



Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer 

THRU: Al Linero 

FROM: Teresa Heron

DATE: November 15, 2002

SUBJECT Florida Rock Industries - Newberry
: Production Increase and Emission Limit Finalization
DEP File No. 0010087-006-AC (PSD-FL-228C)

Attached is the public notice package for a production increase from 2300 to 2650 tons per day of clinker at the existing Florida Rock Industries Thompson S. Baker Cement Plant in Newberry, Alachua County. The increase and the final emission limits represent the as-built capacity and capabilities of the plant and its pollution control equipment.

We set final limits for various pollutants as required by the original permit issued for the project. PSD/BACT review was avoided based on the presumption that the existing allowable emission limits represent present actual emissions. The rule-based rationale is detailed in the attached technical evaluation.

Stack particulate emissions are controlled by electrostatic precipitators that have performed very well. The main pollutants of concern are nitrogen oxides (NO_x), sulfur dioxide (SO₂), and volatile organic compounds (VOC). The final NO_x limitation of 2.45 lb/ton of clinker is lower than any 30-day limitation in the country including new kilns authorized since the construction of the FRI plant. A few may have a slightly lower limit based on a less stringent 12-month averaging time. Suwannee-American and Rinker/FCS have greater limits (2.8 to 2.9 lb/ton of clinker), but a more stringent averaging time (24-hours).

The SO₂ and VOC standards are very stringent and reflect the excellent raw materials. The SO₂ limit is the lowest in the country. Most new projects require large scrubbers to control SO₂ caused by naturally occurring pyrites in the limestone (not the fuel) and still emit thousands of tons of the pollutant compared with less than 100 tons from FRI.

Similarly VOC emissions are only about 40 tons per year and are achieved by very careful selection of mill scale sources. In some parts of the country (such as Michigan) where there is naturally occurring kerogene in the raw materials, it is necessary to install very expensive regenerative thermal oxidizers to avoid potential emissions of thousands of tons per year and odor problems.

The permit firmly establishes that the source is subject to the major source NESHAP for the cement industry. We recommend your approval of the attached Intent to Issue.

AAL/th

Attachments

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:

Segundo J. Fernandez, Esquire
Oertel, Hoffman, Fernandez & Cole, P.A.
~~301 S. Bronough Street~~
~~Suite 500~~ P.O. Box 1110
Tallahassee, FL 32301

32302

2. 7001 0320 0001 3692 7584

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

Katie Scarth 11-22-02

C. Signature

x Katie Scarth Agent AddresseeD. Is delivery address different from item 1? YesIf 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**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:

James J. Konish, Esquire
FPLW
P. O. Box 2309
Gainesville, FL 32602-2309

2. 7001 0320 0001 3692 7614

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

J. J. Konish 11/21/02

C. Signature

x J. J. Konish Agent AddresseeD. Is delivery address different from item 1? YesIf 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**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)

Total Postage & Fees \$

Postmark
Here

Sent To

Segundo J. Fernandez, ESQ.

Street, Apt. No.
or PO Box No.

301 S. Bronough St., Ste. 500

City, State, ZIP+4

Tallahassee, FL 32301

PS Form 3800, January 2001

See Reverse for Instructions

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)

Total Postage & Fees \$

Postmark
Here

Sent To

James J. Konish

Street, Apt. No.
or PO Box No.

P.O. Box 2309

City, State, ZIP+4

Gainesville, FL 32602-2309

PS Form 3800, January 2001

See Reverse for Instructions

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:

Robert K. Hutchinson, Chair
Alachua County Board of
County Commissioners
P. O. Box 2877
Gainesville, FL 32602-2877

2. Air 7001 0320 0001 3692 7577

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) *Shari Bergquist* B. Date of Delivery *11/2/02*
Signature *Shari Bergquist*
 Agent
 Addressee
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

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

OFFICIAL USE

7001 0320 0001 3692 7577

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To Robert K. Hutchinson
Street, Apt. No. or PO Box P.O. Box 2877
City, State, ZIP+4 Gainesville, FL 32602-2877

PS Form 3800, January 2001

See Reverse for Instructions

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 Bird
Environmental Protection Director
Alachua County Environmental
Protection Department
201 SE 2nd Avenue, Ste. 201
Gainesville, FL 32601

2. Air 7001 0320 0001 3692 7560

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) *Amanda Cox* B. Date of Delivery *11-2-02*
Signature *Amanda Cox*
 Agent
 Addressee
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

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

OFFICIAL USE

7001 0320 0001 3692 7560

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To Chris Bird
Street, Apt. No. or PO Box 201 SE 2nd Ave., Ste. 201
City, State, ZIP+4 Gainesville, FL 32601

PS Form 3800, January 2001

See Reverse for Instructions

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. John D. Baker, President
 Florida Rock Industries, Inc.
 155 East 21 Street
 Jacksonville, Florida 32206

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

11/21/02

C. Signature

X *B. Blankenship* Agent
 Addressee

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. A

7001 0320 0001 3692 7621

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

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

OFFICIAL USE

7001 0320 0000 0200 7001
 1294 2692 7621

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
 Here

Sent To
 Street, Apt. No.,
 or PO Box No.
 City, State, ZIP+4

Mr. John D. Baker, President
 Florida Rock Industries, Inc.
 155 East 21 Street
 Jacksonville, Florida 32206

PS Form 3800, January 2001

See Reverse for Instructions



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

November 19, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John D. Baker, President
Florida Rock Industries, Inc.
155 East 21st Street
Jacksonville, Florida 32206

Re: DEP File No. 0010087-006-AC (PSD-FL-228C)
Thompson S. Baker Cement Plant

Dear Mr. Baker:

Enclosed is one copy of the Draft Air Construction Permit for the proposed production increase at the Thompson S. Baker Cement Plant on County Road 235, in Newberry, Alachua County. The Department's Intent to Issue Air Construction Permit, the Technical Evaluation and Preliminary Determination, and the "Public Notice of Intent to Issue Air Construction Permit" 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 of Chapter 50, Florida Statutes. Proof of publication, such as a 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.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, Administrator, New Source Review Section at the letterhead address. If you have any questions regarding this matter, please contact Mr. Greg DeAngelo at (850)921-9506 or Ms. Teresa Heron at (850)921-9529.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

AAL/th

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

In the Matter of a
Permit Application by:

Florida Rock Industries, Inc.
155 East 21st Street
Jacksonville, Florida 32206

DEP File No. 0010087-006-AC (PSD-FL-228C)
Production Increase and Revision of Emission Limits
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. FRI applied for a construction permit to increase clinker production limits while reducing emission limits per unit of production. The Department was already required by the previous construction permit to finalize emission limits for sulfur dioxide (SO₂), nitrogen oxides (NO_x) and beryllium and has consolidated the requirement with FRI's request.

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 increase production and revise the emission limits.

The Department intends to issue this air construction permit 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.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Mediation is not available in this proceeding. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

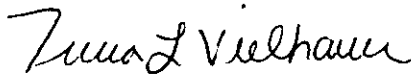
The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each

rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.



Trina 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 11/19/02 to the person(s) listed:

John D. Baker, FRI*
Fred W. Cohrs, FRI
Cary O. Cohrs, FRI
Steven C. Cullen, PE
Gregg Worley, EPA
John Bunyak, NPS
Chris Kirts, DEP NED

Chair, Alachua County Commission*
Chris Bird, Alachua County EPD*
James J. Konish, Esq., FPLW*
Segundo J. Fernandez, Esq., OHF&C*
Arthur Saarinen*
Rob Luna, NCFGP*
W. Douglas Beason, Esq., DEP OGC

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.

 November 19, 2002
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection

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

Draft Air Construction Permit No.: 0010087-006-AC (PSD-FL-228C)

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 increase production at the Thompson S. Baker Cement Plant located 2.5 miles Northeast of Newberry on County Road 235 in Alachua County. A new Best Available Control Technology (BACT) determination was not required. The applicant's name and address are: Florida Rock Industries, Inc., 155 East 21st Street, Jacksonville, Florida 32206.

FRI requests an increase in its daily clinker production limit from 2,300 tons per day (TPD) to 2,650 TPD and in annual production from 712,500 tons per year (TPY) to 800,000 TPY. The company proposes reductions in allowable emission limits per unit of production (lb/ton of clinker) such that there will be no annual emission limit increases. The production limit increase is approximately 12 percent while the annualized maximum allowable emissions decreases total approximately 15 percent compared with the existing permits. The Department is already required by the previous construction permit to set final emission limits for sulfur dioxide (SO₂), nitrogen oxides (NO_x), and beryllium after receipt of emission testing results.

The final production and emission limits represent the as-built capabilities of the plant. The final construction activity was the installation of a multi-stage combustion (MSC) calciner that made it possible for the kiln to reliably meet a nitrogen oxides emission limit of 2.8 lb NO_x/ton clinker (previously 3.8 lb/ton) effective January 1, 2002. The Department presumes that the present federally enforceable allowable emissions for the affected units are equivalent to the actual emissions of the emissions unit. The proposed production increase will not result in significant net emissions increases and a new evaluation under the rules for the Prevention of Significant Deterioration (PSD) is not required.

The final limit proposed for NO_x of 2.45 lb/ton of clinker (30-day basis) is one of the lowest in the country compared with recent BACT determinations for new projects. The limit for SO₂ of 0.16 lb/ton of clinker is the lowest limit issued to-date in the country. It reflects the use of raw materials that are inherently low in sulfur as well as very efficient scrubbing of combustion gases by finely divided lime in the calciner. Stack tests indicate very low emissions of beryllium from the plant. The federal PSD program no longer requires regulation of beryllium. Beryllium is now regulated under the 1999 federal cement industry maximum achievable control technology (MACT) standards and only at cement kilns that (unlike FRI) burn hazardous waste.

The plant has continuous emissions monitoring equipment for NO_x, SO₂, opacity and total hydrocarbons as well as annual testing requirements for all of the regulated pollutants. The plant is subject to 40CFR63, Subpart LLL, which requires annual testing for dioxin and furans as well as specific operating parameters for the pollution control equipment.

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. 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. 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.

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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 Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information. The technical evaluation and draft permit can be viewed at www.dep.state.fl.us/air/permitting/construct.htm in the Florida Rock Newberry link.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

FLORIDA ROCK INDUSTRIES, INC.
NEWBERRY, ALACHUA COUNTY, FLORIDA

Portland Cement Manufacturing Facility
Production Increase and Finalization of Emission Limits

DEP File Nos. 0010087-006-AC
PSD-FL-228C

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

November 19, 2002

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

I. APPLICANT NAME AND ADDRESS

Florida Rock Industries, Inc
400 NW CR 235
Newberry, Florida 32669
Authorized Representative: Mr. Cary O. Cohrs, Vice President – Operations

II. FACILITY INFORMATION

A. FACILITY LOCATION

Florida Rock Industries, Inc. (FRI), owns and operates the Thompson S. Baker Cement Plant in Newberry, Alachua County. The plant is currently permitted to produce 2300 tons per day and is located off of Alachua County Road 235, 2.5 miles northeast of Newberry, Florida. The UTM coordinates of the Florida Rock facility are Zone 17, 346.8 km East and 3287.0 km North.

B. FACILITY CLASSIFICATION CODE (SIC)

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

C. FACILITY CATEGORY

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 (SO₂), nitrogen oxides (NO_x), or particulate matter (PM/PM₁₀) characterize the existing installation as a Major Facility per the definitions in Rule 62-210.200, F.A.C. and subject to applicability review for the requirements of Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Accordingly, the original FRI project was subject to New Source Review (NSR) including the PSD provisions.

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 SO₂, 7 TPY of sulfuric acid mist (SAM), 25/15 TPY of PM/PM₁₀, 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.

The facility is also subject to a number of industry regulations and permit specific conditions enumerated in the Title V Operation Permit issued January 11, 2002. Among these is designation as a major source of hazardous air pollutants (HAPs) and applicability of the major source provisions of 40 CFR 63, Subpart LLL – 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.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

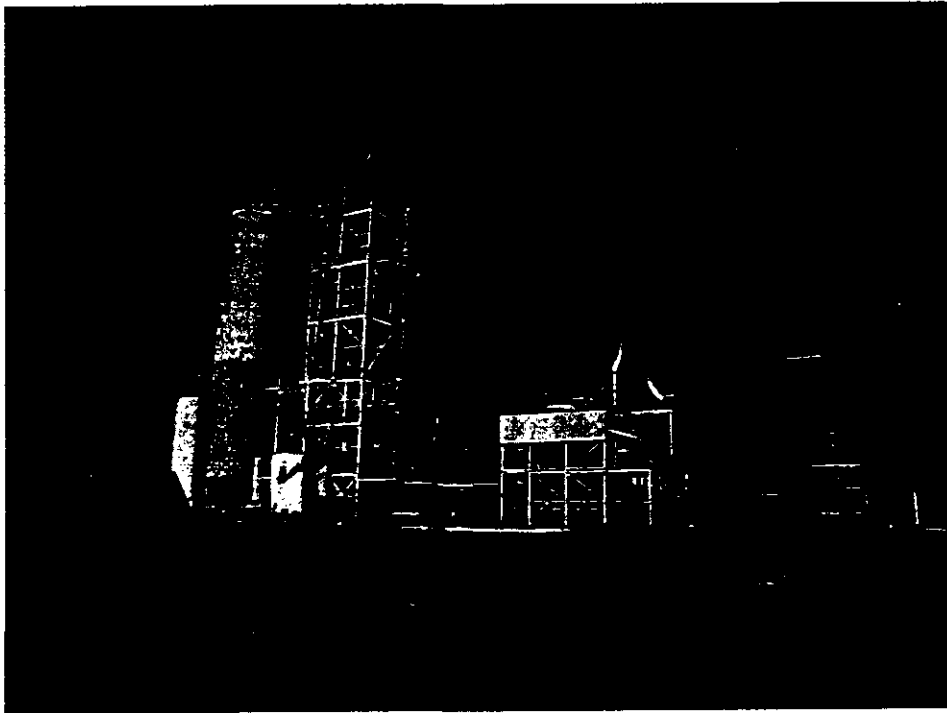
III. ORIGINAL PROJECT

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.

The originally authorized plant was permitted to make 2300 tons per day (TPD) of clinker. An hourly production rate of 95.83 TPD was included in the permit. An annual production limit of 712,500 TPY was also included.

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.

A more complete project and process description was provided in the Technical Evaluation and Preliminary Determination issued for the project in September 1995. FRI completed construction of the basic plant in late Fall of 1999. Compliance tests were conducted during mid-2000. Following is a photograph of the constructed plant taken in 2001. Some additional components are visible on the ground that 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

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

IV. PREVIOUS PERMIT MODIFICATION

The original construction permit issued in December 1996 set an initial limit for NO_x emissions of 3.8 pounds per ton (lb/ton) of clinker. It provided for a two-year optimization period and installation of additional control equipment to insure compliance with a lower limit of 2.8 lb/ton by the end of the period (by January 2002). The permit also allowed the Department to further lower the NO_x and SO₂ limits and to set SAM and beryllium limits after evaluation of future stack testing or continuous emission monitoring results.

The permit was revised in August 2001 to modify the kiln in accordance with the final configuration chosen by FRI to reliably meet the lower NO_x limit. The revision added a requirement to: continuously monitor total hydrocarbons (THC); provide reasonable assurance of compliance with the VOC limit; set a final limit for SAM emissions; and specify additional stack testing for beryllium emissions. The presently applicable requirements are summarized in Table 1.

Table 1. Allowable Emissions – Florida Rock Industries, Newberry, Alachua County

Pollutant	BACT Emission Limit		Emission Rate *		Basis
	lb/ton clinker	lb/ton dry feed	lb/hr	ton/yr	
PM (kiln)	0.31	0.20	30.00	110.50	BACT
PM ₁₀ (kiln)	0.26	0.17	25.50	93.93	BACT
PM (cooler)	0.16	0.10	14.99	55.70	BACT-NSPS
PM ₁₀ (cooler)	0.13	0.09	12.71	47.34	BACT
SO ₂ (kiln) ⁺	0.28	0.18	28.82	108.55	BACT
NO _x (kiln)**	2.80	1.80	268.30	1018.00	BACT
H ₂ SO ₄ (kiln)	0.0025	0.0016	0.25	1	BACT
CO (kiln)	3.60	2.30	346.38	1288.60	BACT
VOC (kiln)	0.12	0.08	11.55	42.90	BACT
Beryllium	TO BE DETERMINED BY FUTURE STACK TESTS				BACT

Notes:

- * The kiln emission rate includes fuel oil combustion emissions from the raw mill air heater.
- ** After startup and until December 31, 2001, the kiln shall not exceed a NO_x limit of 3.8 lb/ton clinker and 2.8 lb/ton clinker thereafter (30-day rolling average). A compliance demonstration with the 2.8 lb/ton limit for the first 30-day period following December 31 (January 1-30, 2002) shall be submitted by Florida Rock to the Northeast District Office by February 15, 2002. The Department may revise the limit to less than 2.8 lb/ton clinker (30-day rolling average) based on continuous emission monitoring data covering the period January 1-March 31, 2002 to be submitted by Florida Rock to the Department's Northeast District by April 15, 2002.
- + The Department may revise the SO₂ limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

In November 2001 FRI completed a conversion of the calciner to the "PREPOL[®]-MSC calciner system" for the reduction of NO_x emissions and co-firing of tires as fuel. The MSC calciner can reduce NO_x emission by staggered introduction of fuel, tertiary air, and raw meal. This causes the combustion to take place in several stages. In the first stage, burning fuel near the kiln inlet reduces some of the NO_x generated in the sintering zone of the rotary kiln. The fuel is injected against the direction of flow of the kiln gases and is pyrolyzed in its gas phase. In the reducing atmosphere that is formed, some of the NO_x is converted into nitrogen.



PREPOL[®]-MSC

In order to prevent new NO_x from being generated in the calciner, the calcining fuel also has to be burned under reducing conditions. This is achieved by staggered introduction of combustion air such that fuel is first burned under reducing conditions, then additional fuel is burned under oxidizing conditions. This minimizes the generation of additional NO_x in the calciner and further reduces the nitrogen oxides coming from the rotary kiln.

FRI can use tires as the fuel burned under reducing conditions in the lower section of the MSC calciner. Coal is burned under subsequent oxidizing conditions in the higher section of the MSC calciner. Additional tertiary air from the clinker cooler insures good burnout and conversion of most CO to carbon dioxide (CO₂) without significant NO_x formation. Finally by spreading the thermal load toward the lower temperatures of the calciner and from the higher temperatures of the kiln burner, the overall potential for NO_x formation is further lowered.

V. PRESENT PERMIT REQUEST

The Department began reviewing data submitted by FRI in early 2002 in order to set the final limits for NO_x, beryllium, and SO₂ as required by the present permit. Prior to completion of the effort, FRI submitted a permit application on June 14, 2002 to increase clinker production to 2650 TPD and to propose the final emission limits.

The key requests in the application are as follows:

- Increase daily and annual clinker production limits by approximately 12 percent and peak (hourly) production by approximately 20 percent.
- Set (lower) the final NO_x limitation at 2.45 lb/ton of clinker.
- Set (lower) the final SO₂ limitation at 0.16 lb/ton of clinker.
- Revise other emission limitations downward to avoid significant increases in allowable annual emissions.
- Following completion of the quarterly testing program, remove the beryllium limit in accordance with guidance from EPA that removed beryllium as a pollutant regulated under the PSD program.
- In a response to a request for additional information, FRI proposed final continuous emission monitoring and reporting protocols to complement the proposed NO_x and SO₂ limitations.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

VI. PRESENT SITUATION AND EMISSIONS

As of this time, all physical construction required to make cement at the permitted production limit is complete. Facilities have been installed to burn tires as a supplementary fuel. A Title V Operation Permit was issued in January 2002. Compliance testing has been conducted. Table 2 presents the results of stack tests or first quarter 2002 continuous monitoring data from the plant for pollutants of interest in this evaluation.

Table 2. Stack Test and Continuous Monitoring Data Results

Pollutant	Permit Limit	Result
SO ₂	0.28 lb/ton clinker	~ 0.01 lb/ton clinker (single stack test)
NO _x	2.8 lb/ton clinker (30-day avg.)	2 – 2.6 lb/ton of clinker (30-day avg. - CEMS)
Beryllium	None (to be determined)	~ 5 x 10 ⁻⁷ lb/ton clinker (five stack tests)

Based on the results, it is clear that emissions of SO₂ are much less than permitted. Based on the single test, emissions during normal operations might be as little as a few tons per year. That would be less than the significant emission rate of 40 TPY that triggered the requirement to establish a limit based on BACT. The low emissions are confirmed by the upgraded continuous emissions monitoring system (CEMS) installed at the stack.

The reason for the low SO₂ emissions is that the dry preheater/calcliner process provides an opportunity for self-scrubbing of the exhaust gases by finely-divided lime. Therefore virtually all fuel sulfur is removed in this manner. The raw materials fed into the preheater apparently contain minimal sulfur (such as pyrites). Therefore SO₂ emissions from “roasting” in the upper stages of the preheater are minimal.

Emissions of NO_x are lower than permitted and are based on three months of continuous monitoring data. Testing during one stack test consisting of three runs resulted in emissions of 2 lb/ton clinker with a fuel mix that included 18 percent tires. It is possible that even lower emissions can be achieved at times (with or without operation of the MSC calciner). However the present range from 2.0 to 2.8 lb/ton clinker is achieved comfortably and without elevated emissions of CO.

FRI conducted five stack tests for beryllium emissions between July 2000 and December 2001. The tests indicated emission rates for beryllium ranged from 5.2 x 10⁻⁶ lb/hr to a maximum of 8.1x10⁻⁵ lb/hr. The average was 4.2x10⁻⁵ lb/hr, which equates to approximately 4.9x10⁻⁷ lb/ton of clinker. The average and the maximum emission rates during the five tests would equate to annual emission rates of 0.00018 and 0.00035 TPY. Both values are less than the significant emission rate for beryllium of 0.0004 TPY that applied at the time of initial permitting. The Department recognizes that beryllium is no longer regulated as a “PSD pollutant.” The pollutant is now regulated under industry-specific rules pursuant to Title III of the Clean Air Act. The Maximum Achievable Control Technology (MACT) rules applicable to cement kilns regulate beryllium at kilns that (unlike FRI) burn hazardous waste.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

For reference, according to an EPA review for setting the cement industry MACT standard emissions of beryllium from 24 kilns ranged from 0.05 to 2.2 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at 7 percent oxygen. The average is approximately $0.56 \mu\text{g}/\text{m}^3$. The average beryllium concentration based on the five stack tests conducted by FRI is $0.12 \mu\text{g}/\text{m}^3$ at 7% O_2 . This value is well below the average and is towards the low end of the data considered by EPA.

According to the BACT determination that accompanied the FRI permit issued in 1996, the emission limit for beryllium was "as controlled by the PM BACT (ESP)." In other words, the electrostatic precipitator (ESP) that controls PM emissions is the physical control equipment for the control of beryllium as well.

The Department concludes that emissions of beryllium are inherently low and adequately controlled by the ESP. Annual emissions are less than the values that would even require a BACT determination based on the previous rule. Beryllium is regulated at cement kilns that (unlike FRI) burn hazardous waste. The Department has, therefore, determined that it is not necessary to set a limit for beryllium and will modify the requirement as requested by FRI.

VII. KILN PRODUCTION CAPACITY

The kiln has been producing clinker at its authorized production limit of 2300 tons per day and within the annual limit of 712,500 tons. It was the first kiln constructed in the United States in approximately 12 years. Typically, there is additional capacity above and beyond the guarantees provided by the manufacturer, Polysius.

FRI believes that the plant can make substantially more clinker than allowed by the present production limitations. The modifications to the calciner during the MSC calciner project added 13.2 percent volume to the calciner system, improved airflow, and increased retention time in the preheater. FRI believes that the kiln now has further production capacity aside from the inherent "overdesign" of the original configuration.

Mr. Fred Cohrs, recently retired from FRI and formerly president of Polysius USA, is an acknowledged expert in cement manufacturing. He submitted a report with the application attesting to the proposed production capacities while meeting lower emission limits per unit of production. Based on Mr. Cohr's report and as set forth below, the Department has reasonable assurance that the plant is physically capable of meeting the proposed production rates.

Mr. Cohrs attests also that the plant operates more efficiently at the higher production rate. The result is that less fuel is combusted per unit of clinker produced. Therefore emissions per ton of clinker produced will also tend to be lower. While the Department does not necessarily concur with the premise, there is reasonable assurance that the facility can, at the higher production rates, comply with lower emission limits (per ton of clinker) than presently in effect. The Department also believes FRI can meet the limit while operating at lower rates based on the past testing discussed above and the 30-day averaging period applicable to this source.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

VIII. METHOD OF ESTIMATING EMISSION INCREASES AND DECREASES

As a major source, a physical modification or change in method of operation of this facility resulting in **no significant net emissions increases** is not subject to PSD review. It is clear that the production increase is a physical change or change in method of operation because it involves relaxation of a federally enforceable production limit. Significant net emissions increase is defined in Rule 62-212.400, F.A.C as follows:

*Significant Net Emissions Increase – A significant net emissions increase of a pollutant regulated under the Act is a **net emissions increase** equal to or greater than the applicable significant emission rate listed in Table 212.400-2, Regulated Air Pollutants – Significant Emission Rates.*

The significant emission rates are included in Table 3. The meaning of a net emissions increase is given in Rule 62-212.400, F.A.C. as:

*Net Emissions Increase - A modification to a facility results in a net emissions increase when, for a pollutant regulated under the Act, the sum of all of the contemporaneous creditable increases and decreases in the **actual emissions** of the facility, including the increase in emissions of the modification itself and any increases and decreases in quantifiable fugitive emissions, is greater than zero.*

The definition of actual emissions is given in Rule 62-210.200, F.A.C. (definitions) as follows:

Actual Emissions - The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:

- (a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.*
- (b) The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limits are federally enforceable.*
- (c) For any emissions unit (other than an electric utility steam-generating unit specified in subparagraph (d) of this definition) which has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date.*

The modification to achieve the lower NO_x limit of 2.8 lb/ton of clinker (previously 3.8 lb/ton of clinker) was completed in late 2001. The Department does not consider the operation prior to 2002 to represent “normal operation under the present configuration and emission limits.”

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Therefore the Department will not rely upon emissions that occurred during the two-year period as “representative of normal operations” described in paragraph (a) above.

The Department will rely on paragraph (b) above in estimating actual emissions and presumes that these are equal to the federally-enforceable emission limits allowed by the present permit. Future emissions will be calculated in accordance with part (c) above based on allowable emissions proposed by the Department for the facility in association with the requested production increase.

IX. PROPOSED EMISSION LIMITS

The following table lists the emission limits proposed by the Department for comparison with the previously listed emission limits applicable to the plant.

Table 3. Proposed Emissions – Florida Rock Industries, Newberry, Alachua County

Pollutant	Allowable Emissions (2000 - 2001)		Allowable Emissions (Effective 2002)		Proposed BACT Emissions Limit		TPY Change from Allowable Emissions ¹		SER
	lb/ton clinker	TPY ²	lb/ton clinker	TPY ²	lb/ton clinker	TPY ²	2000/01	2002	TPY
PM (kiln)	0.31	110	0.31	110	0.23	94	-16	-16	25
PM ₁₀ (kiln)	0.26	94	0.26	94	0.20	80	-14	-14	15
PM (cooler)	0.16	56	0.16	56	0.14	56	0	0	25
PM ₁₀ (cooler)	0.13	47	0.13	47	0.12	47	0	0	15
SO ₂ (kiln) ³	0.28	109	0.28	109	0.16	64	-45	-45	40
NO _x (kiln) ⁴	3.80	1353	2.80	1018	2.45	980	-373	-38	40
H ₂ SO ₄ (kiln)	0.0025	1	0.0025	1	0.0025	1	0	0	7
CO (kiln)	3.60	1289	3.60	1289	2.5	1000	-289	-289	100
VOC (kiln)	0.12	43	0.12	43	0.11	43	0	0	40
Beryllium (kiln)	No emissions limit; Emissions ~ 5 x 10 ⁻⁷ lb/ton clinker				No emission limit proposed		~ 0.00002		0.0004 ⁵

Notes:

¹ Change compared to allowable annual emissions in place during the period 2000 to 2001 and to the present allowable annual emissions (effective 2002) for comparison with Significant Emission Rates (SER) listed in Table 212.400-2, F.A.C.

² The kiln emission rate includes fuel oil combustion emissions from the raw mill air heater.

³ Represents revised SO₂ limit (24-hour rolling average) based on compliance tests and continuous monitoring data.

⁴ Represents revised NO_x limit (30-day rolling average) based on continuous monitoring data covering the period January 1 – March 31, 2002.

⁵ Previous regulatory Significant Emission Rate for beryllium is not applicable.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

X. PSD AND BACT APPLICABILITY DETERMINATION

The Department concludes that there will not be a significant net emissions increase associated with the proposed production increase. Therefore PSD does not apply and another BACT determination is not required. Although a new BACT determination is not required, the revised limits proposed in conjunction with the production increase are all more stringent than previous BACT determinations for the plant. Additionally, the values are, by and large, more stringent than many of the determinations made for new cement plants since the construction of the FRI facility.

The Department notes this PSD applicability determination applies strictly to this project and the exact circumstances and does not constitute guidance for any other project. The Department makes these determinations on a case-by-case basis.

XI. CONCLUSION

The Department concludes that the respective final limitations for SO₂ and NO_x are 0.16 and 2.45 lb/ton clinker respectively. These lower limits together with the reductions in limits proposed by FRI for PM/PM₁₀, CO, and VOC insure that the project will not trigger new PSD and BACT requirements. The requested values are well within the ranges of the most recent BACT determinations made in the United States. The Department concludes as well that it is not necessary to set a limit for beryllium and will modify the requirement as requested by FRI.

The Department has reasonable assurance that the proposed emission rates can be maintained at the increased operation levels requested by FRI. Conditions incorporating the proposed changes and detailing compliance demonstration requirements are shown in the attached draft permit for this modification.

Teresa Heron, Permit Engineer

Greg DeAngelo, Permit Engineer

A. A. Linero P.E.

Program Administrator

New Source Review

DRAFT PERMIT

PERMITTEE

Florida Rock Industries
155 East 21st Street
Jacksonville, Florida 32206

Permit No. 0010087-006-AC (PSD-FL-228C)
Expires: June 30, 2003
Production Increase and Emission Limit Revisions

PROJECT AND LOCATION

This permit authorizes a production increase and revises emission limits for the existing kiln and associated equipment at the Thompson S. Baker Cement Plant in Alachua County. The facility is off of County Road 235 approximately 2.5 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

(DRAFT)

Howard L. Rhodes, Director
Division of Air Resources Management

SECTION I. FACILITY INFORMATION (DRAFT)

FACILITY DESCRIPTION

Florida Rock Industries, Inc. 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 key component is the kiln that is presently permitted to make 2300 tons per day of clinker, 712,500 tons per year, and which has an hourly clinker production limit of 95.83 tons per hour.

The facility first produced clinker in December 1999. It operated under the provisions of original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC) issued in December 1996 (as amended in August 2001) until issuance of the facility Title V Operation Permit in January 2002.

PROJECT

The project is to increase the allowable production rate of clinker to 2650 tons per day, 800,000 tons per year, and a peak hourly clinker production limit of 115 tons per hour. Following is the description of the key emission unit affected by the modification:

ID No.	Emission Unit Description
003	Kiln system. The kiln system (or pyroprocessing system) includes the 156.5 foot kiln, a four-stage preheater tower, a 25,300 cubic foot multi-stage combustion (MSC) calciner, a tire feed system, two coal burners and ancillary equipment. Particulate emissions are controlled by an electrostatic precipitator.

REGULATORY CLASSIFICATION

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

Title III: Based on the initial Title V permit application received October 1, 1999 and the permit issued January 2002.

Title V: Based on the initial Title V permit application received October 1, 1999, this facility is a major source of sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter (PM/PM₁₀), and nitrogen oxides (NO_x).

PSD: The project is located in an area designated as "attainment" 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.

SECTION I. FACILITY INFORMATION (DRAFT)

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

- Application received June 14, 2002.
- Additional Information submitted by Florida Rock on September 5, 2002.
- Current Title V Operation Permit 0010087-002-AV issued January 11, 2002.
- 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.
- Construction permit modification (PSD-FL-228A and 0010087-003-AC) issued on July 13, 2000, to add EPA Test Method 25A to measure volatile organic compounds (VOC) emissions.
{Permitting note: This permit modification was originally issued as 0010087-003-AC, PSD-FL-228.}
- Construction permit modification (PSD-FL-228B and 0010087-004-AC) issued on August 20, 2001, to extend the permit expiration date to December 31, 2001, install VOC monitor, and install multi-stage combustion (MSC) calciner.
{Permitting Note: This permit modification was originally issued as 0010087-003-AC, PSD-FL-228A.}
- Technical Evaluation and Preliminary Determination issued on November 19, 2002.

DRAFT

SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

EU 003. KILN SYSTEM

The proposed project affects the following existing unit:

ID No.	Emission Unit Description
003	Kiln system. The kiln system (or pyroprocessing system) includes the 156.5 foot kiln, a four-stage preheater tower, a 25,300 cubic foot multi-stage combustion (MSC) calciner, a tire feed system, two coal burners and ancillary equipment. Particulate emissions are controlled by an electrostatic precipitator.

ADMINISTRATIVE REQUIREMENTS

Previous Permit Conditions: Previous permit conditions (as previously amended) apply. This permit authorizes a production increase from the kiln and associated equipment. The following conditions are in addition to or replace those of the previous air construction permit.

CONSTRUCTION ACTIVITIES

Production Increase: No physical construction activities will be conducted in association with the production increase. The increase reflects the as-built capabilities of the kiln and of the pollution control systems. [Application]

NOTIFICATIONS AND REPORTS

Notifications: Within one week of increasing production rates to levels greater than previously permitted, the permittee shall notify the Compliance Authority that the project has commenced and provide a general schedule of activities associated with operation and testing (including test protocols) at the revised production rates.

SPECIFIC CONDITIONS

- The kiln clinker production rate shall not exceed 110.2 tons per hour (TPH) on a 24-hr rolling average, 115.0 TPH (peak hourly rate), and 2650 tons per day (TPD). On an annual basis, the clinker production rate shall not exceed 800,000 tons per year (TPY). The clinker production rate will be determined as a function of the preheater dry feed rate. The preheater dry feed rate is limited to 173 TPH on a 24-hr rolling average, 180 TPH (peak hourly rate), and 1,360,000 TPY. Continuous operation is allowed (8,760 hours per year) as long as the 800,000 TPY clinker limit is not exceeded.

{Permitting note: Replaces Specific Condition 3 of the original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC as amended) that read as follows: "The kiln clinker production rate shall not exceed 95.8 tons per hour (TPH) and 2300 tons per day (TPD). On an annual basis, the clinker production rate shall not exceed 712,500 tons per year (TPY). The clinker production rate will be determined as a function of the preheater dry feed rate. The preheater dry feed rate is limited to 149.9 TPH and 1,114,350 TPY. Continuous operation is allowed (8,760 hours per year) as long as the 712,500 TPY clinker limit is not exceeded. [Rule 62-210.200(225), F.A.C.]"}

- Emissions from the facility shall comply with the pollutant limits specified in attached Tables I and II.

{Permitting note: Replaces Specific Condition 5 and Tables I and II of the original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC as amended in August 2001) that read as follows: "Emissions from the facility shall comply with the pollutant limits specified in attached Tables I and II. Following completion of the performance tests required herein, the interim SO2 emission limit may be revised downward based on the test results (and continuous emission monitoring data) such that overall control attained for all air pollutants including, SO2, NOx, VOC, and CO, is optimized. The Department shall issue the final SO2 emission limits within 120 days following receipt of all test results required by this

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

EU 003. KILN SYSTEM

permit. Any changes will be publicly noticed. FRI will install any additional control equipment during the two year optimization period to insure compliance with the NO_x limit of 2.8 lb/ton clinker by the end of the period.”}

3. Permittee shall operate the NO_x and SO₂ continuous monitoring equipment in accordance with the following:
 - (a) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR 60, adopted by reference at 62-204.800(7)(e), F.A.C., data shall be collected concurrently by both the continuous emission monitors and the reference test methods.
 - (b) The span value of the continuous emission monitoring system shall be no less than 150 percent and no greater than 250 percent of the maximum permitted emissions of the inline kiln/raw mill.
 - (c) The 24-hour daily arithmetic averages shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume (dry basis). The 1-hour arithmetic averages shall be calculated using the one-minute data points generated by the continuous emission monitoring system. At least two data points separated by a period of 15 minutes or more shall be used to calculate each 1-hour arithmetic average.
 - (d) At a minimum, valid continuous emission monitoring system hourly averages shall be obtained for 75 percent of the operating hours per day, and for 90 percent of the operating days per calendar quarter that the plant is producing clinker. If less than 90 percent of the hourly averages for the operating days for any given calendar quarter is available, within 45 days following the end of the quarter, the permittee will provide a report with corrective actions.
 - (e) All valid continuous emission monitoring system data must be used in calculating the emissions averages. When continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, for periods of time in excess of those described in specific condition 6:c(4), emissions data shall be obtained using other monitoring systems as approved by the Department (e.g., the reference methods in 40 CFR 60 Appendix A, Method 19, such as equation 19-19 where E_{hj} is in terms of lbs/ton clinker) to provide, as necessary, reasonable assurance.
 - (f) In the event the plant is not in operation and there is no data, the system records zeroes. In the event the plant is firing fuel but producing no clinker, the system records pollutant mass emissions rates (i.e., lbs/hour), but the system records zeroes for the production-normalized emission rates (i.e., lbs/ton clinker). These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.
 - (g) 30-day NO_x rolling average is calculated through the integrated and automated data acquisition and handling system of the continuous emission monitoring system, according to the procedures in 40 CFR 60 Appendix A, Method 19.

{Permitting note: This specific condition is in addition to the requirements of Tables I and II of this permit as well as Specific Condition 6 of the original Air Construction Permit AC01-267311 (renumbered 0010087-001-AC as amended in August 2001), as incorporated into the final Title V Air Operation Permit No. 0010087-002-AC.}
4. Testing to demonstrate compliance with each emission standard specified in Tables I and II shall be conducted within 90 days of issuance of this permit. Results shall be submitted to the compliance authority within 135 days of issuance of this permit.

APPENDIX GC

CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62-4.160, F.A.C.]

- 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:
- Have access to and copy and records that must be kept under the conditions of the permit;
 - Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - 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 description of and cause of non-compliance; and
 - 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.

APPENDIX GC

CONSTRUCTION PERMIT GENERAL CONDITIONS [RULE 62-4.160, F.A.C.]

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 I – Allowable Opacity Limitations
Florida Rock Industries

0010087-006-AC

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material Process Rate = 1,360,000 TPY Dry Feed			
Fugitive	Material Processing		10
Fugitive	Handling and Storage		10
Fugitive	Crusher		15
Emission Unit 2: Raw Mill System 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 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: tires		10
	Tires (30 % of total heat input)		
Emission Unit 4: Clinker Handling 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 Process Rate = 136 TPH Clinker			
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 Process Rate = 500 TPH Cement Unloading			
Q-14	Cement silo loadout	0.01 gr/dscf	5
Q-17	Cement silo loadout	0.01 gr/dscf	5
Q-21	Cement silo loadout	0.01 gr/dscf	5
R-12	Cement bagging operation	0.01 gr/dscf	5
Emission Unit 7: Coal Handling and Grinding Process Rate = 14 TPH Pulverized Coal			
S-17	Coal Mill	0.01 gr/dscf	5
S-21	Pulverized coal storage bin	0.01 gr/dscf	5
Fugitive	Coal Handling and Storage		5/20

Table II – Allowable Emissions
Florida Rock Industries
 0010087-006-AC

Pollutant	BACT Emission Limit		Emission Rate*		Basis**
	lb/ton clinker	lb/ton dry feed	lb/hr	ton/yr	
PM (kiln)	0.23	0.14	25.9	94	BACT
PM ₁₀ (kiln)	0.20	0.12	22.1	80	BACT
PM (cooler)	0.14	0.08	15.4	56	BACT
PM ₁₀ (cooler)	0.12	0.07	13.0	47	BACT
SO ₂ (kiln) ⁺	0.16	0.10	17.7	64	BACT
NO _x (kiln)**	2.45	1.50	271	980	BACT
H ₂ SO ₄ (kiln)	0.0025	0.0016	0.25	1	BACT
CO (kiln)	2.50	1.55	276	1000	BACT
VOC (kiln)	0.11	0.075	11.8	43	BACT

Notes:

- * The kiln emission rate includes fuel oil combustion emissions from the raw mill air heater.
- ** Represents revised NO_x limit (30-day rolling average) based on continuous monitoring data.
- + Represents revised SO₂ limit (24-hour rolling average) based on compliance tests and continuous monitoring data.
- ++ BACT values are representative of kiln permitted in 1996 and reflective of as-built configuration and not as a new kiln.

Table I – Allowable Opacity Limitations
 Florida Rock Industries

0010087-001-AC

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material Process Rate = 1,211,250 TPY Processed			
Fugitive	Material Processing		10
Fugitive	Handling and Storage		10
Fugitive	Crusher		15
Emission Unit 2: Raw Mill System Process Rate = 212 TPH Raw Materials			
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 Process Rate = 364 MMBTU/heat input			
E-21	Kiln Operations (ESP)		10
E-21	In-process fuel: coal		10
E-21	In-process fuel: tires		10
	Tires (30 % of total heat input)		
Emission Unit 4: Clinker Handling Process Rate = 95.83 TPH Clinker			
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 Process Rate = 136 TPH Cement Output			
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 Process Rate = 500 TPH Cement Unloading			
Q-14	Cement silo loadout	0.01 gr/dscf	5
Q-17	Cement silo loadout	0.01 gr/dscf	5
Q-21	Cement silo loadout	0.01 gr/dscf	5
R-12	Cement bagging operation	0.01 gr/dscf	5
Emission Unit 7: Coal Handling and Grinding Process Rate = 14 TPH Pulverized Coal			
S-17	Coal Mill	0.01 gr/dscf	5
S-21	Pulverized coal storage bin	0.01 gr/dscf	5
Fugitive	Coal Handling and Storage		5/20

Table II – Allowable Emissions
Florida Rock Industries
 0010087-004-AC

Pollutant	BACT Emission Limit		Emission Rate *		Basis
	lb/ton clinker	lb/ton dry feed	lb/hr	ton/yr	
PM (kiln)	0.31	0.20	30.00	110.50	BACT
PM ₁₀ (kiln)	0.26	0.17	25.50	93.93	BACT
PM (cooler)	0.16	0.10	14.99	55.70	BACT-NSPS
PM ₁₀ (cooler)	0.13	0.09	12.71	47.34	BACT
SO ₂ (kiln) ⁺	0.28	0.18	28.82	108.55	BACT
NO _x (kiln)**	2.80	1.80	268.30	1018.00	BACT
H ₂ SO ₄ (kiln)	0.0025	0.0016	0.25	1	BACT
CO (kiln)	3.60	2.30	346.38	1288.60	BACT
VOC (kiln)	0.12	0.08	11.55	42.90	BACT
Beryllium	TO BE DETERMINED BY FUTURE STACK TESTS				BACT

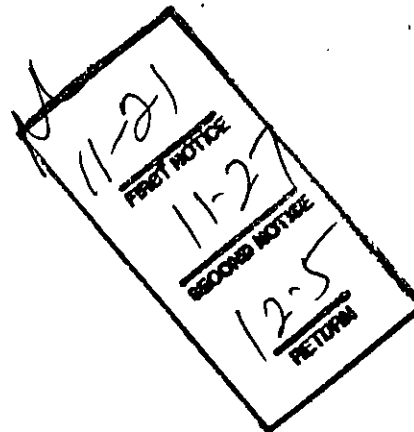
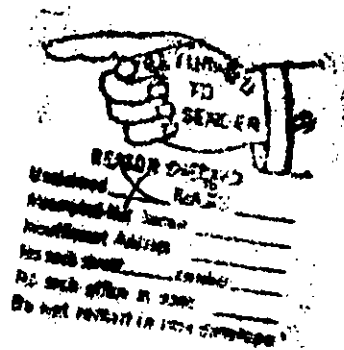
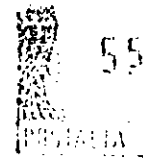
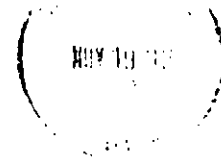
Notes:

- * The kiln emission rate includes fuel oil combustion emissions from the raw mill air heater.
- ** After startup and until December 31, 2001, the kiln shall not exceed a NO_x limit of 3.8 lb/ton clinker and 2.8 lb/ton clinker thereafter (30-day rolling average). A compliance demonstration with the 2.8 lb/ton limit for the first 30-day period following December 31 (January 1-30, 2002) shall be submitted by Florida Rock to the Northeast District Office by February 15, 2002. The Department may revise the limit to less than 2.8 lb/ton clinker (30-day rolling average) based on continuous emission monitoring data covering the period January 1-March 31, 2002 to be submitted by Florida Rock to the Department's Northeast District by April 15, 2002.
- + The Department may revise the SO₂ limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

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