

10. Generator Nameplate Rating: MW

Emissions Unit Comment: **Natural gas will be added to the fuels to be burned in the kiln and allow use of a Unitherm Mono Airduct System (MAS) rotary kiln burner, with the current Polysius model as an approved replacement. The maximum usage rate of natural gas shall not exceed 0.36 MCF per hour and 400 MCF per year.**

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description: **Electrostatic Precipitator - High Efficiency**

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

## B. EMISSIONS UNIT CAPACITY INFORMATION

**(Optional for unregulated emissions units.)**

**Emissions Unit Operating Capacity and Schedule**

| |
|---|
| 1. Maximum Process or Throughput Rate: **191.4 TPH Preheater Dry Feed (peak hourly rate)** |
| 2. Maximum Production Rate: **115.0 TPH Clinker Production (peak hourly rate)** |
| 3. Maximum Heat Input Rate: million Btu/hr **364 mmBtu/hr** |
| 4. Maximum Incineration Rate: pounds/hr **N/A**<br>tons/day |
| 5. Requested Maximum Operating Schedule:<br>hours/day **24** days/week **7**<br>weeks/year **52** hours/year **8760** |
| 7. Operating Capacity/Schedule Comment:<br>Clinker Production: **115.0 TPH (peak hourly), 110.2 TPH (24-hour rolling average), 2650 TPD, 800,000 TPY**<br><br>**Preheater Feed: 191.4 TPH (peak hourly), 183.4 TPH (24-hour rolling average), 1,331,000 TPY** |

## 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: **E-21** | 2. Emission Point Type Code: **1** | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **E-21: Main Stack** | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **EU 002: Raw Mill and 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: **225,000** acfm | 10. Water Vapor: **15** % |
| 11. Maximum Dry Standard Flow Rate: **150,000** dscfm | 12. Nonstack Emission Point Height: **N/A** 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: **Fields 8-12 are with kiln and raw mill operating ; normal conditions.** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION

**Segment Description and Rate:** Segment 1 of 6

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **Mineral Products : Cement Manufacturing - Dry Process : Preheater/Precalciner Kiln** | | |
| 2. Source Classification Code (SCC): **3-05-006-23** | 3. SCC Units: **Tons Processes** | |
| 4. Maximum Hourly Rate: **191.4** | 5. Maximum Annual Rate: **1,331,000** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **N/A** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **N/A** |
| 10. Segment Comment: **Preheater feed rate: Peak hourly rate and annual rate** | | |

**Segment Description and Rate:** Segment 2 of 6

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **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: **N/A** |
| 7. Maximum % Sulfur: **N/A** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **N/A** |
| 10. Segment Comment: **Clinker production rate: Peak hourly rate and annual rate** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

**Segment Description and Rate:** Segment 3 of 6

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **In-process Fuel Use : Distillate Oil : Cement Kiln** | | |
| 2. Source Classification Code (SCC): **3-90-005-02** | 3. SCC Units: **1,000 Gallons Burned** | |
| 4. Maximum Hourly Rate: **0** | 5. Maximum Annual Rate: **0** | 6. Estimated Annual Activity Factor: **125** |
| 7. Maximum % Sulfur: **.05** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **141** |
| 10. Segment Comment: **No change requested in this application.** | | |

**Segment Description and Rate:** Segment 4 of 6

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **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: **122,640** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **1.75** | 8. Maximum % Ash: **10** | 9. Million Btu per SCC Unit: **26** |
| 10. Segment Comment: **Maximum sulfur of 1,75% requested in earlier application submitted May 2005** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

**Segment Description and Rate:** Segment **5** of **6**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **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: **36,792** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **N/A** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **26** |
| 10. Segment Comment: **No change requested in this application.** | | |

**Segment Description and Rate:** Segment **6** of **6**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **In-process Fuel Use : Natural Gas** | | |
| 2. Source Classification Code (SCC): **3-05-006-02** | 3. SCC Units: **Million Cubic Feet Processed** | |
| 4. Maximum Hourly Rate: **0.36** | 5. Maximum Annual Rate: **400** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: **1025** |
| 10. Segment Comment: **Additional fuel option.** | | |

## 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** | **010** | **None** | **EL** |
| **PM10** | **010** | **None** | **EL** |
| **$SO_2$** | **None** | **None** | **EL** |
| **NOx** | **None** | **None** | **EL** |
| **CO** | **None** | **None** | **EL** |
| **VOC** | **None** | **None** | **EL** |
| **SAM** | **None** | **None** | **EL** |
| **DIOX** | **None** | **None** | **EL** |
| | | | |
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## 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: **99%** |
| 3. Potential Emissions: **25.9** lb/hour **94** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.14 lb/ton dry feed**<br>Reference: Permit No. **0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions:<br>**0.14 lb/ton x 183.4 tons/hr = 25.9 lb/hr**<br>**0.14 lb/ton x 1,331,000 tons/yr x 1.0 ton/2000 lb = 94 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.14 lb/ton dry feed** | 4. Equivalent Allowable Emissions: **25.9** lb/hour **94** tons/year |
| 5. Method of Compliance: **Method 5** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **None** | |

## 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: **PM10** | 2. Total Percent Efficiency of Control: **99%** |
| 3. Potential Emissions: **22.1** lb/hour **80** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.20 lb/ton clinker** Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **0.20 lb/ton x 110.2 tons/hr = 22.1 lb/hr** **0.20 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 80 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.20 lb/ton clinker** | 4. Equivalent Allowable Emissions: **22.1** lb/hour **80** tons/year |
| 5. Method of Compliance: **Method 5 for total PM** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **None** | |

## 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: **N/A** |
| 3. Potential Emissions: **17.7** lb/hour **64** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.16 lb/ton clinker**<br>Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions:<br>**0.16 lb/ton x 110.2 tons/hr = 17.7 lb/hr**<br>**0.16 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 64 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.16 lb/ton clinker** | 4. Equivalent Allowable Emissions: **17.7** lb/hour **64** tons/year |
| 5. Method of Compliance: **CEM** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **Hourly emission limit is 24-hour rolling average.** | |

## 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: **NOx** | 2. Total Percent Efficiency of Control: **N/A** |
| 3. Potential Emissions: **271** lb/hour **980** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **2.45 lb/ton clinker**<br>Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions:<br>**2.45 lb/ton x 110.2 tons/hr = 271 lb/hr**<br>**2.45 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 980 tons/year**<br><br>**Unitherm's proposal, Attachment 5, includes a guarantee that the NOx emissions by the MAS burner will not exceed the present measured NOx emission level.** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **2.45 lb/ton clinker** | 4. Equivalent Allowable Emissions: **271** lb/hour **980** tons/year |
| 5. Method of Compliance: **CEM** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **Hourly emission limit is 24-hour rolling average.** | |

## 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: **N/A** |
| 3. Potential Emissions: **276** lb/hour **1,000** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **2.50 lb/ton clinker**<br>Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions:<br>**2.50 lb/ton x 110.2 tons/hr = 276 lb/hr**<br>**2.50 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 1,000 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **2.50 lb/ton clinker** | 4. Equivalent Allowable Emissions: **276** lb/hour **1,000** tons/year |
| 5. Method of Compliance: **Method 10** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **None** | |

## 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: **N/A** |
| 3. Potential Emissions: **11.8** lb/hour **43** tons/year | 4. Synthetically Limited? ☐ Yes [x] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.11 lb/ton Clinker** Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **0.11 lb/ton x 110.2 tons/hr = 11.8 lb/hr** **0.11 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 43 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.11 lb/ton clinker** | 4. Equivalent Allowable Emissions: **11.8** lb/hour **43** tons/year |
| 5, Method of Compliance: **Method 25/25A (CEM for reasonable assurance only)** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **None** | |

## 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: **N/A** |
| 3. Potential Emissions: **0.25** lb/hour **1** tons/year | 4. Synthetically Limited? ☐ Yes ☒ No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.0025 lb/ton Clinker**<br>Reference: **Permit No. 0010087-006-AC** | 7. Emissions Method Code: **3** |
| 8. Calculation of Emissions:<br>**0.0025 lb/ton x 110.2 tons/hr = 0.25 lb/hr**<br>**0.0025 lb/ton x 800,00 tons/yr x 1.0 ton/2000 lb = 1 ton/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.0025 lb/ton Clinker** | 4. Equivalent Allowable Emissions: **0.25** lb/hour **1** tons/year |
| 5, Method of Compliance: **Method 8** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **None** | |

## 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: **N/A** |
| 3. Potential Emissions: **0.00000014** lb/hour **0.0000006** tons/year | 4. Synthetically Limited? ☐ Yes [x] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **1.7 x $10^{-10}$ gr/dscf TEQ at 7% $O_2$** Reference: **40CFR 63.1343(b)(3)** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **1.7 x $10^{-10}$ gr/dscf x 150,000 dscfm x (20.9 - 12.0)/920.9 -7.0) x 60mon/hour x 1.0 lb/7,000 gr = 0.00000014 lb/hour**<br><br>**@8760 hours/yr = 0.0000006 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. 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: **Method 23** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **NESHAP Subpart LLL** | |

## 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: [x] Rule [ ] Other |
| 3. Allowable Opacity: Normal Conditions: **10 %** Exceptional Conditions: **10 %** Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: **Method 9** | |
| 5. Visible Emissions Comment: **BACT** | |

**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 **5**

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

**Continuous Monitoring System:** Continuous Monitor **2** of **5**

| | |
|---|---|
| 1. Parameter Code: **EM** | 2. Pollutant(s): **$SO_2$, NOx** |
| 3. CMS Requirement: | [x] Rule [ ] Other |
| 4. Monitor Information...<br>Manufacturer: **Sick AG Environmental Monitoring**<br>Model Number: **GM31-3** Serial Number: **8040 8002** | |
| 5. Installation Date: **12/2000** | 6. Performance Specification Test Date: **1/17/2001** |
| 8. Continuous Monitor Comment: **62-212.400, FAC**<br>**CEMS was recertified in July 2001** | |

## H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

**Continuous Monitoring System:** Continuous Monitor 3 of 5

| | |
|---|---|
| 1. Parameter Code: **EM** | 2. Pollutant(s): **THC** |
| 3. CMS Requirement: | ☐ Rule ☒ Other |
| 4. Monitor Information...<br>Manufacturer: **Bernath Atomic GmbH & Co.**<br>Model Number: **EuroFID Model 3010** Serial Number: **4387** | |
| 5. Installation Date: | 6. Performance Specification Test Date: **7/30/2001** |
| 7. Continuous Monitor Comment: **Reasonable Assurance only.** | |

**Continuous Monitoring System:** Continuous Monitor 4 of 5

| | |
|---|---|
| 1. Parameter Code: **TEMP** | 2. Pollutant(s): **N/A** |
| 3. CMS Requirement: | ☒ Rule ☐ Other |
| 4. Monitor Information...<br>Manufacturer: : **Sick AG Environmental Monitoring**<br>Model Number: **GM31-3** Serial Number: **8040 8002** | |
| 5. Installation Date: **12/2000** | 6. Performance Specification Test Date: **1/2001** |
| 7. Continuous Monitor Comment: **NESHAP Subpart LLL** | |

## H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

**Continuous Monitoring System:** Continuous Monitor **5** of **5**

| | |
|---|---|
| 1. Parameter Code: **Flow** | 2. Pollutant(s): **N/A** |
| 3. CMS Requirement: | ☐ Rule ☒ Other |
| 4. Monitor Information...<br>Manufacturer: **Sick AG Environmental Monitoring**<br>Model Number: **FLSE160-350** Serial Number: **7042096** | |
| 5. Installation Date: | 6. Performance Specification Test Date: **7/20/2000** |
| 7. Continuous Monitor Comment: **None** | |

## 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:_____ ☒ Previously Submitted, Date **(1)**

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: **4** ☐ 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: _____ ☒ Previously Submitted, Date **(1)**

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 **(1)**
   ☐ 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 **(1)**
   ☐ 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: **Will be submitted in accordance with Rule 62-297, FAC**
   ☐ 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: _____ [x] Not Applicable

**EMISSIONS UNIT INFORMATION**
**Section [2] of [3]**

**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** NA

1. Identification of Applicable Requirements
   ☐ Attached, Document ID:_____
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**

| |
|---|
| **None.** |

## 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.)

   [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.

**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. Description of Emissions Unit Addressed in this Section: **Finish Grinding Operations**

3. Emissions Unit Identification Number: **005**

| 4. Emissions Unit Status Code: **A** | 5. Commence Construction Date: **N/A** | 6. Initial Startup Date: **12/9/99** | 7. Emissions Unit Major Group SIC Code: **32** | 8. Acid Rain Unit? [ ] Yes [x] No |
|---|---|---|---|---|

9. Package Unit:
   Manufacturer: **N/A** Model Number:

10. Generator Nameplate Rating: MW

Emissions Unit Comment: **This application requests an increase in finish mill throughput to 150 tph from the current limit of 136 tph.**

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:
   **Fabric Filters - Medium Temperature**
   **Fabric Filters - Low Temperature**

2. Control Device or Method Code(s): **017, 018**

## B. EMISSIONS UNIT CAPACITY INFORMATION

**(Optional for unregulated emissions units.)**

**Emissions Unit Operating Capacity and Schedule**

| | |
|---|---|
| 1. Maximum Process or Throughput Rate: **NA** | |
| 2. Maximum Production Rate: **150 TPH** | |
| 3. Maximum Heat Input Rate: million Btu/hr **NA** | |
| 4. Maximum Incineration Rate: pounds/hr **N/A**<br>tons/day | |
| 5. Requested Maximum Operating Schedule:<br>hours/day **24**<br>weeks/year **52** | <br>days/week **7**<br>hours/year **8760** |

8. Operating Capacity/Schedule Comment:

**The finish mill throughput can be increased because the type of Portland cement produced by FRI has changed and is therefore easier to grind, which allows throughput to increase by 10%. No production equipment or control devices are changed or affected. Emissions from the finish mill will not increase nor exceed BACT limit.**

## 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: **M-07, M-08, N-09, N-12, N-14, Q-25, Q26, Q-27** | 2. Emission Point Type Code: **3** | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **M-07: Clinker to finish mill** **M-08: Clinker to finish mill** **N-09: Finish mill separator** **N-12: Finish mill** **N-14: Cement handling in finish mill** **Q-25, Q26, Q-27: Cement Storage silos** | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA** | | |
| 5. Discharge Type Code: **V** | 6. Stack Height: **123** feet | 7. Exit Diameter: **3.1** feet |
| 8. Exit Temperature: **210** °F | 9. Actual Volumetric Flow Rate: **30,000** acfm | 10. Water Vapor: **2** % |
| 11. Maximum Dry Standard Flow Rate: **23,200** dscfm | 12. Nonstack Emission Point Height: **N/A** 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: **N-12 is representitive emission point with greatest emission rate.** | | |

## 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 : Finish Grinding Mill** | | |
| 2. Source Classification Code (SCC): **3-05-006-17** | 3. SCC Units: **Tons Processes** | |
| 4. Maximum Hourly Rate: **150** | 5. Maximum Annual Rate: **1,314,000** | 6. Estimated Annual Activity Factor: **N/A** |
| 7. Maximum % Sulfur: **N/A** | 8. Maximum % Ash: **N/A** | 9. Million Btu per SCC Unit: **N/A** |
| 10. Segment Comment: **None** | | |

**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** | **017, 018** | **None** | **EL** |
| **PM10** | **017, 018** | **None** | **EL** |
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## 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: **99%** |
| 3. Potential Emissions: **6.2** lb/hour **27.2** tons/year | 4. Synthetically Limited? ☐ Yes [x] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **N/A** to tons/year | |
| 6. Emission Factor: **0.01 gr/dscf** Reference: Permit No. **BACT** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **0.01 gr/dscf x 72293 dscfm x 60 min/hr x 1 lb/7000 gr = 6.20 lb/hr** **6.20 lb/hr x 8760 hr/year / 2000 lb/ton = 27.2 tons/year** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: **None** | |

## 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: **N/A** |
| 3. Allowable Emissions and Units: **0.01 gr/dscf** | 4. Equivalent Allowable Emissions: **6.20** lb/hour **27.2** tons/year |
| 5. Method of Compliance: **Method 5** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **62-214.400, FAC** | |

## 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: **VE05** | 2. Basis for Allowable Opacity: [x] Rule [ ] Other |
| 3. Allowable Opacity: Normal Conditions: **5 %** Exceptional Conditions: **5 %** Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: **Method 9** | |
| 5. Visible Emissions Comment: **62-212.400, FAC Baghouses** | |

**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 NA

**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): **Opacity** |
| 3. CMS Requirement: | ☐ Rule ☐ Other |
| 4. Monitor Information... Manufacturer: Model Number: | Serial Number: |
| 5. Installation Date: | 6. Performance Specification Test Date: |
| 9. 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: |
| Continuous Monitor Comment: | |

**EMISSIONS UNIT INFORMATION**
**Section [3] of [3]**

## 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:_____ ☒ Previously Submitted, Date **(1)**

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: **4** ☐ 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: _____ ☒ Previously Submitted, Date **(1)**

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 **(1)**
   ☐ 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 **(1)**
   ☐ 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: **Will be submitted in accordance with Rule 62-297, FAC**
   ☐ 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<br>☐ Attached, Document ID: _____ ☒ Not Applicable |
|---|

**EMISSIONS UNIT INFORMATION**
**Section [3] of [3]**

**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 NA**

1. Identification of Applicable Requirements
   ☐ Attached, Document ID:_____
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**

| |
|---|
| **None.** |

Attachment 1

Description of Proposed Construction or Modification

Florida Rock Industries, Inc. (FRI) will add natural gas as a fuel for firing the Raw Mill Air Heater and Cement Kiln at their Thompson S. Baker Cement Plant in Newberry, Florida. FRI will also replace the current Polysius burner with a Unitherm Mono Airduct System (MAS) rotary kiln burner. Unitherm has stated that they will include in their performance guarantee that the current level of NOx will not be exceeded.

The Raw Mill Air Heater (EU 002) is addressed in the present Title V permit 0010087-009-AV and provides emission limits for VE, PM, and Sulfur content of the fuel oil being fired. The permit application for the Title V permit addressed NOx referencing AP-42 Table 1.3-1 (Boilers < 100mmBTU/hr), an emission factor 20 lb per 1,000 gallons of fuel oil.

20 lb NOx / 1000gal fuel oil x 280 gal/hr = 5.60 lb NOx/hour
5.60 lb NOx/hour x 8760 hours/year x ton/2000lb = 24.5 tons NOx/year

Using AP-42 Table 1.4-1 (Small Boilers < 100 mmBTU/hr Uncontrolled), an emission factor of 100 lb/$10^6$ scf and a emission factor rating of B (1.2) resulting in 120 lb/$10^6$ scf.

120 lb NOx/$10^6$ scf x 0.039 $10^6$ scf/hr = 4.68 NOx lb/hr
4.68 NOx lb/hr x 8760 hours/year x 1.0 ton/2000lb = 20.5 tons NOx/year

Four tons per year less NOx. The permit does not state a NOx limit.

The Kiln System (EU 003) is addressed in the present Title V permit 0010087-009-AV and provides emission limits for Hg, VE, PM/$PM_{10}$, $SO_2$, NOx, CO, VOC, SAM, and D/F. The NOx limitation of 2.45 pounds per ton of clinker, 271 lb/hr (30 day rolling average) and 980 tons per year references Permit No. 0010087-006-AC (PSD-FL-228C). Unitherm's proposal, Attachment 5, includes a guarantee that the NOx emissions by the MAS burner will not exceed the present measured NOx emission level.

In addition the finish mill throughput will be increased to 150 tph from current limit of 136 tph.

The finish mill throughput can be increased because the type of Portland cement produced by FRI has changed and is therefore easier to grind, which allows throughput to increase by 10%. No production equipment or control devices are changed or affected. Emissions from the finish mill will not increase nor exceed BACT limit.

Attachment 2

Rule Applicability Analysis

FRI's Cement Plant directly emits more than 100 tons per year (TPY) of several regulated air pollutants and is, therefore, classified as a "Major Source of Air Pollution or Title V Source," per the definitions in Rule 62-212.200, Florida Administrative Code (F.A.C.).

This industry is listed in Table 212.400-1, "Major Facilities Categories", Section 62-212.400, F.A.C. Therefore, stack and fugitive emissions of over 100 TPY of carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide ($SO_2$), nitrogen oxides (NOx), or particulate matter (PM/PM10) characterize the existing installation as a Major Facility per the definitions in Rule 62-210.200, F.A.C.

The facility is also subject to a number of industry regulations and permit specific conditions enumerated in the Title V Operation Permit number 001087-002-AV. Among these is designation as a major source of hazardous air pollutants (HAPs) and applicability of the major source provisions of:

| | |
|---|---|
| NESHAP Subpart LLL: | National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry |
| NSPS Subpart F: | Standard of Performance for Portland Cement Plants |
| NSPS Subpart Y: | Standard of Performance for Coal Preparation Plants |
| NSPS Subpart OOO: | Standard of Performance for Non-Mineral Processing Plants |

The applied for use of natural gas is exempt from PSD by Rule 62-212.400(2)(c)5.
(c) Alternative Fuel or Raw Material Exemption.
A modification that is to occur for any of the following reasons shall not be subject to the preconstruction review requirements of this rule:
5. Use of an alternate fuel or raw material which the facility is approved to use under any permit issued under 40 CFR 52.21 or Rule 17-2.500 (transferred) or 62-212.400, F.A.C.

Permit number 0010087-013-AC was issued under 62-212.400 with approval for firing natural gas.

Attachment 3

Fugitive Emission Identification

Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-4, TITLE V CONDITIONS Permit No. 0010087-009-AV):

*The material handling activities at the plant covered by this protocol include loading and unloading, storage and conveying of:*

- *Limestone and overburden*
- *Iron oxide source (coal ash, iron ore, or other)*
- *Gypsum*
- *Coal*

*Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:*

- All materials at the plant will be stored under roof on compacted clay or concrete.
- The plant area will be paved to limit the generation of UPM from truck and equipment traffic.
- A sweeper truck will be maintained and operated at the plant to limit dust buildup on paved surfaces.
- All materials are to be received and used with excess surface moisture.
- Water supply lines, hoses and sprinklers will be located near all material stockpiles.
- All plant equipment operators will be trained in basic environmental compliance, and will perform visual inspections of materials before handling. If the visual inspections indicate a lack of excess surface moisture, the materials will be wetted with the sprinklers. Such wetting will continue until the materials can be handled without generating UPM.
- The permittee shall "immediately collect" any spilled CKD to prevent fugitive emissions.

[Rule 62-296.320(4)(c)2., F.A.C.; and, Proposed by applicant in the initial Title V permit application received [10/01/99]

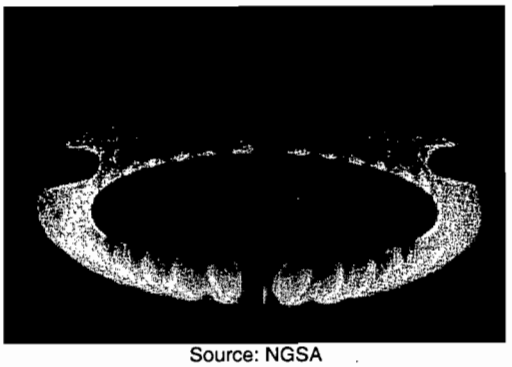
Attachment 4

Fuel Analysis or Specification

# NaturalGas.org

## Background


> Home
> Overview of Natural Gas
  > Background
  > History
  > Resources
  > Uses
> Natural Gas - From Wellhead to Burner Tip
> Business Overview
> Natural Gas Regulations
> Environment & Technology
> Focus on LNG

Source: NGSA

Natural Gas is a vital component of the world's supply of energy. It is one of the cleanest, safest, and most useful of all energy sources. Despite its importance, however, there are many misconceptions about natural gas. For instance, the word 'gas' itself has a variety of different uses, and meanings. When we fuel our car, we put 'gas' in it. However, the gasoline that goes into your vehicle, while a fossil fuel itself, is very different from natural gas. The 'gas' in the common barbecue is actually propane, which, while closely associated and commonly found in natural gas, is not really natural gas itself. While commonly grouped in with other fossil fuels and sources of energy, there are many characteristics of natural gas that make it unique. Below is a bit of background information about natural gas, what exactly it is, how it is formed, and how it is found in nature.

### What is Natural Gas?

**A Natural Gas Wellhead**
Source: Duke Energy Gas Transmission Canada

Natural gas, in itself, might be considered a very uninteresting gas - it is colorless, shapeless, and odorless in its pure form. Quite uninteresting - except that natural gas is combustible, and when burned it gives off a great deal of energy. Unlike other fossil fuels, however, natural gas is clean burning and emits lower levels of potentially harmful byproducts into the air. We require energy constantly, to heat our homes, cook our food, and generate our electricity. It is this need for energy that has elevated natural gas to such a level of importance in our society, and in our lives.

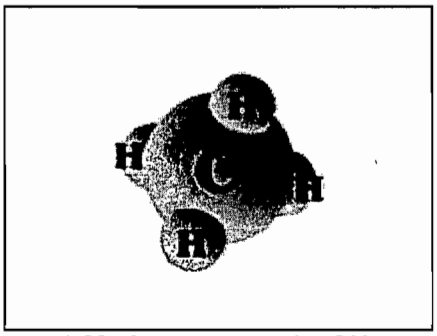
Natural gas is a combustible mixture of hydrocarbon gases. While natural gas is formed primarily of methane, it can also include ethane, propane, butane and pentane. The composition of natural gas can vary widely, but below is a chart outlining the typical makeup of natural gas before it is refined.

**Typical Composition of Natural Gas**

| | | |
|---|---|---|
| Methane | $CH_4$ | 70-90% |
| Ethane | $C_2H_6$ | |
| Propane | $C_3H_8$ | 0-20% |
| Butane | $C_4H_{10}$ | |
| Carbon Dioxide | $CO_2$ | 0-8% |
| Oxygen | $O_2$ | 0-0.2% |
| Nitrogen | $N_2$ | 0-5% |
| Hydrogen sulphide | $H_2S$ | 0-5% |
| Rare gases | A, He, Ne, Xe | trace |

In its purest form, such as the natural gas that is delivered to your home, it is almost pure methane. Methane is a molecule made up of one carbon atom and four hydrogen atoms, and is referred to as $CH_4$.

Ethane, propane, and the other hydrocarbons commonly associated with natural gas have slightly different chemical formulas, which can be seen here. For a closer look into the combustion of methane, click here.



**A Methane molecule, $CH_4$**
Source: USGS

Natural gas is considered 'dry' when it is almost pure methane, having had most of the other commonly associated hydrocarbons removed. When other hydrocarbons are present, the natural gas is 'wet'.

Natural gas has many uses, residentially, commercially, and industrially. For more information on the multiple uses of natural gas, click here. Found in reservoirs underneath the earth, natural gas is commonly associated with oil deposits. Production companies search for evidence of these reservoirs by using sophisticated technology that helps to find the location of the natural gas, and drill wells in the earth where it is likely to be found. To learn more about the new technologies and their environmental impact, click here. Once brought from underground, the natural gas is refined to remove impurities like water, other gases, sand, and other compounds. Some hydrocarbons are removed and sold separately, including propane and butane. Other impurities are also removed, like hydrogen sulfide (the refining of which can produce sulfur, which is then also sold separately). After refining, the clean natural gas is transmitted through a network of pipelines, thousands of miles of which exist in the United States alone. From these pipelines, natural gas is delivered to its point of use. For more information on how natural gas gets from underneath the ground to its final destination, click here.

Natural gas can be measured in a number of different ways. As a gas, it can be measured by the volume it takes up at normal temperatures and pressures, commonly expressed in cubic feet. Production and distribution companies commonly measure natural gas in thousands of cubic feet (Mcf), millions of cubic feet (MMcf), or trillions of cubic feet (Tcf). While measuring by volume is useful, natural gas can also be measured as a source of energy. Like other forms of energy, natural gas is commonly measured and expressed in British thermal units (Btu). One Btu is the amount of natural gas that will produce enough energy to heat one pound of water by one degree at normal pressure. To give an idea, one cubic foot of natural gas contains about 1,027 Btus. When natural gas is delivered to a residence, it is measured by the gas utility in 'therms' for billing purposes. A therm is equivalent to 100,000 Btu's, or just over 97 cubic feet, of natural gas.

**The Formation of Natural Gas**

Natural gas is a fossil fuel. Like oil and coal, this means that it is, essentially, the remains of plants and animals and microorganisms that lived millions and millions of years ago. But how do these once living organisms become an inanimate mixture of gases?

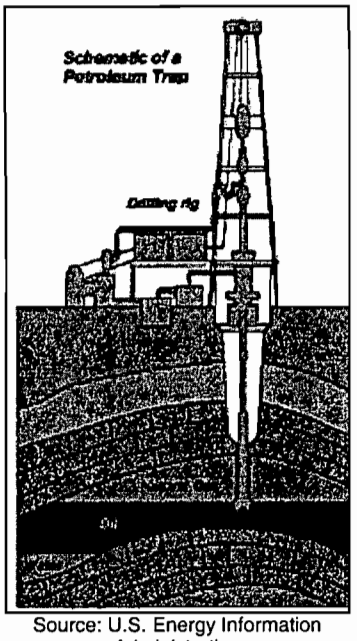
There are many different theories as to the origins of fossil fuels. The most widely accepted theory says that fossil fuels are formed when organic matter (such as the remains of a plant or animal) is compressed under the earth, at very high pressure for a very long time. This is referred to as thermogenic methane. Similar to the formation of oil, thermogenic methane is formed from organic particles that are covered in mud and other sediment. Over time, more and more sediment and mud and other debris are piled on top of the organic matter. This sediment and debris puts a great deal of pressure on the organic matter, which compresses it. This compression, combined with high temperatures found deep underneath the earth, break down the carbon bonds in the organic matter. As one gets deeper and deeper under the earths crust, the temperature gets higher and higher. At low temperatures (shallower deposits), more oil is produced relative to natural gas. At higher temperatures, however, more natural gas is created, as opposed to oil. That is why natural gas is usually associated with oil in deposits that are 1 to 2 miles below the earth's crust. Deeper deposits, very far underground, usually contain primarily natural gas, and in many cases, pure methane.

Natural gas can also be formed through the transformation of organic matter by tiny microorganisms. This type of methane is referred to as biogenic methane. Methanogens, tiny methane producing microorganisms, chemically break down organic matter to produce methane. These microorganisms are commonly found in areas near the surface of the earth that are void of

oxygen. These microorganisms also live in the intestines of most animals, including humans. Formation of methane in this manner usually takes place close to the surface of the earth, and the methane produced is usually lost into the atmosphere. In certain circumstances, however, this methane can be trapped underground, recoverable as natural gas. An example of biogenic methane is landfill gas. Waste-containing landfills produce a relatively large amount of natural gas, from the decomposition of the waste materials that they contain. New technologies are allowing this gas to be harvested and used to add to the supply of natural gas.

A third way in which methane (and natural gas) may be formed is through abiogenic processes. Extremely deep under the earth's crust, there exist hydrogen-rich gases and carbon molecules. As these gases gradually rise towards the surface of the earth, they may interact with minerals that also exist underground, in the absence of oxygen. This interaction may result in a reaction, forming elements and compounds that are found in the atmosphere (including nitrogen, oxygen, carbon dioxide, argon, and water). If these gases are under very high pressure as they move towards the surface of the earth, they are likely to form methane deposits, similar to thermogenic methane.

**Natural Gas Under the Earth**



Source: U.S. Energy Information Administration

Although there are several ways that methane, and thus natural gas, may be formed, it is usually found underneath the surface of the earth. As natural gas has a low density, once formed it will rise towards the surface of the earth through loose, shale type rock and other material. Most of this methane will simply rise to the surface and dissipate into the air. However, a great deal of this methane will rise up into geological formations that 'trap' the gas under the ground. These formations are made up of layers of porous, sedimentary rock (kind of like a sponge, that soaks up and contains the gas), with a denser, impermeable layer of rock on top. This impermeable rock traps the natural gas under the ground. If these formations are large enough, they can trap a great deal of natural gas underground, in what is known as a reservoir. There are a number of different types of these formations, but the most common is created when the impermeable sedimentary rock forms a 'dome' shape, like an umbrella that catches all of the natural gas that is floating to the surface. There are a number of ways that this sort of 'dome' may be formed. For instance, faults are a common location for oil and natural gas deposits to exist. A fault occurs when the normal sedimentary layers sort of 'split' vertically, so that impermeable rock shifts down to trap natural gas in the more permeable limestone or sandstone layers. Essentially, the geological formation which layers impermeable rock over more porous, oil and gas rich sediment, has the potential to form a reservoir. The picture below shows how natural gas and oil can be trapped under irnpermeable sedimentary rock, in what is known as an anticlinal formation. To successfully bring these fossil fuels to the surface, a hole must be drilled through the impermeable rock to release the fossil fuels under pressure. Note that in reservoirs that contain oil and gas, the gas, being the least dense, is found closest to the surface, with the oil beneath it, typically followed by a certain amount of water.

With natural gas trapped under the earth in this fashion, it can be recovered by drilling a hole through the impermeable rock. Gas in these reservoirs is typically under pressure, allowing it to escape from the reservoir on its own.

In additioin to being found in a traditional reservoir such as the one shown above, natural gas may also be found in other 'unconventional' formations. To learn more about unconventional natural gas formations, click here.

Now that the basics of natural gas as a fossil fuel have been discussed, click here to proceed to information on the history of natural gas!


# AMERADA HESS CORPORATION

NFPA 704 (Section 16)

MATERIAL SAFETY DATA SHEET

**NATURAL GAS (odorized)** **MSDS No. 8010**

## 1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Aug-98)

**Amerada Hess Corporation**
**1 Hess Plaza**
**Woodbridge, NJ 07095-0961**

**EMERGENCY TELEPHONE NUMBER (24 hrs):** **CHEMTREC (800) 424-9300**
**COMPANY CONTACT (business hours):** Corporate Safety (732) 750-6000
**SYNONYMS:** Compressed Natural Gas (CNG); Dry Natural Gas ; Methane; Pipeline Spec Gas; Processed Gas; Residue Gas; Sweet Natural Gas; Treated Gas

See Section 16 for abbreviations and acronyms.

## 2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Aug-98)

| INGREDIENT NAME (CAS Number) | EXPOSURE LIMITS | CONCENTRATION PERCENT BY VOLUME |
|---|---|---|
| Natural Gas, dry (68410-63-9) | None established by OSHA or ACGIH<br>Simple asphyxiant; exposure limited by oxygen and flammability | 100 |
| Methane (115-07-1) | None established by OSHA or ACGIH<br>Simple asphyxiant | < 90 |
| Ethane (74-84-0) | None established by OSHA or ACGIH<br>Simple asphyxiant | < balance > |

A complex mixture of light gases separated from raw natural gas consisting of aliphatic hydrocarbons having carbon numbers in the range of C1 through C4, predominantly methane (C1) and ethane (C2); may contain carbon dioxide ($CO_2$). Odorized with trace amounts of odorant (see Section 9). This is for natural gas that has been processed and is in commerce.

## 3. HAZARDS IDENTIFICATION (rev. Aug-98; Tox-98)

**EMERGENCY OVERVIEW**
**DANGER!**
**EXTREMELY FLAMMABLE GAS - MAY CAUSE FLASH FIRE OR EXPLOSION!**

High concentrations may exclude oxygen and cause dizziness and suffocation. Contact with pressurized vapor may cause frostbite or freeze burn.

**EYES**
Not irritating. However, contact with pressurized vapor may cause frostbite, freeze burns, and permanent eye damage.

**SKIN**
Not irritating. Direct contact to skin or mucous membranes with pressurized vapor may cause freeze burns and frostbite. Signs of frostbite include a change in the color of the skin to gray or white, possibly followed by blistering. Skin may become inflamed and painful.

**INGESTION**
Risk of ingestion is extremely unlikely.

**INHALATION**
This product is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long-term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposures to high concentrations.

This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in confined spaces. Signs of asphyxiation will be noticed when oxygen is reduced to below 16%, and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about 6% to 8% or less.

**WARNING**: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

**CHRONIC and CARCINOGENICITY**
None expected - see Section 11.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**
Individuals with pre-existing conditions of the heart, lungs, and blood may have increased susceptibility to symptoms of asphyxia.

## 4. FIRST AID MEASURES (rev. Aug-98; Tox-98)

**EYES**
In case of freeze burn cover eyes to protect from light. Seek immediate medical attention.

**SKIN**
In case of frostbite or freeze burns seek immediate medical attention.

**INGESTION**
Though risk of ingestion is extremely unlikely, in case of frostbite or freeze burns due to oral exposure seek immediate medical attention.

**INHALATION**
Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

## 5. FIRE FIGHTING MEASURES (rev. Aug-98)

**FLAMMABLE PROPERTIES:** (NFPA Natural Gas)

| | |
|---|---|
| FLASH POINT: | Flammable gas |
| AUTOIGNITION POINT: | 900 - 1170 °F (482 - 632 °C) |
| OSHA/NFPA FLAMMABILITY CLASS: | FLAMMABLE GAS |
| LOWER EXPLOSIVE LIMIT (%): | 3.8 - 6.5 |
| UPPER EXPLOSIVE LIMIT (%): | 13 - 17 |

**FIRE AND EXPLOSION HAZARDS**
Dangerous fire and explosion hazard when exposed to heat, sparks or flame. Natural gas is lighter than air and may travel long distances to a point of ignition and flash back. Container may explode in heat or fire. Liquefied Natural Gas (LNG) releases flammable gas at well below ambient temperatures and readily forms a flammable mixture with air.

**EXTINGUISHING MEDIA**
Dry chemical, carbon dioxide, Halon or water. However, fire should not be extinguished unless flow of gas can be immediately stopped.

**FIRE FIGHTING INSTRUCTIONS**
Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak.

Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

Isolate area, particularly around ends of storage vessels. Let vessel, tank car or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish the fire.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

See Section 16 for the NFPA 704 Hazard Rating.

## 6. ACCIDENTAL RELEASE MEASURES (rev. Aug-98)

ACTIVATE FACILITY'S SPILL CONTINGENCY or EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and secure all ignition sources. No road flares, smoking or flames in hazard area. Consider wind direction, stay upwind, if possible. Evaluate the direction of product travel. Cold vapor cloud may be white, but color will dissipate as cloud disperses - fire and explosion hazard is still present!

Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

## 7. HANDLING and STORAGE (rev. Aug-98)

**HANDLING and STORAGE PRECAUTIONS**

Keep away from flame, sparks and excessive temperatures. Store only in approved containers. Bond and ground containers. Use only in well ventilated areas. See also applicable OSHA regulations for the handling and storage of this product, including, but not limited to, 29 CFR 1910.110 Storage and Handling of Liquefied Petroleum Gases.

## 8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Aug-94)

**ENGINEERING CONTROLS**

Use adequate ventilation to keep gas concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

**EYE/FACE PROTECTION**

Splash-proof safety goggles and/or faceshield for protection from pressurized gas

**SKIN PROTECTION**

Wear apron, faceshield, and cold-impervious, insulating gloves may protect from pressurized gas.

**RESPIRATORY PROTECTION**

Use a NIOSH/MSHA approved positive-pressure, supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure limits, for potential for uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere.

**CAUTION**: Flammability limits (i.e., explosion hazard) should be considered when assessing the need to expose personnel to concentrations requiring respiratory protection.

Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

## 9. PHYSICAL and CHEMICAL PROPERTIES (rev. Jun-97)

**APPEARANCE**

Colorless gas. Cold vapor cloud may be white but the lack of visible gas cloud does not indicate absence of gas.

**ODOR**

Natural gas has a distinctive, disagreeable "natural gas" type odor when treated with an odorizing agent (typically < 0.1% ethyl mercaptan).

**BASIC PHYSICAL PROPERTIES** (for methane)

| | |
|---|---|
| BOILING POINT: | -259 °F (-162 °C) |
| VAPOR PRESSURE: | 40 atm. @ -187 °F (-86 °C) |
| VAPOR DENSITY (air = 1): | 0.6 |
| SPECIFIC GRAVITY ($H_2O$ = 1): | 0.4 @ -263 °F (-164 °C) |
| SOLUBILITY ($H_2O$): | 3.5% |

## 10. STABILITY and REACTIVITY (rev. Aug-94)

**STABILITY:** Stable. Hazardous polymerization will not occur.

**CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS**

Keep away from strong oxidizers, ignition sources and heat.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

## 11. TOXICOLOGICAL PROPERTIES (rev. Aug-98; Tox-98)

**ACUTE TOXICITY**

Methane and ethane, the main components of natural gas, are considered practically inert in terms of physiological effects. At high concentrations these materials act as simple asphyxiants and may cause death due to lack of oxygen.

**CARCINOGENICITY**

**OSHA:** NO **IARC:** NO **NTP:** NO **ACGIH:** NO

## 12. ECOLOGICAL INFORMATION (rev. Aug-98)

This product is expected to exist entirely in the vapor phase in ambient air.

## 13. DISPOSAL CONSIDERATIONS (rev. Aug-98)

Consult federal, state and local waste regulations to determine appropriate disposal methods.

## 14. TRANSPORTATION INFORMATION (rev. Aug-98)

| | |
|---|---|
| PROPER SHIPPING NAME: | NATURAL GAS, COMPRESSED *(with high methane content)* |
| HAZARD CLASS: | 2.1 |
| DOT IDENTIFICATION NUMBER: | UN 1971 |
| DOT SHIPPING LABEL: | FLAMMABLE GAS |

## 15. REGULATORY INFORMATION (rev. Aug-98)

**U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION**

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

**CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)**

This product does not contain any chemicals subject to the reporting requirements of CERCLA Section 103 or SARA 304. In addition, the CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts natural gas and synthetic gas usable for fuel and any indigenous components of such from the CERCLA Section 103 reporting requirements.

**SARA SECTION 311/312 - HAZARD CLASSES**

| ACUTE HEALTH | CHRONIC HEALTH | FIRE | SUDDEN RELEASE OF PRESSURE | REACTIVE |
|---|---|---|---|---|
| -- | -- | X | X | -- |

**SARA SECTION 313 - SUPPLIER NOTIFICATION**

This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

**CANADIAN REGULATORY INFORMATION**

Class A (Compressed Gas) Class B, Division 1 (Flammable Gas)

## 16. OTHER INFORMATION (rev. Feb-00)

| | | | |
|---|---|---|---|
| **NFPA® 704 HAZARD RATING** | HEALTH: | 1 | Slight |
| | FIRE: | 4 | Extreme |
| | REACTIVITY: | 0 | Negligible |
| **HMIS® HAZARD RATING** | HEALTH: | 1 | Slight |
| | FIRE: | 4 | Severe |
| | REACTIVITY: | 0 | Minimal |

**SUPERSEDES MSDS DATED:** 08/12/98

**ABBREVIATIONS:**

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

**ACRONYMS:**

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| AIHA | American Industrial Hygiene Association |
| ANSI | American National Standards Institute (212)642-4900 |
| API | American Petroleum Institute (202)682-8000 |
| CERCLA | Comprehensive Emergency Response, Compensation, and Liability Act |
| DOT | U.S. Department of Transportation [General info: (800)467-4922] |
| EPA | U.S. Environmental Protection Agency |
| HMIS | Hazardous Materials Information System |
| IARC | International Agency For Research On Cancer |
| MSHA | Mine Safety and Health Administration |
| NFPA | National Fire Protection Association (617)770-3000 |
| NIOSH | National Institute of Occupational Safety and Health |
| NOIC | ACGIH TLV Notice of Intended Change |
| NTP | National Toxicology Program |
| OPA | Oil Pollution Act of 1990 |
| OSHA | U.S. Occupational Safety & Health Administration |
| PEL | Permissible Exposure Limit (OSHA) |
| RCRA | Resource Conservation and Recovery Act |
| REL | Recommended Exposure Limit (NIOSH) |
| SARA | Superfund Amendments and Reauthorization Act of 1986 Title III |
| SCBA | Self-Contained Breathing Apparatus |
| SPCC | Spill Prevention, Control, and Countermeasures |
| STEL | Short-Term Exposure Limit (generally 15 minutes) |
| TLV | Threshold Limit Value (ACGIH) |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average (8 hr.) |
| WEEL | Workplace Environmental Exposure Level (AIHA) |
| WHMIS | Canadian Workplace Hazardous Materials Information System |

**DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

Attachment 5

Unitherm's Proposal

TECO
TAMPA ELECTRIC

# TAMPA ELECTRIC COMPANY
## Environmental, Health & Safety - Air Programs
## FDEP CBO Meeting Agenda

**DEP/TEC Meeting – August 11th, 2005**

10-31-05
FINAL PERMIT ?

- **Introduce Participants**
- **Objectives of the Meeting**
  - Agreement to process the permit as non PSD
  - Agreement to expedite process to deem application complete
  - Agreement that CBO is a separate emissions unit not included in the boiler emissions rate
  - Agreement for expeditious review of the CBO permit
  - Resolution of any outlying technical questions
  - Agreement to approach EPA
- **General Overview of the Permit Application**
- **Applicability of the CFJ as it relates to PSD**
- **Review of the CBO Application and how it addresses the pre-application meeting**
- **Current Status/Deadlines**
- **Outstanding Technical Issues**
- **Next Steps**

CHECK S.C. PLANT DATA FOR NOX

=

SPECIFY AMMONIA/UREA COMPOUNDS ?

=

FATE IN FLUE GAS ?

=

NOX ESTIMATES ?

TOO HIGH ?

CAN WE CALCULATE.

**PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

Florida Department of Environmental Protection
DEP File No.: 0010087-018-AC

Florida Rock Industries, Inc.
Thompson S. Baker Cement Plant - Newberry
Alachua County

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit to Florida Rock Industries, Inc. (FRI) to allow an increase in the finish mill throughput rate at the Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County. The previously issued Best Available Control Technology (BACT) determination applies to the facility. The applicant's name and address are: Florida Rock Industries, Inc., 4000 NW County Road 235, Post Office Box 459, Newberry, Florida 32699.

Historically FRI has produced AASHTO and masonry types of cement. Recently FRI has added ASTM type cement to its line of available products. ASTM allows a limestone content of up to 5%, as opposed to the 1% limestone allowed by AASHTO. Cement with higher limestone content (therefore lower clinker content) is easier to grind in the mill. This, along with kiln operation that minimizes the calcium-silicate crystal size which makes the clinker easier to grind, allows for a faster grinding process, therefore more product through the finish mill system. Although a slight increase in cement production could be realized due to this project, a cement process rate increase was not requested.

No emissions limit or production increases were requested by FRI due to this project. No production equipment or control devices will be changed or affected. No changes are requested in the amount of fuel use or raw materials subjected to pyroprocessing in the preheater/calciner, kiln, or clinker cooler. Particulate emissions from the baghouses will remain unchanged and fugitive emissions due to increased truck traffic from the limestone quarry to the limestone/gypsum storage area are estimated to be less than 1 ton per year.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: (850) 488-0114
Fax: (850) 922-6979

Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: (904) 807-3233
Fax: (904) 448-4363

The complete project file includes the technical evaluation, Draft Air Construction Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Bureau of Air Regulation at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968, for additional information.

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The High Springs Herald

High Springs, Florida
Published Weekly

STATE OF FLORIDA
COUNTY OF ALACHUA

Before the undersigned authority personally appeared DOT COULLIETTE who on oath says that he/she is an EDITORIAL ASSISTANT of *The High Springs Herald*, a weekly newspaper published at High Springs in Alachua County, Florida; that the attached copy of advertisement, being a **PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT,** was published in said newspaper in the issue of **January 26, 2006**.

Affiant further says that *The High Springs Herald* is a newspaper published at High Springs, in said Alachua County, Florida, and that the said newspaper has heretofore been continually published in said Alachua County, Florida, each week and has been entered as periodicals matter at the post office in High Springs, in said Alachua County, Florida for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Dot Coulliette
(Signature of Affiant)

Sworn to and subscribed before me
this 26th day of January, 2006.

Carol D Short
(Signature of Notary Public)

CAROL D. SHORT
Notary Public, State of Florida
My comm. expires Nov. 19, 2007
No. DD 269014