STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

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

DEP File No. 0010087-006-AC, PSD-FL-228C
Thompson S. Baker Cement Plant
Newberry, Alachua County

_____/

Enclosed is Final Permit Number 0010087-006-AC (PSD-FL-228C). This permit authorizes an increase in clinker production limits at the Florida Rock Industries, Inc., Thompson S. Baker Cement Plant located at 4000 NW County Road 235 in Newberry, Alachua County. This permit also reduces the allowable emissions of air pollutants per unit of production. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, 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 must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina L. Vielhauer

Trina 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 mailed by U.S. Mail before the close of business on 12/11/02 to the person(s) listed:

Cary O. Cohrs, Florida Rock (*)
Steven Cullen, P.E., Koogler & Associates
Christopher Kirts, DEP NWD
Lalit Lalwani, Alachua County EPD

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.

Victoria Gibson December 11, 2002
(Clerk) (Date)

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 E. 21st Street
Jacksonville, FL 32206

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* | B. Date of Delivery 12/13/02

C. Signature
X M.L. Drozy ☒ 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. 7001 0320 0001 3692 7423

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

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

Postmark Here

Sent To: John D. Baker
Street, Apt. No.; or PO Box No.: 155 E. 21st St.
City, State, ZIP+4: Jacksonville, FL 32206

7001 0320 0001 3692 7423

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. Cary O. Cohrs
Vice President of Operations
Florida Rock Industries, Inc.
Cement Group
PO Box 459
Newberry, FL 32669

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* Becky Hurley | B. Date of Delivery 12/16

C. Signature
X Becky Hurley ☐ 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. 7001 0320 0001 3692 7393

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

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

Postmark Here

Sent To: Cary O. Cohrs
Street, Apt. No.; or PO Box No.: PO Box 459
City, State, ZIP+4: Newberry, FL 32669

7001 0320 0001 3692 7393

PS Form 3800, January 2001 See Reverse for Instructions

FINAL DETERMINATION

FLORIDA ROCK INDUSTRIES, INC.
THOMPSON S. BAKER CEMENT PLANT
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

December 9, 2002

I. INTRODUCTION

The Florida Department of Environmental Protection (Department) distributed an "Intent to Issue Permit" package for a proposed production increase at the Thompson S. Baker Cement Plant in Newberry, Alachua County, on November 19, 2002. (The package included one copy of 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 applicant published the Public Notice in the Gainesville Sun on November 20, 2002. The Department received the proof of publication on December 5, 2002.

The Department did not receive comments on the draft air construction permit from the public, the National Park Service, nor the U.S. Environmental Protection Agency (EPA). The Department received comments from Mr. Fred Cohrs on November 26, 2002 and from Koogler & Associates, the applicant's consultant, on December 5, 2002. The following sections summarize the Department's response to the comments, the resulting revisions to the air construction permit, and the final determination of emission limits applicable to the plant.

II. RESPONSE TO COMMENTS

Comments regarding the preheater feed rate:

Mr. Fred Cohrs, recently retired from Florida Rock Industries (FRI) and formerly president of Polysius USA, is an acknowledged expert in cement manufacturing. Mr. Cohrs submitted comments on the draft permit that clarify raw material handling.

As noted in Mr. Cohrs' comments, physical losses of feed are recaptured in the pollution control devices, including the ESP and the nuisance dust collector. This recycled dust is combined with "virgin" raw materials before being fed into the preheater tower. Depending on plant configuration and operation, the recycled dust can be input into the raw mill/feed storage silos or it can be combined with the material withdrawn from the raw mill/feed storage silos prior to being fed into the preheater tower. The weigh scales are downstream of the recycled dust addition; in other words, Florida Rock measures the material that is input into the preheater, which can be greater than the output from the feed storage silo. To reflect the recycled feed, Mr. Cohrs suggested that the kiln feed limit be raised to 183.4 tons of preheater dry feed per hour to produce the permitted 110.2 tons of clinker per hour (approximately 1.66 tons of kiln feed per ton of clinker produced).

Response:

The Department recognizes that the "preheater dry feed rate" should be specified for the Florida Rock facility to represent the mass of material (on a dry basis) entering the preheater/kiln, as opposed to the mass of material exiting the raw mill/kiln feed storage silo. Because the recirculation patterns for the recycled dust vary, it is difficult to set a meaningful limit otherwise. Sometimes the recycled dust is added to virgin material prior to the raw mill/kiln feed storage silo; sometimes it is added to the material withdrawn from the feed storage silo.

The Department accepts the applicant's argument that, on average, 183.4 tons of preheater dry feed (i.e., the mass of material – on a dry basis – that is actually fed into the preheater tower

and the kiln) are required to produce 110.2 tons of clinker. The final permit will be revised to incorporate into all feed rate limits this ratio of "preheater dry feed" to clinker.

REVISED PERMIT:

Specific Condition 1. 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 the mass of material (on a dry basis) entering the preheater/kiln. The preheater dry feed rate is limited to ~~173~~ 183.4 TPH on a 24-hr rolling average, ~~180~~ 191.4 TPH (peak hourly rate), and ~~1,360,000~~ 1,331,000 TPY. Continuous operation is allowed (8,760 hours per year) as long as the 800,000 TPY clinker limit is not exceeded.

Comments regarding the continuous emissions monitoring systems (CEMS) specifications:

The applicant's consultant noted two minor typographical errors and suggested one other change to the specifications for the CEMS (specific condition 3 of the draft permit). In specific condition 3(a), the reference to Performance Specification 4A should refer to Performance Specification 2; Performance Specification 4A is the specification for carbon monoxide (CO) monitors while Performance Specification 2 is the correct specification for nitrogen oxide (NO_X) and sulfur dioxide (SO_2) monitors. Also, in specific condition 3(e), the reference to "specific condition 6.c(4)" should instead refer to "specific condition 3(d)."

Specific condition 3(d) specifies the minim valid CEMS hourly averages (i.e., "uptime") both on a daily basis (75 percent of the operating hours per day) and a quarterly basis (90 percent of the operating days per calendar quarter). The applicant's consultant noted that it would be less confusing to make these operating requirements consistent with similar operating requirements of Federal air rules (New Source Performance Standards, NSPS, and National Emission Standards for Hazardous Air Pollutants, NESHAP). In other words, the commenter requested an elimination of the daily operating requirement along with making the quarterly "uptime" requirements consistent with the Federal programs.

Response:

The Department is revising the specifications for specific condition 3 to address the two minor typographical errors.

Regarding the CEMS operating requirements, the Department believes that a quarterly minimum valid "uptime" requirement is sufficient to assure adequate operation of the CEMS. The Department will revise the permit to remove the daily uptime requirement and tighten the quarterly uptime requirement to 95 percent. Although the NO_X and SO_2 CEMS are not required pursuant to rule, this revision is nevertheless consistent with the approach followed for CEMS subject to the NSPS General Provisions [see 40 CFR 60.7(d)(2)]. This revision is also more stringent than the requirements for CEMS pursuant to the NESHAP for Portland Cement Plants [see 40 CFR 63.1354(b)(10)].

REVISED PERMIT:

Specific Condition 3(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~~ 95 percent of the operating ~~days~~ hours per calendar quarter that the plant is producing clinker. If less than ~~90~~ 95 percent of the hourly averages for the operating ~~days~~ hours 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.

III. FINAL EMISSION LIMITS

The emission limits proposed in the Technical Evaluation and Preliminary Determination are hereby finalized. Table 1 lists the new limits finalized by the Department for comparison with the emission limits previously applicable to the plant.

Table 1. Previously Permitted and New Final Emission Limits – FRI Newberry

Pollutant	Previously Permitted Limits		New Final Limits		
	lb/ton clinker	TPY [1]	lb/ton clinker	TPY [1]	Basis [2]
PM (kiln)	0.31	110	0.23	94	Non-BACT
PM_{10} (kiln)	0.26	94	0.20	80	Non-BACT
PM (cooler)	0.16	56	0.14	56	Non-BACT
PM_{10} (cooler)	0.13	47	0.12	47	Non-BACT
SO_2 (kiln) [3]	0.28	109	0.16	64	BACT
NO_X (kiln) [4]	2.80	1018	2.45	980	BACT
H_2SO_4 (kiln)	0.0025	1	0.0025	1	BACT
CO (kiln)	3.60	1289	2.5	1000	Non-BACT
VOC (kiln)	0.12	43	0.11	43	Non-BACT
Beryllium (kiln)	Emission limit to be determined; emissions ~ $5x10^{-7}$ lb/ton clinker.		No emissions limit will be set.		

Notes:

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

[2] "Non-BACT" implies emission limits previously set as BACT were revised downward to avoid triggering a significant net emissions increase – and therefore a Prevention of Significant Deterioration (PSD) review – upon the production increase. "BACT" values are those limits for which the original permit's BACT determination required the Department to re-address the emission limit after verification of actual operation through stack tests and CEMS data. "BACT" values are therefore representative of a kiln permitted in 1996 and are reflective of the as-built configuration of Florida Rock. The above listed "BACT" values would not necessarily be applicable to a new kiln undergoing a BACT review today or in the future.

[3] Represents revised SO_2 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.

IV. CONCLUSION

The Department concludes that the final limitations for SO_2 and NO_x are 0.16 and 2.45 lb/ton clinker respectively. The revised 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 are included in the final permit to incorporate the requested production increases, the revised emission limitations, and the corresponding CEMS specifications for demonstrating compliance.

V. DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Greg DeAngelo, Permit Engineer
A. A. Linero, P.E. Administrator
New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Trina Vielhauer, Chief
Bureau of Air Regulation

12/10/02
Date

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

12/10/02
Date

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

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

Howard L. Rhodes, Director
Division of Air Resources Management

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 (SO_2), carbon monoxide (CO), particulate matter (PM/PM_{10}), 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.

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

- Comments submitted by Florida Rock on November 22, 2002.
- Technical Evaluation and Preliminary Determination issued on November 19, 2002.
- Additional Information submitted by Florida Rock on September 5, 2002.
- Application received June 14, 2002.
- Current Title V Operation Permit 0010087-002-AV issued January 11, 2002.
- 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.}
- 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.}
- 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.

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.]

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

1. 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 the mass of material (on a dry basis) entering the preheater/kiln. The preheater dry feed rate is limited to 183.4 TPH on a 24-hr rolling average, 191.4 TPH (peak hourly rate), and 1,331,000 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.]"}

2. 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 SO_2 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, SO_2, NO_X, VOC, and CO, is optimized. The Department shall issue the final SO_2 emission limits within 120 days following receipt of all test results required by this 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 SO_2 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 2 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 95 percent of the operating hours per calendar quarter that the plant is producing clinker. If less than 95 percent of the hourly averages for the operating hours 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 3(d), 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.

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 I

ALLOWABLE OPACITY LIMITATIONS

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material 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 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

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_2SO_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 SO_2 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.

Florida Department of
Environmental Protection

Memorandum

TO: Howard Rhodes

THRU: Trina Vielhauer
Al Linero

FROM: Greg DeAngelo

DATE: December 6, 2002

SUBJECT: Florida Rock Thompson S. Baker Cement Plant – Newberry, Alachua County
Production Increase and Emission Limit Finalization
DEP File No. 0010087-006-AC (PSD-FL-228C)

The Final Permit for this project is attached for your approval and signature. This permit authorizes:

- Increasing the daily clinker production limit from 2,300 tons per day (TPD) to 2,650 TPD and the annual clinker production limit from 712,500 tons per year (TPY) to 800,000 TPY.
- Increasing the dry preheater feed rate limits to correspond with the new clinker production rate limits. Defining more clearly what is meant by "dry preheater feed rate" and how it should be measured.
- Setting (lowering) the final NO_X limitation at 2.45 lb/ton of clinker.
- Setting (lowering) the final SO_2 limitation at 0.16 lb/ton clinker.
- Revising other emission limitations downward (on a lb/ton basis) to avoid significant increases in allowable annual emissions.
- Following completion of the quarterly testing program required by Florida Rock's current permit, removing the beryllium limit (in accordance with guidance from EPA that removed beryllium as a pollutant regulated under the PSD program).
- Adopting continuous emissions monitoring system operation and reporting protocols to complement the new, lower emission limits for NO_X and SO_2.

The production 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 technical evaluation and preliminary determination dated November 19, 2002.

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 (SO_2), 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 SO_2 and VOC standards are very stringent and reflect the excellent raw materials. The SO_2 limit is the lowest in the country. Most new projects require large scrubbers to control SO_2 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 permit.

Attachments

TTV/AAL/gpd

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

January 17, 2003

CERTIFIED MAIL - RETURN RECEIPT

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

Alachua County - AP
Florida Rock Industries, Inc.
Thompson S. Baker Plant- Newberry
AIRS ID No.: 0010087
Permit Revision to incorporate 40 CFR 63, Subpart LLL

Dear Mr. Baker:

On January 10, 2003, the Northeast District Office received a faxed letter from Henry Gotsch, Environmental Manager at Florida Rock Industries, Inc., requesting an air permit revision to permit 0010087-002-AV in order to incorporate 40 CFR 63, Subpart LLL.

In order to be accepted as an application for permit modification, the request must be submitted on prescribed DEP Form No. 62-210.900(1) in accordance with Rule 62-213.430(4), F.A.C. Furthermore, because the request may result in the potential amendment to PSD permit(s) and possibly BACT Determination(s), the application should be submitted to the attention of Trina Vielhauer, Bureau Chief, at the Tallahassee Office for processing by the New Source Review Group. Pursuant to Rule 62-4.050(2), F.A.C., the application is to be submitted in quadruplicate.

Please note that the compliance plan in permit 0010087-002-AV, Section II. Facility-wide Condition No. 7., states that the permittee shall apply for a revision as well as demonstrate compliance with Subpart LLL requirements no later than January 31, 2003.

Should you have any questions concerning this matter, please contact Leslie Maybin at (904) 807-3242.

Sincerely,

Christopher L. Kirts, P.E
District Air Program Administrator

CLK:LM
cc: Trina Vielhauer – BAR
Gregg Worley, EPA Region IV
Henry Gotsch, Environmental Manager - Florida Rock Industries, Inc.
Steve Cullen, P.E. – Koogler & Associates

RECEIVED

DEC 06 2002

BUREAU OF AIR REGULATION

24212

NO_____

THE GAINESVILLE SUN
Published Daily and Sunday
GAINESVILLE, FLORIDA

STATE OF FLORIDA
COUNTY OF ALACHUA

Naomi Williams-Jordan

Before the undersigned authority appeared.....

Classified Assistant Manager

Who on oath says that he/she is.....of THE GAINESVILLE SUN, a daily

newspaper published at Gainesville in Alachua County, Florida, that the attached copy of advertisement, being a

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

.....

CEMENT PLANT – NEWBERRY, FL. Draft Air Construction/ Permit No. 0010087-006AC (PSD-FL-228C)

in the matter of .....

in the.....Court, was published in said newspaper in the issue o

NOVEMBER 20TH

.....2002

Affidavit further says that the said THE GAINESVILLE SUN is a newspaper published at Gainesville, in said Alachua County, Florida, and that the said newspaper has heretofore been continuously published in said Alachua County, each day, and has been entered as second class mail matter at the post office in Gainesville, in Said Alachua County, Florida, for a period of one year next preceding the first publication of the attached copy Of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount for publication in the said newspaper.

Sworn to and subscribed before me this

4 day of Dec A.D., 2002

Sharon K Williams

(seal) Notary Public

Naomi Williams-Jordan

SHARON K. WILLIAMS
MY COMMISSION # CC 814219
EXPIRES: March 3, 2003
Bonded Thru Notary Public Underwriters

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 (SO_2), 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 no 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 SO_2 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, SO_2, opacity and total hydrocarbons as well as annual testing requirements for

0001 LEGAL NOTICES

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 Section120.60(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 which-ever 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., 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 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 whishes 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 accor-

emissions monitoring equipment for dioxin and furans 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 (143) 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 to become 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.

(#24212) 11/20

12/04/2002 **Best Available Copy** **Sun Classified Department** 1:47 PM

Acct: 3524724722Fla **Name:** Florida Rock **Adid:** 2074139

Ph: 3524724722 **Class Rate:** **Disp Rate:**

4000 NW CR 235 **Credit Status:**

Newberry FL 32669 **Reply Request**

Paytype BL **Rate** LR LEGAL RATE 2000 **Rep:** 46

Source F **Class** 0001 Legal Notices ☐ **TFN**

Start 11/20/02 **Days** 1 **Rate lss** 1 **Stop** 11/20/02

	0.00	**Words.....**	1,349	**Price**	612.88
	0.00	**Lines.....**	188	**Discount**	0.00
	0.00	**Depth.....**	188.00	**Commis**	0.00
	0.00	**Columns.....**	2	**Net**	612.88
	0.00	**Graphic.....**	0	**St Tax**	0.00
		St Words.	13	**Fed Tax**	0.00
		☐ **Boxed Ad**		**Total**	612.88
				Payment	0.00
				App Cr.	0.00
				Balance	0.00

Free Day 0

Copy Line PUBLIC NOTICE O

Sort String PUBLIC NOTICE

On Hold

Product Code

☐ **Ad Killed**

Tear Sheets

PO # 24212 11/20

Comments

24212 11/20

Reason for Discount

Editions

E1,

RECEIVED
DEC 06 2002
BUREAU OF AIR REGULATION

GENERAL OFFICE: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products

November 22, 2002

Mr. A.A. Linero
Administrator, New Source Review Section
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Re: Draft Air Construction Permit No: 0010087-006-AC (PSD-FL-228C)
Comments by Applicant Florida Rock Industries, Inc.

Dear Mr. Linero:

Our comments concern the amount of kiln feed required to produce a given quantity of clinker. Both kiln feed and clinker are used as bases for permitted emissions in subject application.

Under Section III, Emission Unit, Specific Conditions, EU 003 Kiln System, Specific Condition 1, the ratios of kiln feed to clinker are shown for the various production rates, expressed in tons per hour (TPH), tons per day (TPD) and tons per year (TPY), both for clinker and the respective amounts of kiln feed required to produce this amount of clinker.

Both the original construction permit No.: 0010087-001-AC and the new draft permit contain the correct ratios of kiln feed to clinker. Florida Rock 's comments have to do only with the definition of kiln feed as seen by the plant's weigh scales, which measure both the 'kiln feed' and the circulating dust load.

Owing to the location of the measuring point of the amount of material fed into the preheater, the quantity of feed represents both the new 'kiln feed' and the dust recycled from the various pollution control devices, which include the ESP and a nuisance dust collector, which vents the kiln feed transport system.

The streams of 'kiln feed' and recycled dust are combined prior to measuring and controlling the total flow of material into the lift pump, which conveys the material to the preheater.

To account for this circulating load, the amount expressed as kiln feed must be increased appropriately to produce the permitted amount of clinker.
Measurements of clinker production and careful tracking of new feed production by the raw mill have shown the average circulating load to be 10.4 tons per hour. When this amount is added to the 'kiln feed' rate of 173 TPH to produce the permitted amount of

clinker of 110.5 TPH, the feed rate measured by the scale and reported by the process control devices is actually 183.4 TPH.
We respectfully request, therefore that the department recognizes the existence of the circulating dust load and agrees that the 'kiln feed' rate as seen by the scale must be increased by the amount of the recycled dust.

The above comments are for clarification only and are not intended to nor should they have any effect on the draft permit as written.

Two block flow diagrams are attached to illustrate the flow conditions.
Attachment 1 shows the flow as depicted in the draft permit.
Attachment 2 shows the actual flow and the point of measurement including the recycled dust.

We would very much appreciate your considering making these comments a part of the final permit when granted.

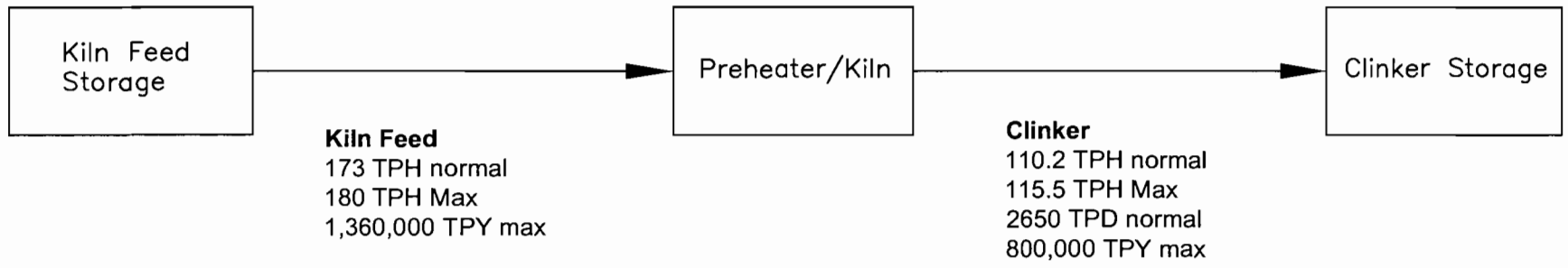
Sincerely,

Fred W. Cohrs

Fred W. Cohrs
Consultant to Florida Rock Industries, Inc.

FWC/

Attachments



Florida Rock Industries, Inc.

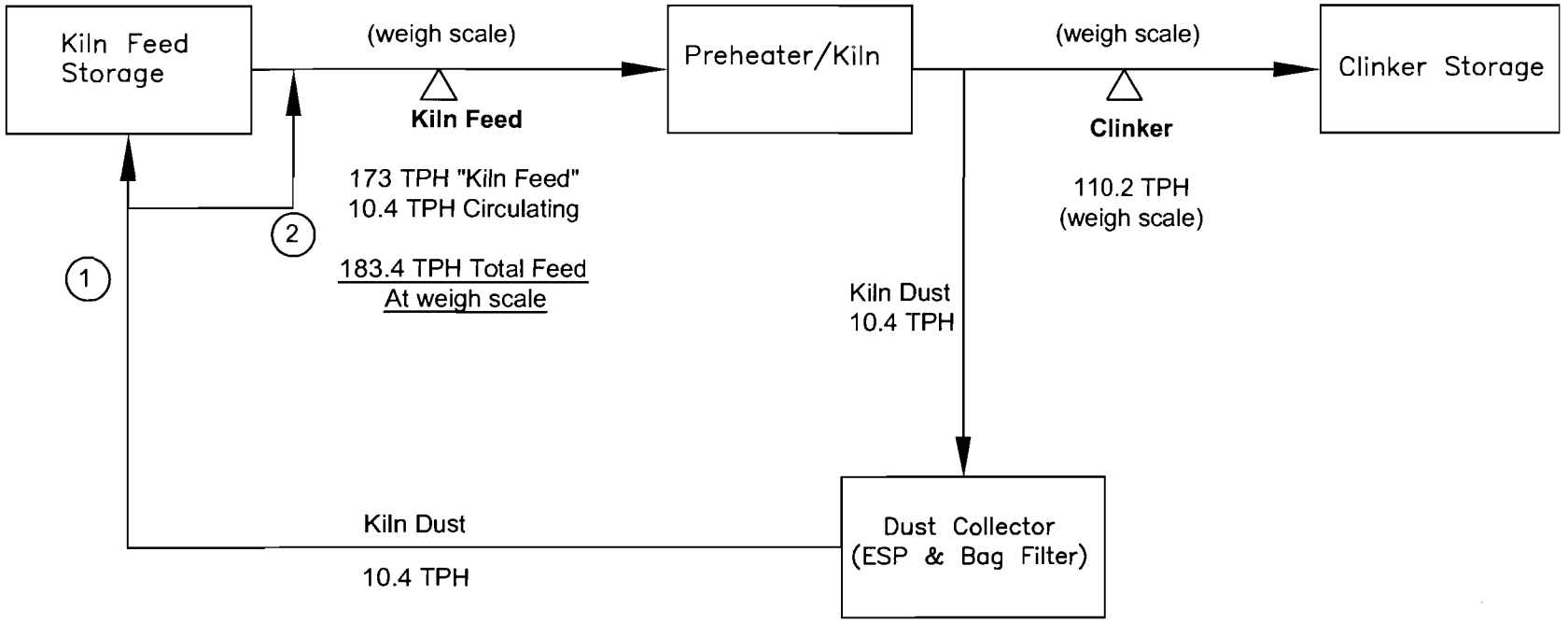
Material Flow Block Diagram
As expressed in Draft Air
Construction Permit No:
0010087-006-AC

Thompson S. Baker

Cement Plant

SCALE

Attachment 1



Note 1 - Direction of flow with raw mill operating

Note 2 - Direction of flow with raw mill down

Florida Rock Industries, Inc.

Material Flow Block Diagram
Actual Flow of Materials
and Measuring Points

Thompson S. Baker Cement Plant

SCALE

Attachment 2

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

Project No. 187-02-05

Fax

To:	Greg DeAngelo	
Fax No.:	850-922-6979	
From:	Dr Koogler	Fax No.: 352-377-7158
Date:	12/5/02	Time: 5:00
Sent By:	gkk	

This message consists of 1 page(s) PLUS this cover sheet.
If you experience difficulties with this transmission, please call 352-377-5822.

Remarks:

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

187-02-05

Memorandum

Via Fax: 850-922-6979

TO: Greg DeAngelo, FDEP, Tallahassee
FROM: John B. Koogler, Ph.D., P.E.
DATE: December 5, 2002
SUBJECT: Florida Rock Industries, Inc.
Thompson S. Baker Cement Plant
Comments on Draft Permit 0010087-006-AC (PSD-FL-228C)

For the record, I would like to provide comments on two of the conditions related to the operating requirements of the NO_X and SO_2 CEMS for the above captioned facility. Specific Condition 3 of the above captioned draft air construction permit addresses these conditions.

Specific Condition 3(d) establishes criteria for the operating times of both the NO_X and SO_2 CEMS; including the requirement that data shall be obtained for 75 percent of the operating hours per day. As I discussed with you, I think it would be less confusing if the operating requirements of the two CEMS were made consistent with the operating requirements specified in Federal New Source Performance Standards (40 CFR 60.7) and the requirements of Federal NESHAP (40 CFR 63, Subpart LLL). This would eliminate the daily operating requirement of the CEMS and will make the quarterly operating times (and the attendant reporting requirements) consistent with the two applicable Federal standards.

In Specific Condition 3(e), reference is made to "...specific condition 6.c(4), ..." As we discussed, this reference refers to an earlier draft of the air construction permit and is longer applicable. This typographical error needs to be corrected.

I appreciate the opportunity to provide you with these comments. If there are any questions, please feel free to contact me.

JBK/jhm
cc: Cary Cohrs, FRI
Fred Cohrs, FRI

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 (SO_2), 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 SO_2 and VOC standards are very stringent and reflect the excellent raw materials. The SO_2 limit is the lowest in the country. Most new projects require large scrubbers to control SO_2 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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: Karie Scarth — B. Date of Delivery: 11-22-02

C. Signature: X Karie Scarth — ☐ 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. 7001 0320 0001 3692 7584

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

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

Postmark Here

7001 0320 0001 3692 7584

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

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. ABox 2309
Gainesville, FL 32602-2309

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: J. Konish — B. Date of Delivery: 11/21/02

C. Signature: X — ☐ 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 7001 0320 0001 3692 7614

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

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

Postmark Here

7001 0320 0001 3692 7614

Sent To: James J. Konish
Street, Apt. No. or PO Box No.: PO 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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: Shari Bergquist — B. Date of Delivery: 11/12/02

C. 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

2. Ar 7001 0320 0001 3692 7577

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

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

Postmark Here

7001 0320 0001 3692 7577

Sent To: Robert K. Hutchinson
Street, Apt. No. or PO Box No.: PO 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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: Amanda Cox — B. Date of Delivery: 11-12-02

C. Signature: X 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

2. 7001 0320 0001 3692 7560

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

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

Postmark Here

7001 0320 0001 3692 7560

Sent To: Chris Bird
Street, Apt. No. or PO Box No.: 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

2. A 7001 0320 0001 3692 7621

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

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

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

Postmark Here

7001 0320 0001 3692 7621

Sent To Mr. John D. Baker, President
Street, Apt. No.; or PO Box No. Florida Rock Industries, Inc.
City, State, ZIP+4 155 East 21 Street
Jacksonville, Florida 32206

PS Form 3800, January 2001 See Reverse for Instructions

Department of Environmental Protection

Jeb Bush
Governor

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 L. Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

AAL/th

Enclosures

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 (SO_2), 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 L Vielhauer

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.

Victoria Gibson 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 (SO_2), 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 SO_2 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, SO_2, 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.

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 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

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 (SO_2), nitrogen oxides (NO_X), or particulate matter (PM/PM_{10}) 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 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.

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.

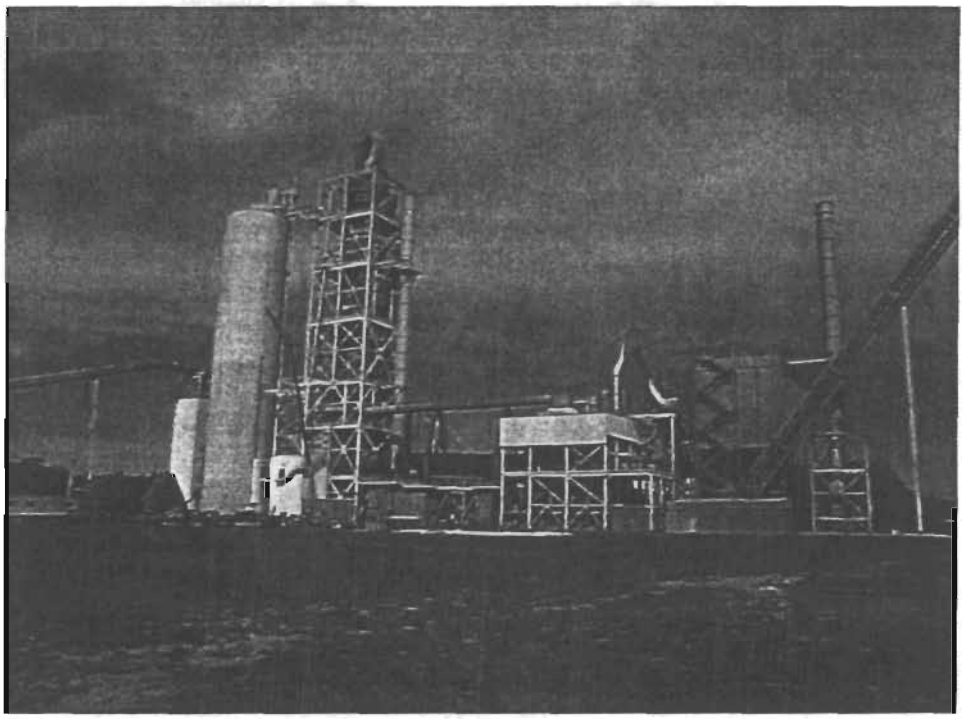
III. ORIGINAL PROJECT

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

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 SO_2 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_2SO_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

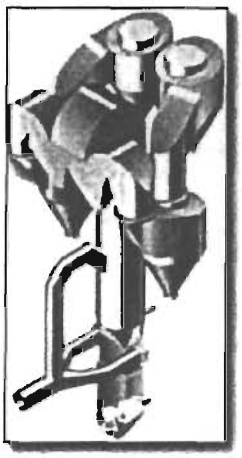
Notes:

* 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 SO_2 limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

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 pyrolized 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 (CO_2) 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 SO_2 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 SO_2 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 SO_2 limitations.

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)	~ 5×10^{-7} lb/ton clinker (five stack tests)

Based on the results, it is clear that emissions of SO_2 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 SO_2 emissions is that the dry preheater/calciner 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 SO_2 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 5.2×10^{-6} lb/hr to a maximum of 8.1×10^{-5} lb/hr. The average was 4.2×10^{-5} lb/hr, which equates to approximately 4.9×10^{-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.

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 ($\mu g/m^3$) at 7 percent oxygen. The average is approximately 0.56 $\mu g/m^3$. The average beryllium concentration based on the five stack tests conducted by FRI is 0.12 $\mu g/m^3$ 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.

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."

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_2SO_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 SO_2 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.

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 SO_2 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/PM_{10}, 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

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 (SO_2), carbon monoxide (CO), particulate matter (PM/PM_{10}), 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.

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.

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.]

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

1. 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.]"}

2. 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 SO_2 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, SO_2, NO_X, VOC, and CO, is optimized. The Department shall issue the final SO_2 emission limits within 120 days following receipt of all test results required by this

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 SO_2 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.

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 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_2SO_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 SO_2 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.

Previous Permit, December 1996

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_2SO_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.

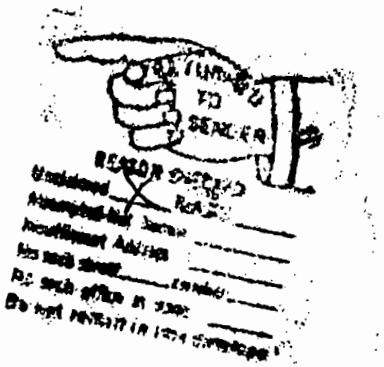
** After startup and until December 31, 2001, the kiln shall not exceed a NO_X limit of 3.8 lb/ton clinker and 2.8 lb/ton clinker thereafter (30-day rolling average). A compliance demonstration with the 2.8 lb/ton limit for the first 30-day period following December 31 (January 1-30, 2002) shall be submitted 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.

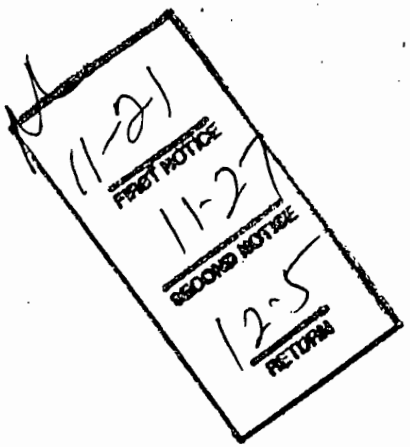
+ The Department may revise the SO_2 limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

rtment of Environmental Protection
Blair Stone Rd
lassee FL 32399-2400

7001 0320 0001 3692 7607

Best Available Copy





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 Rob Luna
Street, Apt. No. or PO Box No. PO Box 12416
City, State, ZIP+4 Gainesville, FL 32604

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0001 3692 7607

Mr. Rob Luna
NCFGP
P. O. Box 12416
Gainesville, FL 32604

Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee FL 32399-2400

7001 0320 0001 3692 7591

Best Available Copy

REASON CHECKED
- ☐ Moved, Left No Address
- ☐ Unable To Forward
- ☐ Attempted - Not Known
- ☐ Unclaimed
- ☐ Refused
- ☐ No Such Street
- ☐ No Such Number
- ☐ Insufficient Address

Refused
11/20
C.48

RECEIVED
NOV 27 2002
BUREAU OF AIR REGULATION

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

7001 0320 0001 3692 7591

Sent To: Arthur Saarinen
Street, Apt. No.; or PO Box No.: 2005 NW 24th St.
City, State, ZIP+4: Gainesville, FL 32605-3849

PS Form 3800, January 2001 — See Reverse for Instructions

Mr. Arthur Saarinen
2005 NW 24th Street
Gainesville, FL 32605-3849

RECEIVED
NOV 27
BUREAU OF AIR REG

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

September 5, 2002

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

Subject: Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant
Newberry, Alachua County, Florida
DEP File No. 0010087-006-AC (PSD-FL-228)
Response to Request for Additional Information dated July 12, 2002

Dear Mr. Linero:

This letter provides a response to your letter requesting additional information related to the application for an air construction permit for the existing Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant.

All of the information request items have been reproduced, preserving your numbering. Responses follow each item.

1. **Please note that in accordance with Page 2 of the application, we will act only on the changes requested in the air construction permit, but not on those requested in the Title V Operation permit (see pages 12 and 38). Please list the requested changes in accordance with the numeration in the original air construction permit. A separate Title V Operation Permit application may be required following final action on this construction permit application.**

Response: The requested changes are listed below in accordance with the numeration in the original air construction permit (AC01-267311), issued in 1996. The requested changes to the referenced Tables I and II are shown in accordance with the revised tables issued in 2001.

FROM

3. 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.]

TO

3. The kiln clinker production rate shall not exceed 110.42 tons per hour (TPH, 24-hour rolling average), 115.0 TPH (maximum per hour) and 2650 tons per day (TPD). On an annual basis, the clinker production rate shall not exceed 800,000 tons per year (TPY). The preheater dry feed rate will be determined as a function of the clinker production rate. The preheater dry feed rate is

limited to 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.

FROM

5. 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 SO_2 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, SO_2, NO_x, VOC, and CO, is optimized. The Department shall issue the final SO_2 emission limits within 120 days following receipt of all test results required by this 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.

TO

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

FROM

Table I Allowable Opacity Limitations
Florida Rock Industries

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

TO

Table I Allowable Opacity Limitations
Florida Rock Industries

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material			
Fugitive	Material Processing		10
Fugitive	Handling and Storage		10
Fugitive	Crusher		15
Emission Unit 2: Raw Mill System			
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			
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			
L-03	Clinker cooler discharge and breaker	0.01 gr/dscf	5
L-06	Clinker into clinker silos	0.01 gr/dscf	5
L-08	Clinker into clinker silos	0.01 gr/dscf	5
K-15	Clinker Cooler (ESP)		10
Emission Unit 5: Finish Grinding Operations			
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			
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			
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

FROM

Table II

Allowable Emissions
Florida Rock Industries

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_2SO_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 SO_2 limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

TO

Table II

Allowable Emissions
Florida Rock Industries

Pollutant	Emission Limit		Emission Rate[1]		Basis
	lb/ton clinker	lb/ton dry feed[2]	lb/hr	ton/yr	
PM (kiln)	0.235	0.138	25.90	94	Permittee
PM_{10} (kiln)	0.20	--	22.08	79.9	Permittee
PM (cooler)	0.139	0.082	15.39	55.70	BACT-NSPS
PM_{10} (cooler)	0.118	--	13.03	47.3	BACT
SO_2 (kiln)[3]	0.16	--	17.67	64	Permittee
NO_x (kiln)[4]	2.45	--	270.53	980	Permittee
H_2SO_4 (kiln)	0.0025	--	0.276	1	BACT
CO (kiln)	2.50	--	276.05	1000	Permittee
VOC (kiln)[5]	0.107	--	11.81	42.90	BACT

Notes:

[1] The kiln emission rate does not include fuel oil combustion emissions from the raw mill air heater.
[2] Emissions in units of lb/ton of dry feed are only applicable for particulate matter.
[3] 24-hour rolling average.
[4] 30-day rolling average.
[5] 24-hour rolling average.

2. **Describe in detail the manner in which the Multi-Stage Calciner (MSC) has been operated with respect to achievement of the present NO_x emission limit (2.8 lb/ton of clinker). Advise of any projected changes or adjustments in kiln burner and MSC operational parameters that will be implemented to insure achievement of the lower proposed emission rates for NO_x and CO. These parameters should include: breakdown of fuel and air distribution between kiln burner and MSC burners; typical percent and type of reburn fuel as well as oxygen levels in the lower stage of the calciner; similar information for the upper calciner; tertiary air considerations to finalize burnout; and achieve the lower CO levels also projected. Attach flow diagrams as necessary.**

Response: The Multi-Stage Calciner System (MSC) conversion was executed for the purpose of complying with the permitted NOx emission limit of 2.8 lb/ton clinker under normal and abnormal operating conditions, and provide operating latitude and process flexibility, while recognizing that the best conditions for reduction of NOx and CO are at the highest sustainable production rates within the capacity levels of the entire pyro-processing system, including all ancillary equipment, i.e. raw material and product conveying and combustion air requirements. A flow diagram of the original kiln/calciner system is attached as Figure I (sheets 1 and 2), to show the base configuration to which the MSC conversion was added. Data under various operating conditions are shown on Table III. These operating scenarios include eight short-term trial periods after the MSC conversion, and typical data from operation prior to the MSC conversion.

Present Operating Conditions and Parameters

Subsequent to the installation of the Multi-Stage Calciner System (MSC), kiln operations have been maintained at a maximum daily rate of 2,300-tpd clinker. Compliance with emission limits of NOx and CO has been achieved by adhering to good operating practices, the main goals of which are the following:

1 Keep fuel consumption at the lowest possible level to satisfactorily convert the raw materials to high quality clinker, which is defined as having less that 1.5% unreacted (free) calcium oxide.

2 Produce kiln feed of sufficient fineness and in compliance with ASTM and AASHTO/FDOT chemical specifications, which is as uniform from day to day as can be achieved, using the most modern on-line and laboratory analytical test methods available.

3 Maintain sufficient kiln feed inventory to ward against undesirable fluctuations in physical and chemical properties due to external causes, i.e. excess moisture resulting from prolonged rain and raw material composition changes.

4 Operate the pyro-processing system in an anticipatory manner to avoid process upsets and temporary excursions from emissions limits, caused by needed corrections to bring the process back to normal operating parameters.

Physical Conversion of the Pyro-Processing System to MSC

The outlet gas duct from the calciner was disconnected and turned 90 degrees. A new identical duct segment was added in parallel to the turned duct and the two duct segments were tied together with a deflection chamber at the bottom and a new outlet connected to stage 1 cyclone in the existing location. The deflection chamber provides the gas residence time to convert CO to CO2 with additional oxygen provided through the upper tertiary air duct (upper TA), a branch off the existing (lower TA) tertiary air duct. Due to the change in velocity of the gas stream, a nominal amount of raw mix drops out, which is collected in the deflection chamber hoppers and returned to the kiln via the

kiln meal chute discharging from cyclone 1. The material collected in stage 2 cyclone was partially rerouted with the installation of a branch meal chute and a material splitter. The new meal chute discharges into the calciner approximately 15 feet above the calciner burner elevation.

A flow sheet showing the revised preheater system after the installation of the MCS is shown as Figure II. Four sheets of this Figure are attached with data entered from Table III (trial periods 2, 4, 6, and 8).

Explanation of the revised preheater operation

The staged introduction of feed allows the reduction of NOx to elemental nitrogen to occur over a larger volume of the calciner. At the junction of the Y, an adjustable splitter allows routing of the meal to the elevation of the calciner, at which the best NOx reduction occurs.

The CO created from the reduction of NOx is oxidized to CO2 in the deflection chamber. The oxygen is supplied through the new upper tertiary air duct. As the temperature in this chamber is between 1500 and 1800 degrees F, additional fuel is not required to provide the energy to oxidize CO.

As shown in Table III, the MSC system is highly efficient for the reduction of NOx and the oxidation of CO.

Additional assurance that the allowable limits of the regulated emissions (i.e., NOx and CO) will not be exceeded under various operating conditions, including those that may be considered to be outside normal production practices, was provided through short-term trial operation scenarios. The kiln was "pushed" through a series of feed rate changes. Such feed rate changes are not normally considered prudent for good kiln operation. The results of this exercise confirm that the kiln / preheater system can maintain emissions within the proposed permitted limits, even under upset or abnormal conditions.

As the process is manually controlled, the operator must maintain management of many variable inputs, i.e. coal, airflow, oxygen content, various temperatures, damper positions and motor amps. Simultaneously, the operator watches the NOx and CO emissions.

With increased feed rates the NOx level stayed generally low, which tracks the very low oxygen content at the kiln inlet. These observations show that the NOx level is controllable at constant feed rates over sustained periods of time as the operator tunes the process, keeping in mind that the heat value of coal is not uniform.

As the feed rates were increased, the fuel input was escalated ahead of its actual requirements. The excess fuel resulted in increased NOx generation. During these tests the airflow lagged behind the fuel increase, which explains the low oxygen level at the kiln inlet.

At the stack, the CO level is very low at all levels of feed rates. The operator attempts to maintain a constant excess oxygen level at the kiln stack, a further indication of the absence of combustibles to protect the electrostatic precipitator against explosions.

The most suitable ratio of calciner and kiln fuel must be adjusted to a variety of conditions and cannot be expected to be constant. Over the short-term test periods, the optimum ratio was not established.

While the coal ratio distributed to the kiln main burner and the calciner burner totals 100%, the weight of tires burned was constant. Under the test conditions, the range of tires burned as a portion of total

fuel by weight was 9% at the low feed level and 7% at the high rate of feed. The tire feed rate must be manually set and is not maintained as a constant percentage of the total fuel input, as it affects potential plugging of the preheater.

There are some other relationships between operating parameters, from which significant conclusions can be drawn. The most important information that can be gleaned from the test series is the assurance that the proposed emission limits will not be exceeded, even though the operating conditions may vary from the desired, preferred and necessary mode to produce a high quality clinker, while maintaining low emission rates.

Table III – NOx and CO Emissions under Various Operating Conditions

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

Operating Parameter	Trial Period 1	2	3	4	5	6	7	8	Prior to MSC Conversion
Kiln Feed Rate, STPH	125	125	145	165	170	155	169	174	154
Clinker Production (SPTH)	76	76	88	100	103	94	102	105	93
Clinker Production (SPTD)	1818	1818	2109	2400	2473	2255	2458	2531	2240
TA Damper A, % Open To Calciner	99	99	54	55	55	70	65	65	75
TA Damper B, % Open To Mix Chamber	0	0	10	10	10	0	0	0	0
Secondary Air Temp, deg F	1658	1637	1507	1644	1672	1501	1703	1703	1750
Tertiary Air Temp, deg F	1513	1524	1458	1798	1782	1527	2123	2121	1580
Kiln Inlet O2, %	2.4	1.7	4.3	2.5	1.3	0.4	0.4	0.5	2
Kiln Inlet CO, ppm	99	244	10000	676	8760	10000	10000	9400	2000
ID Fan O2, %	4.4	4.5	3.7	3.7	4.3	3.8	4	4.4	5
ID Fan CO, ppm	7.2	7.2	8	8	8	3.6	10.4	16	20
Coal to Kiln Main Burner, STPH	4.9	4.7	6.2	6.2	6.2	6.2	6.6	6.7	6
% of total	59.8	56.7	59.1	60	58	63	60	60	60
Coal to Calciner, STPH	3.3	3.6	4.3	4.2	4.4	3.6	4.4	4.5	4
% of total	40.2	43.3	40.9	40	42	37	40	40	40
NOx at Stack, lbs/ton-clinker	3.05	3.3	1.8	1.61	2	1.54	1.65	2.44	2.85
Tires (coal replacement in STPH)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0

3. **Continuous Emission Monitoring: Explain the data collection and calculation procedures during start up and shutdown and low load operation. Describe how the CEM software calculates the 30-day rolling average NO_x limit. Propose permit conditions regarding the manner by which data are to be included or excluded (e.g. span data, zero production, etc.).**

Response: The data collection by the continuous emissions monitoring system (CEM) is done on a continuous basis, regardless of the raw mill or kiln operating status. It records data on one-minute intervals, and summarizes it into one-hour results. These results are recorded both in a database and printed onto a hard copy. In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

The monitor is checked for accuracy daily with zero and span gases and by annual accuracy audits.

The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average, and dropping the first day in the rolling average.

Proposed permit conditions for the CEM are included with this response as Attachment 1.

4. **Attached is a submittal from the Alachua County Environmental Protection Department. Please provide information they have requested when submitting the above requested information.**

Response: All of the Alachua County information request items have been reproduced, preserving their numbering. Responses follow each item.

1) **Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?**

Response: As discussed in preceding sections of this letter, the MSC system has recently been installed as required by permit, and plant and operational refinements are essentially complete. As a result, a two-year plant operating record necessary to establish "actual emissions" as defined by Rule 62-210.200(11)(a), F.A.C., does not exist. Florida Rock believes, therefore that the Department (FDEP) should define "actual emissions" as unit-specific allowable emissions per Rule 62-210.200(11)(b) for purposes of this application. These emissions are summarized in response to FDEP Item No. 1 in Table II as permitted.

2) **Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter. This data should be supplied.**

Response: See Response to FDEP Item No. 1 with specific reference to Permit Condition No. 5 (Table II, as permitted and Table II, as proposed).

3) **Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?**

Response: Reasonable assurance of compliance with the MACT standard for dioxin emissions can be derived from emission data provided to the City of Newberry, for measurements performed quarterly during the first year of plant operation. The data (summarized in the table below) shows that the average emission rate of dioxins/furans (toxicity equivalents, TEQ) was 0.029 nanograms per dry standard cubic meter of stack gas (ng/dscm), when corrected to 7% oxygen. As the standard is 0.4 ng/dscm, reasonable assurance of compliance is demonstrated.

Table IV – Summary of Dioxin/Furan Emission Data for the First Year of Plant Operation

Florida Rock Industries
Thompson S. Baker Cement Plant

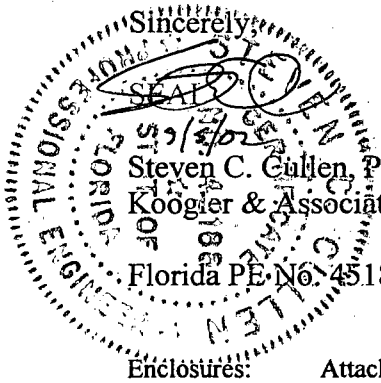
Test Date	Preheater Feed Rate (ton/hr)	Fuel		Dioxin/Furan Emissions (TEQ)	
		Type	Heat Input (MMBtu/hr)	Conc. @ 7% 0_2 (ng/dscm)*	Mass (lb/hr)
7/26/2000	140.0	Coal	170	0.064	0.0000000286
10/17/2000	146.3	Coal	152	0.020	0.0000000039
2/5-6/2001	124.2	Coal	128	0.023	0.0000000071
4/18/2001	155.1	Coal	253	0.008	0.0000000023
Average				**0.029**	0.0000000105

* NESHAP (40 CFR 63, Subpart LLL) Limit - 0.4 ng/dscm

The reports containing the above data were provided to the City of Newberry. The testing was not as a result of state requirements, so the reports were not submitted to the Department of Environmental Protection.

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

Sincerely,



Steven C. Cullen, PE
Koogler & Associates
Florida PE No. 45188

Enclosures: Attachment 1: Proposed Permit Conditions for CEM
Figure I: Original Kiln/Calciner Configuration (2 Sheets)
Figure II: Kiln/Calciner Configuration after MSC Conversion (4 sheets)

cc: J. Huron
D. Galbraith
C. Kirts, NED
G. Wolfe, EPA
Q. Bunyak, NPS
C. Bird, Alachua Co.

Attachment 1 – Proposed Permit Conditions for CEM

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

(1) The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring SO2 and NOx.

(2) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR 60, data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the reference test methods.

(3) The span value of the continuous emission monitoring system shall be no less than 150 percent of the maximum permitted emissions of the inline kiln/raw mill.

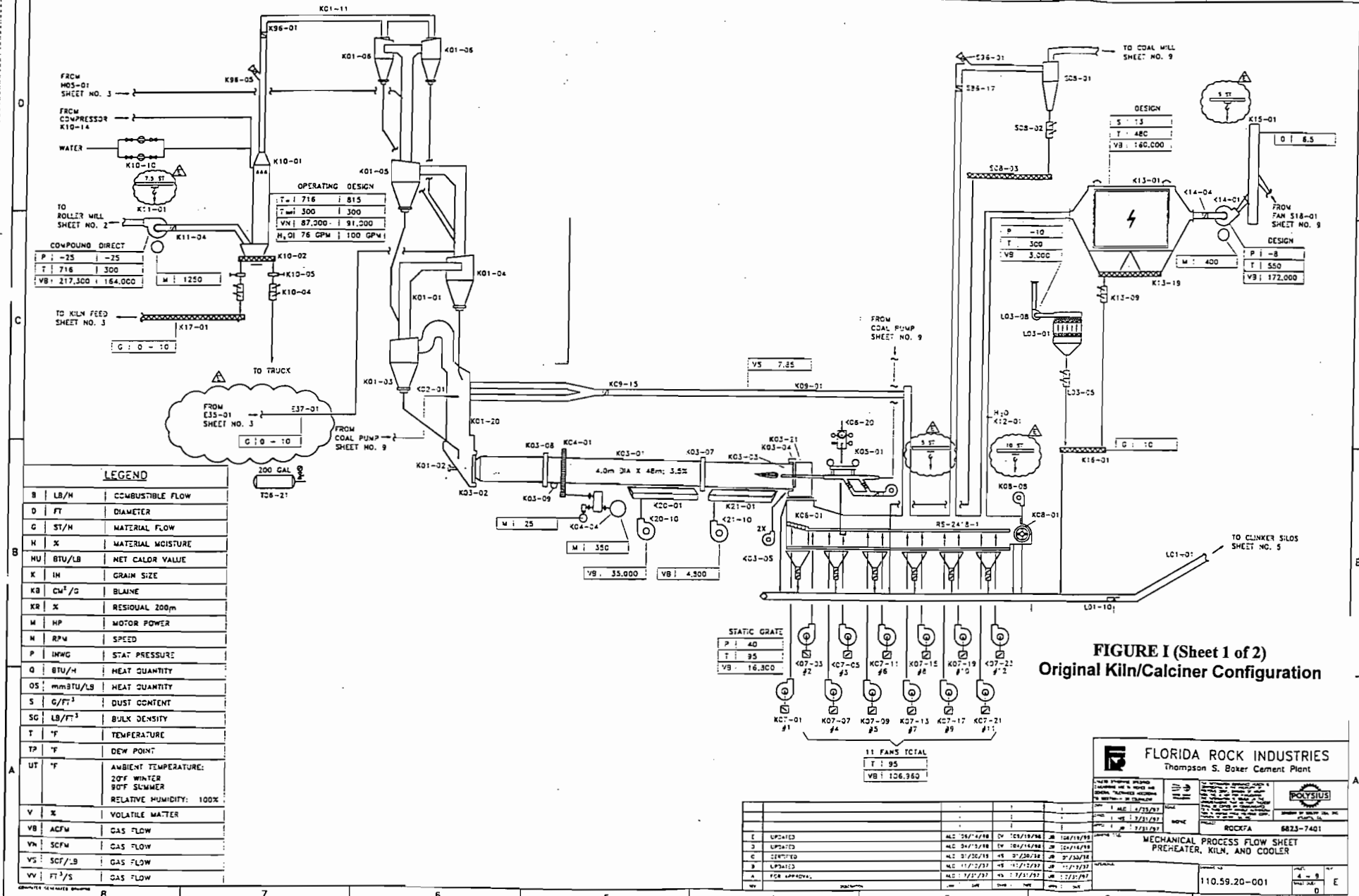
(4) The 24-hour daily arithmetic averages shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume (dry basis). The 1-hour arithmetic averages shall be calculated using the one-minute data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.

(5) 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, the permittee will provide a report with corrective actions.

(6) 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 paragraph (5), emissions data shall be obtained using other monitoring systems as approved by the Department to provide, as necessary, reasonable assurance.

(7) In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

(8) The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average and dropping the first day in the rolling average.



LEGEND		
B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

FIGURE I (Sheet 1 of 2)
Original Kiln/Calciner Configuration

E	UPDATED	MLC 06/14/98	DV 10/19/98	JR 10/19/98
D	UPDATED	MLC 04/13/98	DV 10/14/98	JR 10/14/98
C	REVISED	MLC 01/30/98	VS 2/20/98	JR 2/20/98
B	UPDATED	MLC 11/12/97	VS 11/12/97	JR 11/12/97
A	FOR APPROVAL	MLC 7/31/97	VS 7/31/97	JR 7/31/97

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

POLYSIUS

ROCKFA 6823-7401

MECHANICAL PROCESS FLOW SHEET
PREHEATER, KILN, AND COOLER

110.59.20-001

SHEET 4 OF 9
REV E

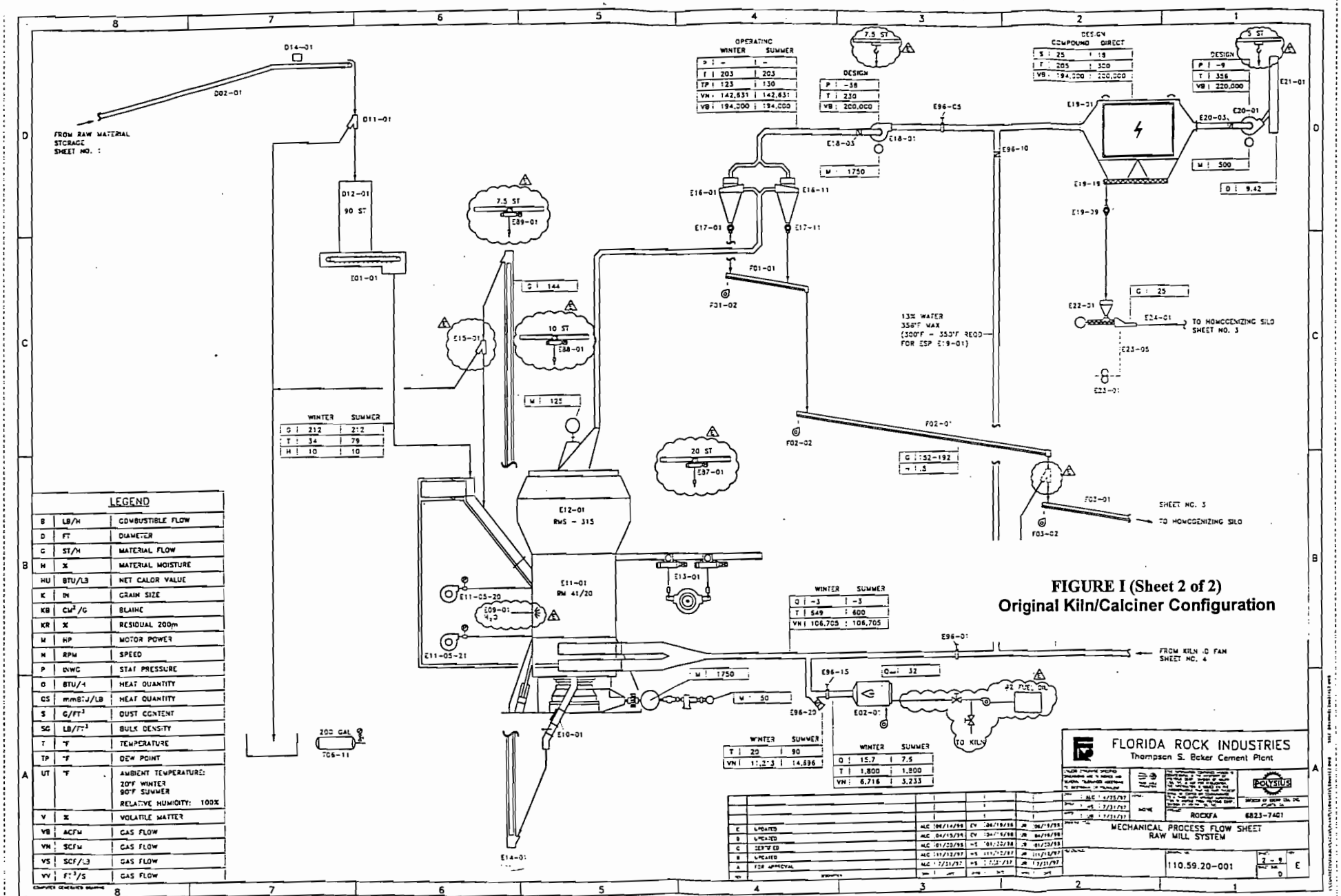


FIGURE I (Sheet 2 of 2)
Original Kiln/Calciner Configuration

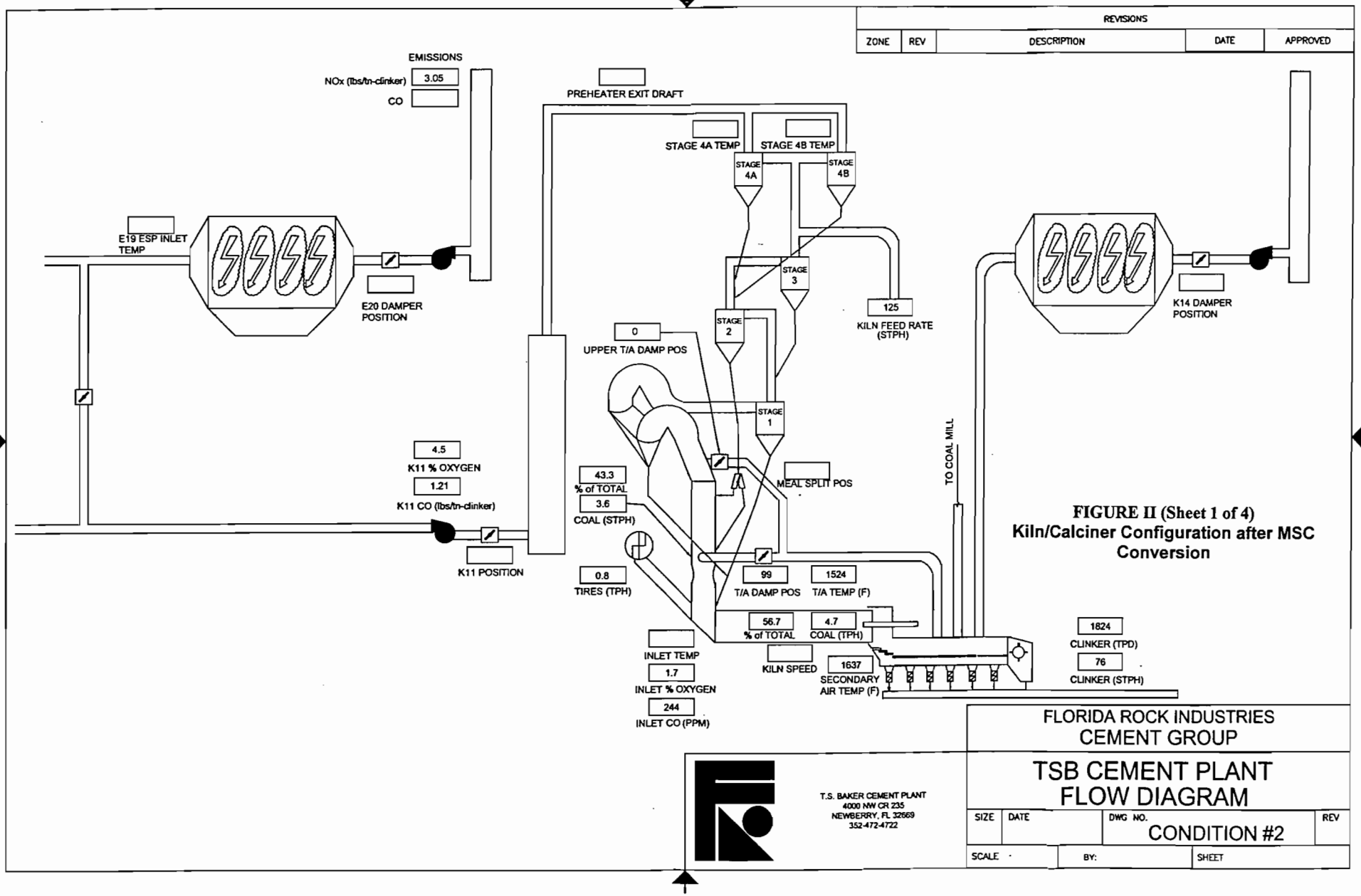


FIGURE II (Sheet 1 of 4)
Kiln/Calciner Configuration after MSC Conversion

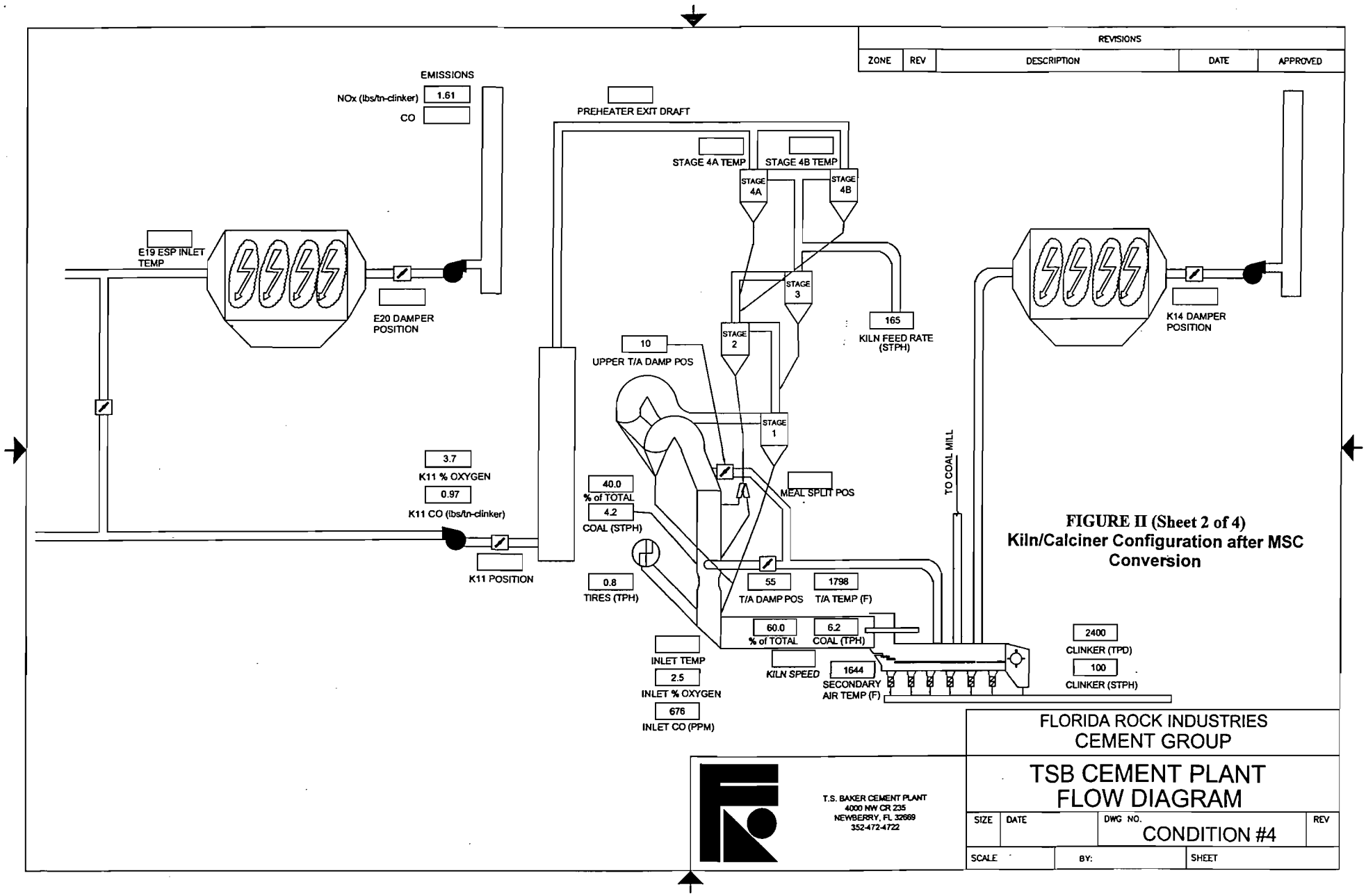
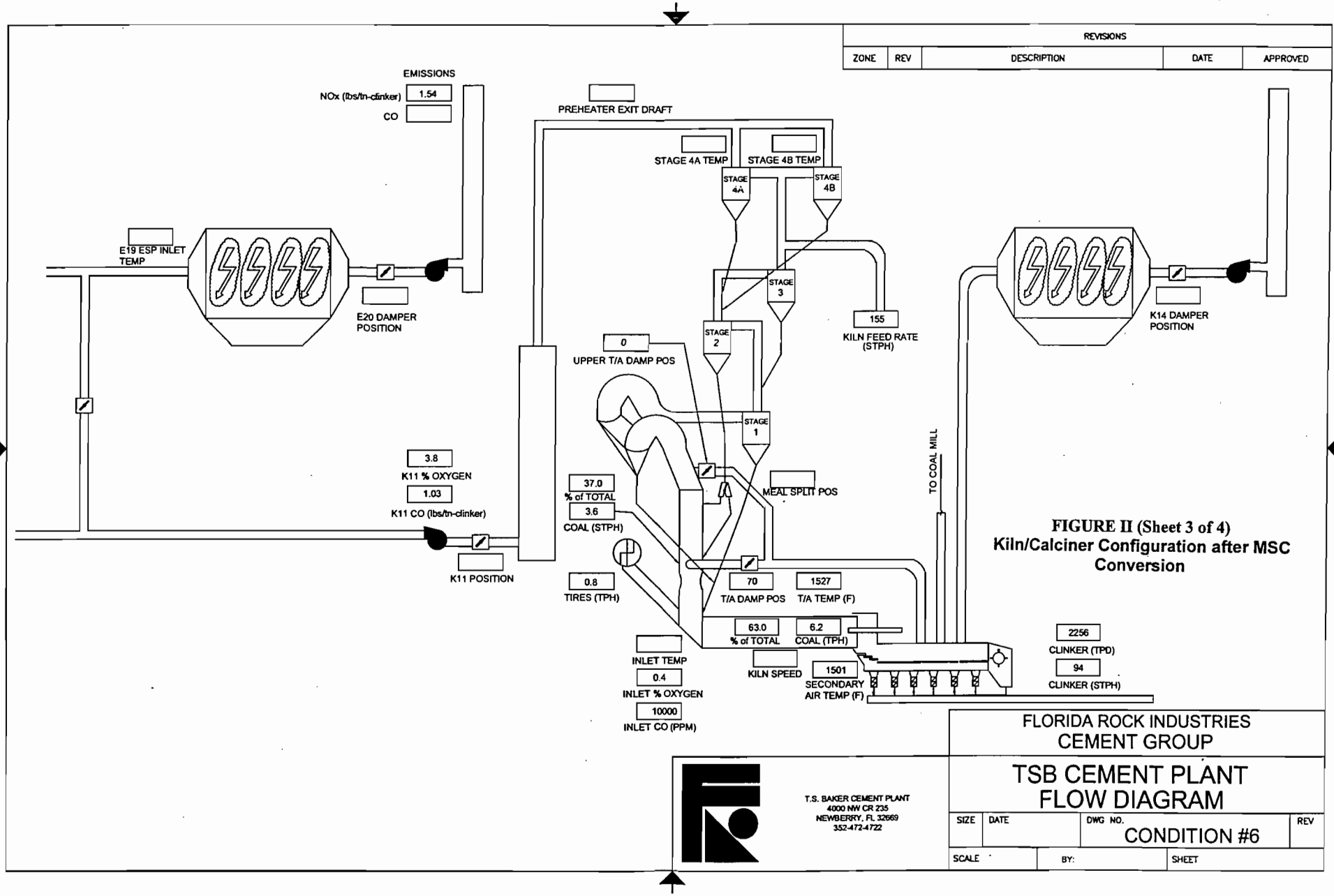


FIGURE II (Sheet 2 of 4)
Kiln/Calciner Configuration after MSC Conversion


REVISIONS
ZONE
REV
DESCRIPTION
DATE
APPROVED
EMISSIONS
NOx (lbs/tn-clinker)
1.54
CO
PREHEATER EXIT DRAFT
STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1
E19 ESP INLET TEMP
E20 DAMPER POSITION
K14 DAMPER POSITION
155
KILN FEED RATE (STPH)
0
UPPER T/A DAMP POS
3.8
K11 % OXYGEN
1.03
K11 CO (lbs/tn-clinker)
K11 POSITION
37.0
% of TOTAL
3.6
COAL (STPH)
MEAL SPLIT POS
TO COAL MILL
0.8
TIRES (TPH)
70
T/A DAMP POS
1527
T/A TEMP (F)
63.0
% of TOTAL
6.2
COAL (TPH)
INLET TEMP
0.4
INLET % OXYGEN
10000
INLET CO (PPM)
KILN SPEED
1501
SECONDARY AIR TEMP (F)
2256
CLINKER (TPD)
94
CLINKER (STPH)
FIGURE II (Sheet 3 of 4)
Kiln/Calciner Configuration after MSC Conversion
T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722
FLORIDA ROCK INDUSTRIES
CEMENT GROUP
TSB CEMENT PLANT
FLOW DIAGRAM
SIZE
DATE
DWG NO.
CONDITION #6
REV
SCALE
BY:
SHEET

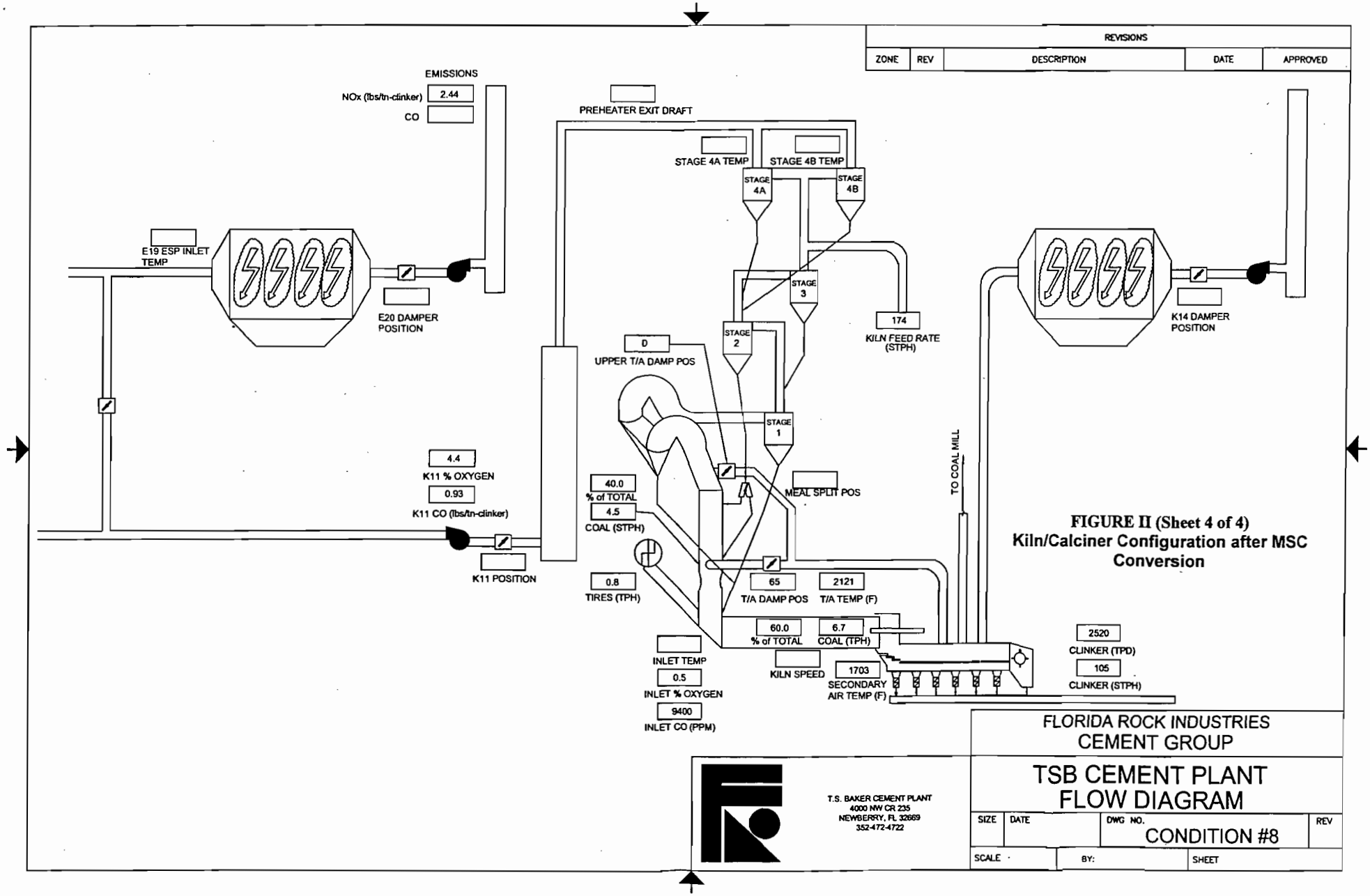


FIGURE II (Sheet 4 of 4)
Kiln/Calciner Configuration after MSC Conversion

Florida Department of Environmental Protection

✓ 7/16/02 @ 9:05 AM

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

Jeb Bush
Governor

David Struhs
Secretary

FAX TRANSMITTAL SHEET

DATE: 7/16/02

TO: Chris Bird, Director

PHONE: _____ FAX: 352-264-6852

FROM: Vickie Gibson PHONE: 850-921-9504

Division of Air Resources Management FAX: 850.922.6979

RE: Fla. Rock Indus. - Thompson S. Baker Portland Cement Plant - Newberry

CC: _____

Total number of pages including cover sheet: 4

Message

I was out of the office yesterday. Therefore, I am sending you a copy of this correspondence by fax and will send you a hard copy in todays mail..

Vickie

If there are any problems with this fax transmittal, please call the above phone number.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

July 12, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John D. Baker, President
Florida Rock Industries
155 East 21st Street
Jacksonville, Florida 34601

Re: Request for Additional Information
DEP File No. 0010087-006-AC (PSD-FL-228)
Florida Rock Industries (FRI)
Thompson S. Baker Portland Cement Plant in Newberry

Dear Mr. Baker:

On June 14, 2002 the Department received your application for a modification of the Thompson S. Baker Portland Cement Plant's air construction permit. This modification is to increase clinker production and to reduce some of the permitted emission limitations of criteria pollutants.

We require some additional information to process your application. Please submit the information requested below. 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.

1. Please note that in accordance with Page 2 of the application, we will act only on the changes requested in the air construction permit, but not on those requested in the Title V Operation permit (see pages 12 and 38). Please list the requested changes in accordance with the numeration in the original air construction permit. A separate Title V Operation Permit application may be required following final action on this construction permit application.
2. Describe in detail the manner in which the Multi-Stage Calciner (MSC) has been operated with respect to achievement of the present NO_X emission limit (2.8 lb/ton of clinker). Advise of any projected changes or adjustments in kiln burner and MSC operational parameters that will be implemented to insure achievement of the lower proposed emission rates for NO_X and CO. These parameters should include: breakdown

of fuel and air distribution between kiln burner and MSC burners; typical percent and type of reburn fuel as well as oxygen levels in the lower stage of the calciner; similar information for the upper calciner; tertiary air considerations to finalize burnout; and achieve the lower CO levels also projected. Attach flow diagrams as necessary.

3. Continuous Emission Monitoring: Explain the data collection and calculation procedures during start up and shutdown and low load operation. Describe how the CEM software calculates the 30-day rolling average NO_x limit. Propose permit conditions regarding the manner by which data are to be included or excluded (e.g. span data, zero production, etc.)

4. Attached is a submittal from the Alachua County Environmental Protection Department. Please provide information they have requested when submitting the above requested information.

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 me at 850/921-9523.

Sincerely,

A.A. Linero, P.E.
Administrator
New Source Review Section

AAL/al

Enclosure

cc: Fred Cohrs, FRI
Cary Cohrs, FRI
Steve Cullen, P.E.
Gregg Worley, EPA
John Bunyak, NPS
Christopher Kirts, NED
Chris Bird, Alachua County

ALACHUA COUNTY
ENVIRONMENTAL PROTECTION DEPARTMENT

201 SE 2nd Avenue, Suite 201 • Gainesville, Florida 32601
Tel: (352) 264-6800 • Fax (352) 264-6852
Suncom: 651-6800
Home Page: http://environment.alachua-county.org/

ALACHUA COUNTY

Board of County Commissioners

Chris Bird
Environmental Protection Director
cbird@co.alachua.fl.us

Ramesh P. Buch
Land Conservation Manager
rbuch@co.alachua.fl.us

John J. Mousa
Pollution Prevention Manager
jmousa@co.alachua.fl.us

Geoffrey Sample
Natural Resources Supervisor (Interim)
gsample@co.alachua.fl.us

Debbie VanSlooten
Administrative Assistant
dvanslooten@co.alachua.fl.us

July 11, 2002

Mr. Al Linero, Administrator
New Source Review
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Permit Number: 0010087-002-AV
Florida Rock Industries, Thompson S. Baker Plant

Dear Mr. Linero,

The purpose of this letter is to provide Alachua County Environmental Protection Department (ACEPD) comments and concerns regarding the air permit modification application of Florida Rocks Industries, Thompson S. Baker plant in Newberry, Florida.

1) Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?

2) Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter? This data should be supplied.

3) Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?

Thanks for your response. If you have any questions please call me at 352-264-6809.

Lalit Lalwani
Air Quality Engineer

cc: John Mousa, ACEPD

7001 0320 0001 3692 8314

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 John D. Baker

Street, Apt. No.; or PO Box No. 155 E. 21 St

City, State, ZIP+4 Jacksonville, FL 34601

PS Form 3800, January 2001 See Reverse for Instructions

AL

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

187-02-04
June 19, 2002

Mr. Joseph Kahn
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

SUBJECT: Florida Rock Industries - Organic HAP stack emissions measurements
NESHAP, Subpart LLL, Source Status Determination

Dear Mr. Kahn:

This letter is to confirm the criteria by which organic HAP emissions will be determined for the Florida Rock Industries (FRI), Newberry plant to establish NESHAP, Subpart LLL source status. In particular, we are requesting confirmation of the specific organic HAP compounds that should be analyzed and quantified.

As your letter to me, dated May 7, 2002, directs me to EPA document "Questions and Answers for the Portland Cement Manufacturing Industry, NESHAP, Subpart LLL" I reviewed the document. Russell Wider discussed the pertinent portions of the document relative to organic HAP compounds with Max Lee via telephone on June 17, 2002. Russell directed Max to Page 3 of the document for clarification of the compounds that should be tested for. The document states on Page 3:

> *Hydrogen chloride and organic HAP emissions such as (but not limited to) benzene, toluene, hexane, formaldehyde, hexane, naphthalene, phenol, styrene, and xylenes are the main HAPs from the kiln that may cause facilities to be major sources, but HAPs emitted from all sources at the plant site should be accounted for in making a major source determination.*

Furthermore, your letter of May 7, 2002 states on Page 2, line 16, semi-volatile organic HAPs are expected to be low and that an estimate of emissions using AP-42 emission factors can substituted for stack testing. For example, formaldehyde and phenol can be estimated using AP-42 factors.

You mention that sampling for volatile organic HAPs will be necessary. We are planning to perform organic HAP emissions at the Newberry plant on July 10, 2002 by EPA

Method 18 (per Method 18 allowance of EPA Method 0030 (VOST traps) with analysis by EPA Method 8260). The following volatile HAP compounds will be analyzed for:

Acetonitrile	Ethylbenzene
Benzene	Hexane
Bromoform	Methylene Chloride
Carbon Sulfide	Napthalene
Carbon Tetrachloride	Styrene
Chlorobenzene	Toluene
Chloroform	1,1,2-Trichlorethane
1,2 Dibromo-3-chlorpropane	Vinyl acetate
1,4-Dichlorobenzene	Vinyl chloride
	m-xylene, p-xylene, o-xylene

We request your confirmation that testing of these volatile organic HAP compounds plus an estimate of semi-volatile (including, but not limited to, phenols and formaldehyde) will allow adequate NESHAP status determination of organic HAP emissions from the FRI -Newberry plant. HAP metals emissions will be estimated using the EPA guidance of 1.0 percent of all permitted PM emissions and HCl emissions will be determined using EPA Method 321. Emissions testing will be conducted during the week of July 8-12, 2002 with EPA Method 321 scheduled on July 10, 2002. Please contact me if you have any questions regarding this request for confirmation.

Sincerely,

John Koogler, Ph.D., P.E.
KOOGLER & ASSOCIATES

C: Greg DeAngelo, DEP DARM
Cindy Phillips, DEP DARM
Fred Cohrs, FRI
Cary Cohrs, FRI

ALACHUA COUNTY
ENVIRONMENTAL PROTECTION DEPARTMENT

201 SE 2nd Avenue, Suite 201 • Gainesville, Florida 32601
Tel: (352) 264-6800 • Fax (352) 264-6852
Suncom: 651-6800
Home Page: http://environment.alachua-county.org/

Board of County Commissioners

Chris Bird
Environmental Protection Director
cbird@co.alachua.fl.us

Ramesh P. Buch
Land Conservation Manager
rbuch@co.alachua.fl.us

John J. Mousa
Pollution Prevention Manager
jmousa@co.alachua.fl.us

Geoffrey Sample
Natural Resources Supervisor (Interim)
gsample@co.alachua.fl.us

Debbie VanSlooten
Administrative Assistant
dvanslooten@co.alachua.fl.us

July 11, 2002

Mr. Al Linero, Administrator
New Source Review
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Permit Number: 0010087-002-AV
Florida Rock Industries, Thompson S. Baker Plant

Dear Mr. Linero,

The purpose of this letter is to provide Alachua County Environmental Protection Department (ACEPD) comments and concerns regarding the air permit modification application of Florida Rocks Industries, Thompson S. Baker plant in Newberry, Florida.

1) Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?

2) Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter? This data should be supplied.

3) Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?

Thanks for your response. If you have any questions please call me at 352-264-6809.

Lalit Lalwani
Air Quality Engineer

cc: John Mousa, ACEPD

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

June 12, 2002

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

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

Dear Mr. Linero:

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

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

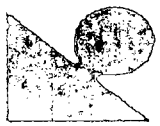
Included as an attachment to the application is a report on changes to the pyroprocessing system, detailing how the emissions reductions will be achieved.

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

Sincerely,

Steven C. Cullen, PE
Koogler & Associates

cc: J. Heron
D. Balbraith
C. Kirts, NED
J. Zalewski, Alachua Co. EPD
P. Reynolds, Jacksonville DEP



Allowable Emissions
Florida Rock Industries

Thompson S. Baker Cement Plant – Newberry, Florida

Pollutant	Existing Emission Rate		Proposed Emission Rate		Decrease (tons/year)	Decrease
	lb/hr	tons/year	lb/hr	tons/year		
PM (kiln)	30.00	110.50	25.90	94	16.5	15%
PM_{10} (kiln)	25.50	93.93	22.08	79.9	14.0	15%
PM (cooler)	14.99	55.70	15.39	55.70	No change	
PM_{10} (cooler)	12.71	47.34	13.03	47.34	No change	
SO_2 (kiln)	28.82	108.55	17.67	64	44.6	41%
NO_x (kiln)	268.30	1018.00	270.53	980	38.0	4%
H_2SO_4 (kiln)	0.25	1.00	0.276	1.00	No change	
CO (kiln)	346.38	1288.60	276.05	1000	288.6	22%
VOC (kiln)	11.55	42.90	11.81	42.90	No Change	
TOTAL[1]		2672.59		2284.94	387.7	15%

Clinker Production	Existing Production Rate		Proposed Production Rate		Increase (tons/year)	Increase
	tons/hour	tons/year	tons/hour	tons/year		
	95.83	712,500	115[2]	800,000	87,500	12%

[1] Total does not include PM10, because it is included with PM.

[2] 115 tons/hour is maximum per hour. Also limited to 2650 tons/day, which equals 110.42 tons/hour (24-hour average).

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

I. APPLICATION INFORMATION

Identification of Facility

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

Application Contact

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

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

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

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

Application Contact

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

Application Processing Information (DEP Use)

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

Purpose of Application

Air Operation Permit Application

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

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

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

Current construction permit number:_____

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

Current construction permit number:_____

Operation permit number to be revised:_____

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

Operation permit number to be revised/corrected:_____

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

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

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

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

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

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

Owner/Authorized Representative or Responsible Official

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

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

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

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature Date 6/11/02

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

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

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

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

4. Professional Engineer Statement:

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

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

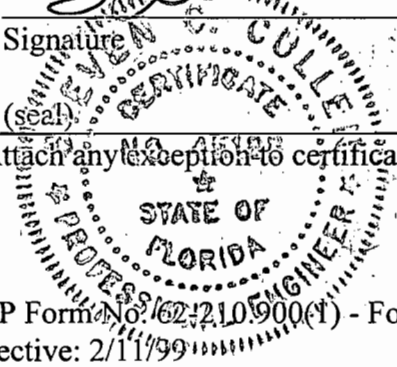
If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

6/12/2002
Date

(seal)



* Attach any exception to certification statement.

Scope of Application

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

Application Processing Fee

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

Construction/Modification Information

1. Description of Proposed Project or Alterations:

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

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

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

Application Comment

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

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

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

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

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

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

Facility Contact

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

Facility Regulatory Classifications

Check all that apply:

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

List of Applicable Regulations

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

B. FACILITY POLLUTANTS

List of Pollutants Emitted

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

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

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

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

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

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

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

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

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Emissions Unit Control Equipment

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

Electrostatic Precipitator – High Efficiency

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

Emissions Unit Details

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

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

Emissions Unit Operating Capacity and Schedule

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

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-212.400, FAC	
NSPS Subpart F	
NESHAP Subpart LLL	

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

Emission Point Description and Type

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

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

Segment Description and Rate: Segment 1 of 5

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

Segment Description and Rate: Segment 2 of 5

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

Segment Description and Rate: Segment 3 of 5

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

Segment Description and Rate: Segment 4 of 5

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

Segment Description and Rate: Segment 5 of 5

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

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

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

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

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

Continuous Monitoring System: Continuous Monitor 1 of 5

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

Continuous Monitoring System: Continuous Monitor 2 of 5

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

Continuous Monitoring System: Continuous Monitor 3 of 5

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

Continuous Monitoring System: Continuous Monitor 4 of 5

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

Continuous Monitoring System: Continuous Monitor 5 of 5

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

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

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

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

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

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

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

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

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

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

[**X**] Not Applicable

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

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

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

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

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

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

Clinker Handling

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

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

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

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

Subsection D.: This section addresses the following emissions unit

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

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

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

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

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

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

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

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

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

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

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

Emissions Unit Control Equipment

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

Electrostatic Precipitator – High Efficiency
Fabric Filters – High Temperature

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

Emissions Unit Details

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

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **Not Applicable**			mmBtu/hr
2. Maximum Incineration Rate: **Not Applicable**	lb/hr		tons/day
3. Maximum Process or Throughput Rate: **115.0 TPH (maximum per hour)**			
4. Maximum Production Rate: **Not Applicable**			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year		**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **None** **110.42 TPH Clinker Production (24-hour rolling average)** **800,000 TPY Clinker and 1,360,000 TPY Preheater Feed**			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

62-212.400, FAC	
NSPS Subpart F	
NESHAP Subpart LLL	

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **K-15, L-03, L-06, L-08**	2. Emission Point Type Code: **3**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

K-15: Clinker Cooler Stack
L-03: Clinker Transport
L-06: Clinker Silos
L-08: Clinker Silos (new baghouse to be installed)

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

Not Applicable

5. Discharge Type Code: **V**	6. Stack Height: **115** feet	7. Exit Diameter: **9** feet
8. Exit Temperature: **480** °F	9. Actual Volumetric Flow Rate: **160000** acfm	10. Water Vapor: **Not Applicable** %

11. Maximum Dry Standard Flow Rate: **Not Applicable** dscfm	12. Nonstack Emission Point Height: **Not Applicable** feet

13. Emission Point UTM Coordinates: **Not Available within 0.01 Kilometer**

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

K-15 is representative emission point with greatest emission rate.

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

Segment Description and Rate: Segment 1 of 2

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

Segment Description and Rate: Segment 2 of 2

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

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 1 of 1

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

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

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

Continuous Monitoring System: Continuous Monitor 1 of 1

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

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

Supplemental Requirements

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

Additional Supplemental Requirements for Title V Air Operation Permit Applications

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

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

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

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

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

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

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

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

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

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

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

[X] Not Applicable

Supplemental Information for Construction Permit Application

Attachment 1: Report on Changes to the Pyro Processing System

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

Report on Changes to the Pyro Processing System

TSB Cement Plant, Newberry, Florida

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Comparison of Operating Data

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

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

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

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

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

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

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

Conclusion

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

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

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

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

June 12, 2002

Fred W. Cohrs

Fred W. Cohrs

0001 LEGAL NOTICES

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 (SO_2 ---), 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 no 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 SO_2 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$_x$, SO_2, 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 (143) 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 Section120.60(3), F.S., however, petitions submitted by person(s) who asked the Oepartment 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., 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 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 whishes 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 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.

(#24212) 11/20

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery 12/13/02

C. Signature
X M. L. Drosy ☒ 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. 7001 0320 0001 3692 7423

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

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

Postmark Here

Sent To John D. Baker
Street, Apt. No.; or PO Box No. 155 E. 21st St.
City, State, ZIP+4 Jacksonville, FL 32206

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0001 3692 7423

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. Cary O. Cohrs
Vice President of Operations
Florida Rock Industries, Inc.
Cement Group
PO Box 459
Newberry, FL 32669

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) Becky Hurley B. Date of Delivery 12/16

C. Signature
X Becky Hurley ☐ 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. 7001 0320 0001 3692 7393

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

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

Postmark Here

Sent To Cary O. Cohrs
Street, Apt. No.; or PO Box No. PO Box 459
City, State, ZIP+4 Newberry, FL 32669

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0001 3692 7393

TMS and SMS

- TMS is higher. The difference *decreases* as speeds increase.

$$\overline{u}_t = 0.966\overline{u}_s + 3.541$$

- From Previous example:

TMS = 0.966 x 38.92 + 3.541 = 41.14 m/hr ~ compare to calculated TMS of 40 m/hr

RECEIVED

DEC 06 2002

BUREAU OF AIR REGULATION

24212

NO_____

THE GAINESVILLE SUN
Published Daily and Sunday
GAINESVILLE, FLORIDA

STATE OF FLORIDA
COUNTY OF ALACHUA

Before the undersigned authority appeared Naomi Williams-Jordan
Classified Assistant Manager

Who on oath says that he/she is.....of THE GAINESVILLE SUN, a daily

newspaper published at Gainesville in Alachua County, Florida, that the attached copy of advertisement, being a PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

in the matter of CEMENT PLANT – NEWBERRY, FL. Draft Air Construction/ Permit No. 0010087-006AC (PSD-FL-228C)

in the.....Court, was published in said newspaper in the issue o
NOVEMBER 20TH

.....2002

Affidavit further says that the said THE GAINESVILLE SUN is a newspaper published at Gainesville, in said Alachua County, Florida, and that the said newspaper has heretofore been continuously published in said Alachua County, each day, and has been entered as second class mail matter at the post office in Gainesville, in Said Alachua County, Florida, for a period of one year next preceding the first publication of the attached copy Of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount for publication in the said newspaper.

Sworn to and subscribed before me this

4 day of Dec A.D., 2002

Sharon K. Williams

(seal) Notary Public

Naomi Williams-Jordan

SHARON K. WILLIAMS
MY COMMISSION # CC 814219
EXPIRES: March 3, 2003
Bonded Thru Notary Public Underwriters

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* Katie Scarth — B. Date of Delivery 11-22-02

C. Signature
X Katie Scarth ☐ 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. 7001 0320 0001 3692 7584

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

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

7001 0320 0001 3692 7584

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:

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* [illegible] — B. Date of Delivery 11/21/02

C. Signature
X [illegible] ☐ 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 7001 0320 0001 3692 7614

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

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.: PO Box 2309
City, State, ZIP+4: Gainesville, FL 32602-2309

7001 0320 0001 3692 7614

PS Form 3800, January 2001 See Reverse for Instructions

- Or

Space Mean Speed (SMS) = $$\bar{u}_s = \frac{n}{\sum_{i=1}^{n}(1/u_i)}$$

= 4/(1/45 + 1/45 + 1/40 + 1/30)

= 38.92 m/hr

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): Shari Bergquist — B. Date of Delivery: 11/2/02

C. Signature: X 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

2. Ar 7001 0320 0001 3692 7577

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

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

Postmark Here

7001 0320 0001 3692 7577

Sent To: Robert K. Hutchinson
Street, Apt. No.; or PO Box No.: PO 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

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): Amanda Cox — B. Date of Delivery: 11-2-02

C. Signature: X 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

2. 7001 0320 0001 3692 7560

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

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

Postmark Here

7001 0320 0001 3692 7560

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

PS Form 3800, January 2001 See Reverse for Instructions

Solution

- Ti = L/s
- T1 = 300/(45X1.47) = 4.535 s
- T2 = 300/(45X1.47) = 4.535s
- T3 = 300/(40X1.47) = 5.102 s
- T4 = 300/(30X1.47) = 6.803 s
- U_s = 4x300/(4.535+4.535+5.102+6.803) = 57.21 ft/s
- = 38.92 m/hr

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

2. A 7001 0320 0001 3692 7621

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

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

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

Postmark Here

7001 0320 0001 3692 7621

Sent To Mr. John D. Baker, President
Street, Apt. No.; or PO Box No. Florida Rock Industries, Inc.
City, State, ZIP+4 155 East 21 Street
Jacksonville, Florida 32206

PS Form 3800, January 2001 See Reverse for Instructions

Solution

Space Mean Speed (SMS)=

$$\bar{u}_s = \frac{nL}{\sum_{i=1}^{n} t_i}$$

n = number of vehicles

t_i = the time it takes the ith vehicle to travel across section of a highway

s_i = individual vehicle speed

L = length of section of highway

Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee FL 32399-2400

7001 0320 0001 3692 7591

Best Available Copy

RECEIVED
NOV 27 2002
BUREAU OF AIR REGULATION

REASON CHECKED
- ☐ Moved, Left No Address
- ☐ Unable To Forward
- ☐ Attempted - Not Known
- ☐ Unclaimed
- ☐ No Such Street
- ☐ Refused
- ☐ No Such Number
- ☐ Insufficient Address

Refused
11/20
C.48

Mr. Arthur Saarinen
2005 NW 24th Street
Gainesville, FL 32605-3849

RECEIVED
NOV 27 2002
BUREAU OF AIR REGULATION

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

7001 0320 0001 3692 7591

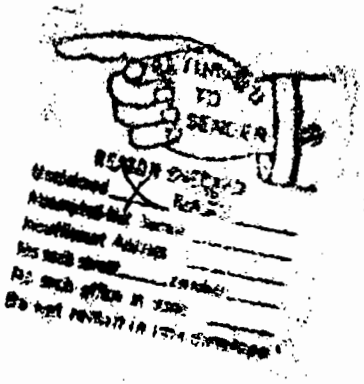
Sent To: Arthur Saarinen
Street, Apt. No.; or PO Box No.: 2005 NW 24th St.
City, State, ZIP+4: Gainesville, FL 32605-3849

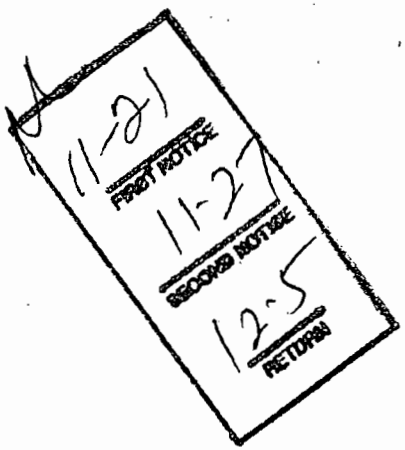
PS Form 3800, January 2001 — See Reverse for Instructions

rtment of Environmental Protection
Blair Stone Rd
hassee FL 32399-2400

7001 0320 0001 3692 7607

Best Available Copy





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

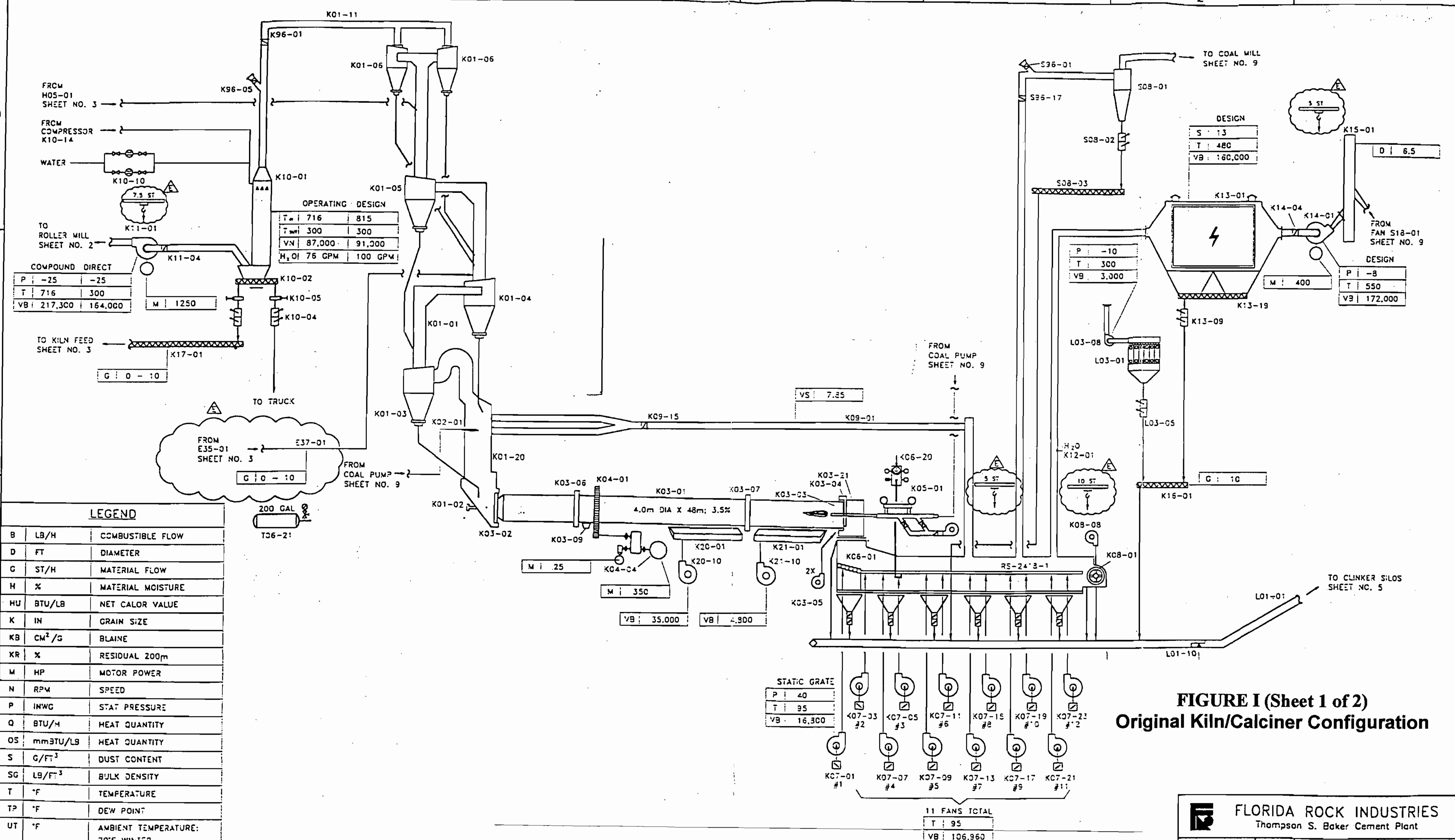
Sent To: Rob Luna
Street, Apt. No. or PO Box No.: PO Box 12416
City, State, ZIP+4: Gainesville, FL 32604

PS Form 3800, January 2001 — See Reverse for Instructions

7001 0320 0001 3692 7607

Mr. Rob Luna
NCFGP
P. O. Box 12416
Gainesville, FL 32604

BEST AVAILABLE COPY


K01-11
K96-01
K01-06
K01-06
FROM H05-01 SHEET NO. 3
K96-05
FROM COMPRESSOR K10-14
WATER
K10-10
7.5 ST
K11-01
TO ROLLER MILL SHEET NO. 2
K11-04
K10-01
K10-02
K10-05
K10-04
COMPOUND DIRECT
P -25 -25
T 716 300
VB 217,300 164,000
M 1250
TO KILN FEED SHEET NO. 3
K17-01
G 0 - 10
TO TRUCK
OPERATING DESIGN
T 716 815
T 300 300
VN 87,000 91,300
H2O 76 GPM 100 GPM
K01-05
K01-04
K01-01
K01-03
K02-01
K01-20
K01-02
K03-02
FROM E35-01 SHEET NO. 3
E37-01
G 0 - 10
FROM COAL PUMP SHEET NO. 9
200 GAL
T36-21
K09-15
K09-01
VS 7.35
FROM COAL PUMP SHEET NO. 9
K03-06
K04-01
K03-01
4.0m DIA X 48m; 3.5%
K03-07
K03-03
K03-21
K03-04
K06-20
K05-01
K03-09
M 25
K04-04
M 350
K20-01
K20-10
K21-01
K21-10
VB 35,000
VB 4,800
2X
K03-05
K06-01
RS-2418-1
K08-08
K08-01
TO CLINKER SILOS SHEET NO. 5
L01-01
L01-10
STATIC GRATE
P 40
T 95
VB 16,300
K07-03 #2
K07-05 #3
K07-11 #6
K07-15 #8
K07-19 #10
K07-23 #12
K07-01 #1
K07-07 #4
K07-09 #5
K07-13 #7
K07-17 #9
K07-21 #11
11 FANS TOTAL
T 95
VB 106,960
S36-01
S36-17
TO COAL MILL SHEET NO. 9
S08-01
S08-02
S08-03
DESIGN
S 13
T 480
VB 160,000
5 ST
K15-01
D 6.5
K13-01
K14-04
K14-01
FROM FAN S18-01 SHEET NO. 9
DESIGN
P -8
T 550
VB 172,000
M 400
K13-19
K13-09
P -10
T 300
VB 3,000
L03-08
L03-01
L03-05
H2O
K12-01
5 ST
10 ST
G 10
K16-01

LEGEND

B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

COMPUTER GENERATED DRAWING

FIGURE I (Sheet 1 of 2)
Original Kiln/Calciner Configuration

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

POLYSIUS

ROCKFA 6823-7401

MECHANICAL PROCESS FLOW SHEET
PREHEATER, KILN, AND COOLER

110.59.20-001

4 of 9 E

REV	DESCRIPTION			
E	UPDATED	ALC 06/14/98	EV 05/19/98	JR 06/19/98
D	UPDATED	ALC 04/15/98	EV 04/16/98	JR 04/16/98
C	CERTIFIED	ALC 01/30/98	HS 01/30/98	JR 01/30/98
B	UPDATED	ALC 11/12/97	HS 11/12/97	JR 11/12/97
A	FOR APPROVAL	ALC 7/31/97	HS 7/31/97	JR 7/31/97

D14-01

D02-01

FROM RAW MATERIAL STORAGE SHEET NO. 1

D11-01

D12-01
90 ST

E01-01

	WINTER	SUMMER
G	212	212
T	34	79
H	10	10

	OPERATING WINTER	OPERATING SUMMER
P	-	-
T	203	203
TP	123	130
VN	142,631	142,631
VB	194,000	194,000

7.5 ST
E89-01

E15-01

10 ST
E88-01

G | 144

M | 125

20 ST
E87-01

E12-01
RMS - 315

E11-01
RM 41/20

E11-05-20

E09-01
H_2O

E11-05-21

E13-01

E14-01

E10-01

200 GAL
T06-11

	DESIGN
P	-38
T	230
VB	200,000

7.5 ST

E16-01

E16-11

E17-01

E17-11

F01-01

F01-02

M | 1750

E18-03

E18-01

E96-05

E96-10

13% WATER
356°F MAX
(300°F - 350°F REQD FOR ESP E19-01)

F02-01

F02-02

	DESIGN COMPOUND	DESIGN DIRECT
S	25	18
T	205	300
VB	194,000	200,000

E19-01

E19-19

E19-09

E22-01

C | 25

E24-01

TO HOMOGENIZING SILO SHEET NO. 3

E23-05

E23-01

E20-01

E20-03

E21-01

	DESIGN
P	-9
T	356
VB	220,000

M | 500

D | 9.42

G | 182-192
H | 5

F03-01

F03-02

SHEET NO. 3
TO HOMOGENIZING SILO

	WINTER	SUMMER
Q	-3	-3
T	549	600
VN	106,705	106,705

E96-01

FROM KILN ID FAN SHEET NO. 4

M | 1750

M | 50

E96-15

Q | 32

E96-20

E02-01

#2 FUEL OIL

TO KILN

	WINTER	SUMMER
T	20	90
VN	11,213	14,696

	WINTER	SUMMER
Q	15.7	7.5
T	1,800	1,800
VN	6,716	3,233

LEGEND

B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWC	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

COMPUTER GENERATED DRAWING

FIGURE I (Sheet 2 of 2)
Original Kiln/Calciner Configuration

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

C	UPDATED	ALC	06/14/98	CV	06/19/98	JR 06/19/98
B	UPDATED	ALC	04/15/98	CV	04/16/98	JR 04/16/98
C	CERTIFIED	ALC	01/20/98	HS	01/20/98	JR 01/20/98
B	UPDATED	ALC	11/12/97	HS	11/12/97	JR 11/12/97
A	FOR APPROVAL	ALC	7/31/97	HS	7/31/97	JR 7/31/97

ALC 6/25/97 · HS 7/31/97 · JR 7/31/97 · NONE

POLYSIUS

ROCKFA 6823-7401

MECHANICAL PROCESS FLOW SHEET
RAW MILL SYSTEM

110.59.20-001

SHEET 2 - 9 · REV. D · E

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 3.05
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP

STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1

125
KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

K14 DAMPER POSITION

0
UPPER T/A DAMP POS

TO COAL MILL

4.5
K11 % OXYGEN
1.21
K11 CO (lbs/tn-clinker)

43.3
% of TOTAL
3.6
COAL (STPH)

MEAL SPLIT POS

K11 POSITION

0.8
TIRES (TPH)

99
T/A DAMP POS

1524
T/A TEMP (F)

56.7
% of TOTAL
4.7
COAL (TPH)

1824
CLINKER (TPD)
76
CLINKER (STPH)

INLET TEMP
1.7
INLET % OXYGEN
244
INLET CO (PPM)

KILN SPEED

1637
SECONDARY AIR TEMP (F)

FIGURE II (Sheet 1 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #2	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS

NOx (lbs/tn-clinker) 1.61

CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

E19 ESP INLET TEMP

STAGE 3

STAGE 2

165
KILN FEED RATE (STPH)

10
UPPER T/A DAMP POS

STAGE 1

K14 DAMPER POSITION

E20 DAMPER POSITION

TO COAL MILL

3.7
K11 % OXYGEN

0.97
K11 CO (lbs/tn-clinker)

40.0
% of TOTAL

4.2
COAL (STPH)

MEAL SPLIT POS

K11 POSITION

0.8
TIRES (TPH)

55
T/A DAMP POS

1798
T/A TEMP (F)

60.0
% of TOTAL

6.2
COAL (TPH)

2400
CLINKER (TPD)

INLET TEMP

KILN SPEED

1644
SECONDARY AIR TEMP (F)

100
CLINKER (STPH)

2.5
INLET % OXYGEN

676
INLET CO (PPM)

FIGURE II (Sheet 2 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #4	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS

NOx (lbs/tn-clinker) 1.54

CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

STAGE 3

STAGE 2

STAGE 1

155
KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

0
UPPER T/A DAMP POS

MEAL SPLIT POS

TO COAL MILL

K14 DAMPER POSITION

3.8
K11 % OXYGEN

1.03
K11 CO (lbs/tn-clinker)

37.0
% of TOTAL

3.6
COAL (STPH)

K11 POSITION

0.8
TIRES (TPH)

70
T/A DAMP POS

1527
T/A TEMP (F)

63.0
% of TOTAL

6.2
COAL (TPH)

INLET TEMP

0.4
INLET % OXYGEN

10000
INLET CO (PPM)

KILN SPEED

1501
SECONDARY AIR TEMP (F)

2256
CLINKER (TPD)

94
CLINKER (STPH)

FIGURE II (Sheet 3 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #6	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS

NOx (lbs/tn-clinker) 2.44

CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

STAGE 3

STAGE 2

STAGE 1

174 KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

0 UPPER T/A DAMP POS

K14 DAMPER POSITION

4.4 K11 % OXYGEN

0.93 K11 CO (lbs/tn-clinker)

40.0 % of TOTAL

4.5 COAL (STPH)

MEAL SPLIT POS

TO COAL MILL

K11 POSITION

0.8 TIRES (TPH)

65 T/A DAMP POS

2121 T/A TEMP (F)

60.0 % of TOTAL

6.7 COAL (TPH)

2520 CLINKER (TPD)

INLET TEMP

KILN SPEED

1703 SECONDARY AIR TEMP (F)

105 CLINKER (STPH)

0.5 INLET % OXYGEN

9400 INLET CO (PPM)

FIGURE II (Sheet 4 of 4)
Kiln/Calciner Configuration after MSC Conversion

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #8	
SCALE	BY:	SHEET	

7001 0320 0001 3692 8314

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: John D. Baker

Street, Apt. No.; or PO Box No. 155 E. 21 St

City, State, ZIP+4: Jacksonville, FL 34601

PS Form 3800, January 2001 — See Reverse for Instructions

Solution

Time Mean Speed (TMS) =

$$\overline{u}_t = \frac{1}{n}\sum_{i=1}^{n} u_i = \frac{45+45+40+30}{4} = 40 \text{ mph}$$

Allowable Emissions
Florida Rock Industries

Thompson S. Baker Cement Plant – Newberry, Florida

Pollutant	Existing Emission Rate		Proposed Emission Rate		Decrease (tons/year)	Decrease
	lb/hr	tons/year	lb/hr	tons/year		
PM (kiln)	30.00	110.50	25.90	94	**16.5**	**15%**
PM_{10} (kiln)	25.50	93.93	22.08	79.9	**14.0**	**15%**
PM (cooler)	14.99	55.70	15.39	55.70	**No change**	
PM_{10} (cooler)	12.71	47.34	13.03	47.34	**No change**	
SO_2 (kiln)	28.82	108.55	17.67	64	**44.6**	**41%**
NO_x (kiln)	268.30	1018.00	270.53	980	**38.0**	**4%**
H_2SO_4 (kiln)	0.25	1.00	0.276	1.00	**No change**	
CO (kiln)	346.38	1288.60	276.05	1000	**288.6**	**22%**
VOC (kiln)	11.55	42.90	11.81	42.90	**No Change**	
TOTAL[1]		2672.59		2284.94	**387.7**	**15%**

Clinker Production	Existing Production Rate		Proposed Production Rate		Increase (tons/year)	Increase
	tons/hour	tons/year	tons/hour	tons/year		
	95.83	712,500	115[2]	800,000	**87,500**	**12%**

[1] Total does not include PM10, because it is included with PM.

[2] 115 tons/hour is maximum per hour. Also limited to 2650 tons/day, which equals 110.42 tons/hour (24-hour average).

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

June 12, 2002

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

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

Dear Mr. Linero:

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

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

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

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

Sincerely,

Steven C. Cullen, PE
Koogler & Associates

√7/16/02 @ 9:05 AM

Florida Department of Environmental Protection

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

Jeb Bush
Governor

David Struhs
Secretary

FAX TRANSMITTAL SHEET

DATE: 7/16/02

TO: Steve Cullen, P.E.

PHONE: _____ FAX: 352-377-7158

FROM: Vickie Gibson PHONE: 850-921-9504

Division of Air Resources Management FAX: 850.922.6979

RE: Florida Rock Industries - Thompson S. Baker Portland Cement Plant-Newber

CC: _____

Total number of pages including cover sheet: 4

Message

I was out of the office yesterday. Therefore, I am sending you a copy of this correspondence by fax and will send you a hard copy in todays mail.

Vickie

If there are any problems with this fax transmittal, please call the above phone number.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

July 12, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John D. Baker, President
Florida Rock Industries
155 East 21st Street
Jacksonville, Florida 34601

Re: Request for Additional Information
DEP File No. 0010087-006-AC (PSD-FL-228)
Florida Rock Industries (FRI)
Thompson S. Baker Portland Cement Plant in Newberry

Dear Mr. Baker:

On June 14, 2002 the Department received your application for a modification of the Thompson S. Baker Portland Cement Plant's air construction permit. This modification is to increase clinker production and to reduce some of the permitted emission limitations of criteria pollutants.

We require some additional information to process your application. Please submit the information requested below. 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.

1. Please note that in accordance with Page 2 of the application, we will act only on the changes requested in the air construction permit, but not on those requested in the Title V Operation permit (see pages 12 and 38). Please list the requested changes in accordance with the numeration in the original air construction permit. A separate Title V Operation Permit application may be required following final action on this construction permit application.
2. Describe in detail the manner in which the Multi-Stage Calciner (MSC) has been operated with respect to achievement of the present NO_x emission limit (2.8 lb/ton of clinker). Advise of any projected changes or adjustments in kiln burner and MSC operational parameters that will be implemented to insure achievement of the lower proposed emission rates for NO_x and CO. These parameters should include: breakdown

of fuel and air distribution between kiln burner and MSC burners; typical percent and type of reburn fuel as well as oxygen levels in the lower stage of the calciner; similar information for the upper calciner; tertiary air considerations to finalize burnout; and achieve the lower CO levels also projected. Attach flow diagrams as necessary.

3. Continuous Emission Monitoring: Explain the data collection and calculation procedures during start up and shutdown and low load operation. Describe how the CEM software calculates the 30-day rolling average NO_X limit. Propose permit conditions regarding the manner by which data are to be included or excluded (e.g. span data, zero production, etc.)
4. Attached is a submittal from the Alachua County Environmental Protection Department. Please provide information they have requested when submitting the above requested information.

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 me at 850/921-9523.

Sincerely,

A.A. Linero, P.E.
Administrator
New Source Review Section

AAL/al

Enclosure

cc: Fred Cohrs, FRI
Cary Cohrs, FRI
Steve Cullen, P.E.
Gregg Worley, EPA
John Bunyak, NPS
Christopher Kirts, NED
Chris Bird, Alachua County

ALACHUA COUNTY
ENVIRONMENTAL PROTECTION DEPARTMENT
201 SE 2nd Avenue, Suite 201 • Gainesville, Florida 32601
Tel: (352) 264-6800 • Fax (352) 264-6852
Suncom: 651-6800
Home Page: http://environment.alachua-county.org/

ALACHUA COUNTY

Board of County Commissioners

Chris Bird
Environmental Protection Director
cbird@co.alachua.fl.us

Ramesh P. Buch
Land Conservation Manager
rbuch@co.alachua.fl.us

John J. Mousa
Pollution Prevention Manager
jmousa@co.alachua.fl.us

Geoffrey Sample
Natural Resources Supervisor (Interim)
gsample@co.alachua.fl.us

Debbie VanSlooten
Administrative Assistant
dvanslooten@co.alachua.fl.us

July 11, 2002

Mr. Al Linero, Administrator
New Source Review
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Permit Number: 0010087-002-AV
Florida Rock Industries, Thompson S. Baker Plant

Dear Mr. Linero,

The purpose of this letter is to provide Alachua County Environmental Protection Department (ACEPD) comments and concerns regarding the air permit modification application of Florida Rocks Industries, Thompson S. Baker plant in Newberry, Florida.

1) Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?

2) Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter? This data should be supplied.

3) Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?

Thanks for your response. If you have any questions please call me at 352-264-6809.

Lalit Lalwani
Air Quality Engineer

cc: John Mousa, ACEPD

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

September 5, 2002

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

Subject: Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant
Newberry, Alachua County, Florida
DEP File No. 0010087-006-AC (PSD-FL-228)
Response to Request for Additional Information dated July 12, 2002

Dear Mr. Linero:

This letter provides a response to your letter requesting additional information related to the application for an air construction permit for the existing Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant.

All of the information request items have been reproduced, preserving your numbering. Responses follow each item.

1. **Please note that in accordance with Page 2 of the application, we will act only on the changes requested in the air construction permit, but not on those requested in the Title V Operation permit (see pages 12 and 38). Please list the requested changes in accordance with the numeration in the original air construction permit. A separate Title V Operation Permit application may be required following final action on this construction permit application.**

Response: The requested changes are listed below in accordance with the numeration in the original air construction permit (AC01-267311), issued in 1996. The requested changes to the referenced Tables I and II are shown in accordance with the revised tables issued in 2001.

FROM

3. 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.]

TO

3. The kiln clinker production rate shall not exceed 110.42 tons per hour (TPH, 24-hour rolling average), 115.0 TPH (maximum per hour) and 2650 tons per day (TPD). On an annual basis, the clinker production rate shall not exceed 800,000 tons per year (TPY). The preheater dry feed rate will be determined as a function of the clinker production rate. The preheater dry feed rate is

limited to 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.

FROM

5. 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 SO_2 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, SO_2, NO_x, VOC, and CO, is optimized. The Department shall issue the final SO_2 emission limits within 120 days following receipt of all test results required by this 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.

TO

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

FROM

Table I Allowable Opacity Limitations
Florida Rock Industries

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

TO

Table I Allowable Opacity Limitations
Florida Rock Industries

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material			
Fugitive	Material Processing		10
Fugitive	Handling and Storage		10
Fugitive	Crusher		15
Emission Unit 2: Raw Mill System			
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			
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			
L-03	Clinker cooler discharge and breaker	0.01 gr/dscf	5
L-06	Clinker into clinker silos	0.01 gr/dscf	5
L-08	Clinker into clinker silos	0.01 gr/dscf	5
K-15	Clinker Cooler (ESP)		10
Emission Unit 5: Finish Grinding Operations			
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			
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			
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

FROM

Table II

Allowable Emissions
Florida Rock Industries

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_2SO_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 SO_2 limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

TO

Table II

Allowable Emissions
Florida Rock Industries

Pollutant	Emission Limit		Emission Rate[1]		Basis
	lb/ton clinker	lb/ton dry feed[2]	lb/hr	ton/yr	
PM (kiln)	0.235	0.138	25.90	94	Permittee
PM_{10} (kiln)	0.20	--	22.08	79.9	Permittee
PM (cooler)	0.139	0.082	15.39	55.70	BACT-NSPS
PM_{10} (cooler)	0.118	--	13.03	47.3	BACT
SO_2 (kiln)[3]	0.16	--	17.67	64	Permittee
NO_x (kiln)[4]	2.45	--	270.53	980	Permittee
H_2SO_4 (kiln)	0.0025	--	0.276	1	BACT
CO (kiln)	2.50	--	276.05	1000	Permittee
VOC (kiln)[5]	0.107	--	11.81	42.90	BACT

Notes:

[1] The kiln emission rate does not include fuel oil combustion emissions from the raw mill air heater.
[2] Emissions in units of lb/ton of dry feed are only applicable for particulate matter.
[3] 24-hour rolling average.
[4] 30-day rolling average.
[5] 24-hour rolling average.

2. **Describe in detail the manner in which the Multi-Stage Calciner (MSC) has been operated with respect to achievement of the present NO_x emission limit (2.8 lb/ton of clinker). Advise of any projected changes or adjustments in kiln burner and MSC operational parameters that will be implemented to insure achievement of the lower proposed emission rates for NO_x and CO. These parameters should include: breakdown of fuel and air distribution between kiln burner and MSC burners; typical percent and type of reburn fuel as well as oxygen levels in the lower stage of the calciner; similar information for the upper calciner; tertiary air considerations to finalize burnout; and achieve the lower CO levels also projected. Attach flow diagrams as necessary.**

Response: The Multi-Stage Calciner System (MSC) conversion was executed for the purpose of complying with the permitted NOx emission limit of 2.8 lb/ton clinker under normal and abnormal operating conditions, and provide operating latitude and process flexibility, while recognizing that the best conditions for reduction of NOx and CO are at the highest sustainable production rates within the capacity levels of the entire pyro-processing system, including all ancillary equipment, i.e. raw material and product conveying and combustion air requirements. A flow diagram of the original kiln/calciner system is attached as Figure I (sheets 1 and 2), to show the base configuration to which the MSC conversion was added. Data under various operating conditions are shown on Table III. These operating scenarios include eight short-term trial periods after the MSC conversion, and typical data from operation prior to the MSC conversion.

Present Operating Conditions and Parameters

Subsequent to the installation of the Multi-Stage Calciner System (MSC), kiln operations have been maintained at a maximum daily rate of 2,300-tpd clinker. Compliance with emission limits of NOx and CO has been achieved by adhering to good operating practices, the main goals of which are the following:

1 Keep fuel consumption at the lowest possible level to satisfactorily convert the raw materials to high quality clinker, which is defined as having less that 1.5% unreacted (free) calcium oxide.

2 Produce kiln feed of sufficient fineness and in compliance with ASTM and AASHTO/FDOT chemical specifications, which is as uniform from day to day as can be achieved, using the most modern on-line and laboratory analytical test methods available.

3 Maintain sufficient kiln feed inventory to ward against undesirable fluctuations in physical and chemical properties due to external causes, i.e. excess moisture resulting from prolonged rain and raw material composition changes.

4 Operate the pyro-processing system in an anticipatory manner to avoid process upsets and temporary excursions from emissions limits, caused by needed corrections to bring the process back to normal operating parameters.

Physical Conversion of the Pyro-Processing System to MSC

The outlet gas duct from the calciner was disconnected and turned 90 degrees. A new identical duct segment was added in parallel to the turned duct and the two duct segments were tied together with a deflection chamber at the bottom and a new outlet connected to stage 1 cyclone in the existing location. The deflection chamber provides the gas residence time to convert CO to CO2 with additional oxygen provided through the upper tertiary air duct (upper TA), a branch off the existing (lower TA) tertiary air duct. Due to the change in velocity of the gas stream, a nominal amount of raw mix drops out, which is collected in the deflection chamber hoppers and returned to the kiln via the

kiln meal chute discharging from cyclone 1. The material collected in stage 2 cyclone was partially rerouted with the installation of a branch meal chute and a material splitter. The new meal chute discharges into the calciner approximately 15 feet above the calciner burner elevation.

A flow sheet showing the revised preheater system after the installation of the MCS is shown as Figure II. Four sheets of this Figure are attached with data entered from Table III (trial periods 2, 4, 6, and 8).

Explanation of the revised preheater operation

The staged introduction of feed allows the reduction of NOx to elemental nitrogen to occur over a larger volume of the calciner. At the junction of the Y, an adjustable splitter allows routing of the meal to the elevation of the calciner, at which the best NOx reduction occurs.

The CO created from the reduction of NOx is oxidized to CO2 in the deflection chamber. The oxygen is supplied through the new upper tertiary air duct. As the temperature in this chamber is between 1500 and 1800 degrees F, additional fuel is not required to provide the energy to oxidize CO.

As shown in Table III, the MSC system is highly efficient for the reduction of NOx and the oxidation of CO.

Additional assurance that the allowable limits of the regulated emissions (i.e., NOx and CO) will not be exceeded under various operating conditions, including those that may be considered to be outside normal production practices, was provided through short-term trial operation scenarios. The kiln was "pushed" through a series of feed rate changes. Such feed rate changes are not normally considered prudent for good kiln operation. The results of this exercise confirm that the kiln / preheater system can maintain emissions within the proposed permitted limits, even under upset or abnormal conditions.

As the process is manually controlled, the operator must maintain management of many variable inputs, i.e. coal, airflow, oxygen content, various temperatures, damper positions and motor amps. Simultaneously, the operator watches the NOx and CO emissions.

With increased feed rates the NOx level stayed generally low, which tracks the very low oxygen content at the kiln inlet. These observations show that the NOx level is controllable at constant feed rates over sustained periods of time as the operator tunes the process, keeping in mind that the heat value of coal is not uniform.

As the feed rates were increased, the fuel input was escalated ahead of its actual requirements. The excess fuel resulted in increased NOx generation. During these tests the airflow lagged behind the fuel increase, which explains the low oxygen level at the kiln inlet.

At the stack, the CO level is very low at all levels of feed rates. The operator attempts to maintain a constant excess oxygen level at the kiln stack, a further indication of the absence of combustibles to protect the electrostatic precipitator against explosions.

The most suitable ratio of calciner and kiln fuel must be adjusted to a variety of conditions and cannot be expected to be constant. Over the short-term test periods, the optimum ratio was not established.

While the coal ratio distributed to the kiln main burner and the calciner burner totals 100%, the weight of tires burned was constant. Under the test conditions, the range of tires burned as a portion of total

fuel by weight was 9% at the low feed level and 7% at the high rate of feed. The tire feed rate must be manually set and is not maintained as a constant percentage of the total fuel input, as it affects potential plugging of the preheater.

There are some other relationships between operating parameters, from which significant conclusions can be drawn. The most important information that can be gleaned from the test series is the assurance that the proposed emission limits will not be exceeded, even though the operating conditions may vary from the desired, preferred and necessary mode to produce a high quality clinker, while maintaining low emission rates.

Table III – NOx and CO Emissions under Various Operating Conditions

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

Operating Parameter	Trial Period 1	2	3	4	5	6	7	8	Prior to MSC Conversion
Kiln Feed Rate, STPH	125	125	145	165	170	155	169	174	154
Clinker Production (SPTH)	76	76	88	100	103	94	102	105	93
Clinker Production (SPTD)	1818	1818	2109	2400	2473	2255	2458	2531	2240
TA Damper A, % Open To Calciner	99	99	54	55	55	70	65	65	75
TA Damper B, % Open To Mix Chamber	0	0	10	10	10	0	0	0	0
Secondary Air Temp, deg F	1658	1637	1507	1644	1672	1501	1703	1703	1750
Tertiary Air Temp, deg F	1513	1524	1458	1798	1782	1527	2123	2121	1580
Kiln Inlet O2, %	2.4	1.7	4.3	2.5	1.3	0.4	0.4	0.5	2
Kiln Inlet CO, ppm	99	244	10000	676	8760	10000	10000	9400	2000
ID Fan O2, %	4.4	4.5	3.7	3.7	4.3	3.8	4	4.4	5
ID Fan CO, ppm	7.2	7.2	8	8	8	3.6	10.4	16	20
Coal to Kiln Main Burner, STPH	4.9	4.7	6.2	6.2	6.2	6.2	6.6	6.7	6
% of total	59.8	56.7	59.1	60	58	63	60	60	60
Coal to Calciner, STPH	3.3	3.6	4.3	4.2	4.4	3.6	4.4	4.5	4
% of total	40.2	43.3	40.9	40	42	37	40	40	40
NOx at Stack, lbs/ton-clinker	3.05	3.3	1.8	1.61	2	1.54	1.65	2.44	2.85
Tires (coal replacement in STPH)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0

3. **Continuous Emission Monitoring: Explain the data collection and calculation procedures during start up and shutdown and low load operation. Describe how the CEM software calculates the 30-day rolling average NO_x limit. Propose permit conditions regarding the manner by which data are to be included or excluded (e.g. span data, zero production, etc.).**

Response: The data collection by the continuous emissions monitoring system (CEM) is done on a continuous basis, regardless of the raw mill or kiln operating status. It records data on one-minute intervals, and summarizes it into one-hour results. These results are recorded both in a database and printed onto a hard copy. In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

The monitor is checked for accuracy daily with zero and span gases and by annual accuracy audits.

The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average, and dropping the first day in the rolling average.

Proposed permit conditions for the CEM are included with this response as Attachment 1.

4. **Attached is a submittal from the Alachua County Environmental Protection Department. Please provide information they have requested when submitting the above requested information.**

Response: All of the Alachua County information request items have been reproduced, preserving their numbering. Responses follow each item.

1) **Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?**

Response: As discussed in preceding sections of this letter, the MSC system has recently been installed as required by permit, and plant and operational refinements are essentially complete. As a result, a two-year plant operating record necessary to establish "actual emissions" as defined by Rule 62-210.200(11)(a), F.A.C., does not exist. Florida Rock believes, therefore that the Department (FDEP) should define "actual emissions" as unit-specific allowable emissions per Rule 62-210.200(11)(b) for purposes of this application. These emissions are summarized in response to FDEP Item No. 1 in Table II as permitted.

2) **Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter. This data should be supplied.**

Response: See Response to FDEP Item No. 1 with specific reference to Permit Condition No. 5 (Table II, as permitted and Table II, as proposed).

3) **Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?**

Response: Reasonable assurance of compliance with the MACT standard for dioxin emissions can be derived from emission data provided to the City of Newberry, for measurements performed quarterly during the first year of plant operation. The data (summarized in the table below) shows that the average emission rate of dioxins/furans (toxicity equivalents, TEQ) was 0.029 nanograms per dry standard cubic meter of stack gas (ng/dscm), when corrected to 7% oxygen. As the standard is 0.4 ng/dscm, reasonable assurance of compliance is demonstrated.

Table IV – Summary of Dioxin/Furan Emission Data for the First Year of Plant Operation

Florida Rock Industries
Thompson S. Baker Cement Plant

Test Date	Preheater Feed Rate (ton/hr)	Fuel		Dioxin/Furan Emissions (TEQ)	
		Type	Heat Input (MMBtu/hr)	Conc. @ 7% 0_2 (ng/dscm)*	Mass (lb/hr)
7/26/2000	140.0	Coal	170	0.064	0.0000000286
10/17/2000	146.3	Coal	152	0.020	0.0000000039
2/5-6/2001	124.2	Coal	128	0.023	0.0000000071
4/18/2001	155.1	Coal	253	0.008	0.0000000023
Average				**0.029**	0.0000000105

* NESHAP (40 CFR 63, Subpart LLL) Limit - 0.4 ng/dscm

The reports containing the above data were provided to the City of Newberry. The testing was not as a result of state requirements, so the reports were not submitted to the Department of Environmental Protection.

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

Sincerely,

SEAL 9/5/02

Steven C. Cullen, PE
Koogler & Associates

Florida PE No. 45188

Enclosures: Attachment 1: Proposed Permit Conditions for CEM
Figure I: Original Kiln/Calciner Configuration (2 Sheets)
Figure II: Kiln/Calciner Configuration after MSC Conversion (4 sheets)

Attachment 1 – Proposed Permit Conditions for CEM

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

(1) The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring SO2 and NOx.

(2) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR 60, data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the reference test methods.

(3) The span value of the continuous emission monitoring system shall be no less than 150 percent of the maximum permitted emissions of the inline kiln/raw mill.

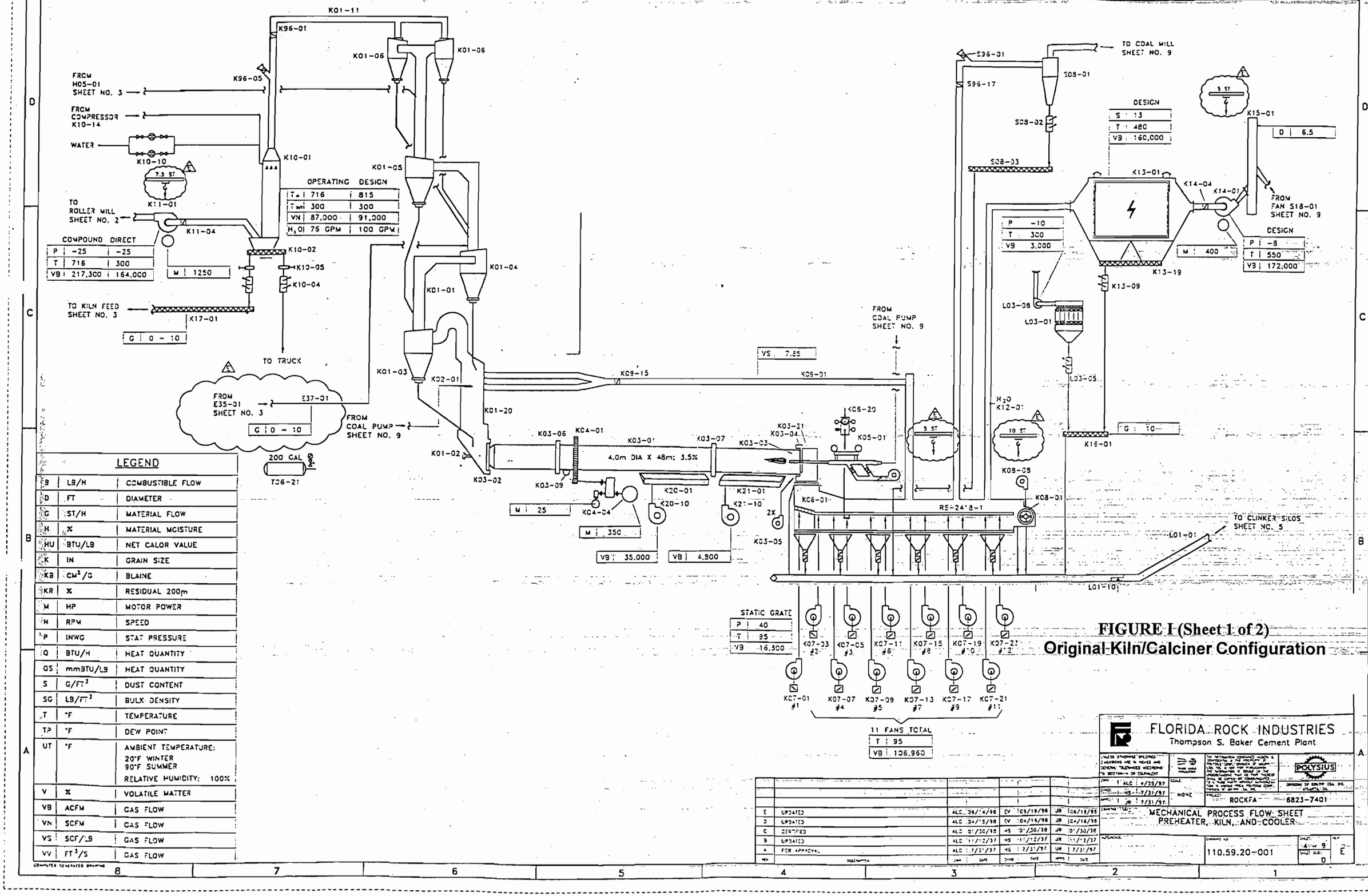
(4) The 24-hour daily arithmetic averages shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume (dry basis). The 1-hour arithmetic averages shall be calculated using the one-minute data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.

(5) 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, the permittee will provide a report with corrective actions.

(6) 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 paragraph (5), emissions data shall be obtained using other monitoring systems as approved by the Department to provide, as necessary, reasonable assurance.

(7) In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

(8) The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average and dropping the first day in the rolling average.



LEGEND

B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

FIGURE I (Sheet 1 of 2)
Original Kiln/Calciner Configuration

REV	DESCRIPTION		DATE		DATE		DATE
E	UPDATED	ALC	06/14/98	EV	05/19/98	JR	06/19/98
D	UPDATED	ALC	04/15/98	EV	04/15/98	JR	04/16/98
C	REVISED	ALC	01/30/98	HS	01/30/98	JR	01/30/98
B	UPDATED	ALC	11/12/97	HS	11/12/97	JR	11/13/97
A	FOR APPROVAL	ALC	7/31/97	HS	7/31/97	JR	7/31/97

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

POLYSIUS

ALC 4/25/97
HS 7/31/97
JR 7/31/97
SCALE: NONE
PROJECT: ROCKFA 6823-7401
DRAWING TITLE: MECHANICAL PROCESS FLOW SHEET PREHEATER, KILN, AND COOLER
REFERENCE
DRAWING NO. 110.59.20-001
SHEET 4 OF 9
SHEET SUB. 0
REV E

COMPUTER GENERATED DRAWING

OPERATING	WINTER	SUMMER
P	–	–
T	203	203
TP	123	130
VN	142,631	142,631
VB	194,000	194,000

DESIGN	
P	-38
T	230
VB	200,000

DESIGN	COMPOUND	DIRECT
S	25	18
T	205	300
VB	194,000	200,000

DESIGN	
P	-9
T	356
VB	220,000

	WINTER	SUMMER
G	212	212
T	34	79
H	10	10

	WINTER	SUMMER
Q	-3	-3
T	549	600
VN	106,705	106,705

	WINTER	SUMMER
T	20	90
VN	11,213	14,696

	WINTER	SUMMER
Q	15.7	7.5
T	1,800	1,800
VN	6,716	3,233

LEGEND		
B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

COMPUTER GENERATED DRAWING

FIGURE I (Sheet 2 of 2)
Original Kiln/Calciner Configuration

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

E	UPDATED	ALC	06/14/99	EV	06/19/98
D	UPDATED	ALC	04/15/98	EV	04/16/98
C	CERTIFIED	ALC	01/20/98	HS	01/23/98
B	UPDATED	ALC	11/12/97	HS	11/12/97
A	FOR APPROVAL	ALC	7/31/97	HS	7/31/97

DRAWN: ALC 4/25/97 | CHK: HS 7/31/97 | APP: JR 7/31/97 | SCALE: NONE

POLYSIUS — DIVISION OF ENTOY USA, INC. ATLANTA, GA

PROJECT: ROCKFA 6823-7401

DRAWING TITLE: MECHANICAL PROCESS FLOW SHEET RAW MILL SYSTEM

DRAWING NO.: 110.59.20-001 | SHEET: 2 – 9 | REV: E

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 3.05
CO

E19 ESP INLET TEMP

E20 DAMPER POSITION

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

STAGE 3

STAGE 2

STAGE 1

125
KILN FEED RATE (STPH)

0
UPPER T/A DAMP POS

4.5
K11 % OXYGEN

1.21
K11 CO (lbs/tn-clinker)

K11 POSITION

43.3
% of TOTAL

3.6
COAL (STPH)

MEAL SPLIT POS

TO COAL MILL

0.8
TIRES (TPH)

99
T/A DAMP POS

1524
T/A TEMP (F)

56.7
% of TOTAL

4.7
COAL (TPH)

INLET TEMP

1.7
INLET % OXYGEN

244
INLET CO (PPM)

KILN SPEED

1637
SECONDARY AIR TEMP (F)

1824
CLINKER (TPD)

76
CLINKER (STPH)

K14 DAMPER POSITION

FIGURE II (Sheet 1 of 4)
Kiln/Calciner Configuration after MSC Conversion

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #2	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS

NOx (lbs/tn-clinker) 1.61

CO

E19 ESP INLET TEMP

E20 DAMPER POSITION

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

STAGE 3

STAGE 2

STAGE 1

165 KILN FEED RATE (STPH)

10 UPPER T/A DAMP POS

MEAL SPLIT POS

TO COAL MILL

K14 DAMPER POSITION

3.7 K11 % OXYGEN

0.97 K11 CO (lbs/tn-clinker)

K11 POSITION

40.0 % of TOTAL

4.2 COAL (STPH)

0.8 TIRES (TPH)

55 T/A DAMP POS

1798 T/A TEMP (F)

60.0 % of TOTAL

6.2 COAL (TPH)

INLET TEMP

2.5 INLET % OXYGEN

676 INLET CO (PPM)

KILN SPEED

1644 SECONDARY AIR TEMP (F)

2400 CLINKER (TPD)

100 CLINKER (STPH)

FIGURE II (Sheet 2 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #4	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 1.54
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1

155
KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

0
UPPER T/A DAMP POS

3.8
K11 % OXYGEN
1.03
K11 CO (lbs/tn-clinker)

K11 POSITION

37.0
% of TOTAL
3.6
COAL (STPH)

MEAL SPLIT POS

TO COAL MILL

0.8
TIRES (TPH)

70
T/A DAMP POS
1527
T/A TEMP (F)

63.0
% of TOTAL
6.2
COAL (TPH)

INLET TEMP
0.4
INLET % OXYGEN
10000
INLET CO (PPM)

KILN SPEED
1501
SECONDARY AIR TEMP (F)

2256
CLINKER (TPD)
94
CLINKER (STPH)

K14 DAMPER POSITION

FIGURE II (Sheet 3 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
-		CONDITION #6	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 2.44
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1

E19 ESP INLET TEMP

E20 DAMPER POSITION

174
KILN FEED RATE (STPH)

0
UPPER T/A DAMP POS

K14 DAMPER POSITION

TO COAL MILL

4.4
K11 % OXYGEN
0.93
K11 CO (lbs/tn-clinker)

K11 POSITION

40.0
% of TOTAL
4.5
COAL (STPH)

MEAL SPLIT POS

0.8
TIRES (TPH)

65
T/A DAMP POS
2121
T/A TEMP (F)

60.0
% of TOTAL
6.7
COAL (TPH)

INLET TEMP
0.5
INLET % OXYGEN
9400
INLET CO (PPM)

KILN SPEED
1703
SECONDARY AIR TEMP (F)

2520
CLINKER (TPD)
105
CLINKER (STPH)

FIGURE II (Sheet 4 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #8	
SCALE	BY:	SHEET	

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

September 5, 2002

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

Subject: Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant
Newberry, Alachua County, Florida
DEP File No. 0010087-006-AC (PSD-FL-228)
Response to Request for Additional Information dated July 12, 2002

Dear Mr. Linero:

This letter provides a response to your letter requesting additional information related to the application for an air construction permit for the existing Florida Rock Industries, Inc. – Thompson S. Baker Cement Plant.

All of the information request items have been reproduced, preserving your numbering. Responses follow each item.

1. **Please note that in accordance with Page 2 of the application, we will act only on the changes requested in the air construction permit, but not on those requested in the Title V Operation permit (see pages 12 and 38). Please list the requested changes in accordance with the numeration in the original air construction permit. A separate Title V Operation Permit application may be required following final action on this construction permit application.**

Response: The requested changes are listed below in accordance with the numeration in the original air construction permit (AC01-267311), issued in 1996. The requested changes to the referenced Tables I and II are shown in accordance with the revised tables issued in 2001.

FROM

3. 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.]

TO

3. The kiln clinker production rate shall not exceed 110.42 tons per hour (TPH, 24-hour rolling average), 115.0 TPH (maximum per hour) and 2650 tons per day (TPD). On an annual basis, the clinker production rate shall not exceed 800,000 tons per year (TPY). The preheater dry feed rate will be determined as a function of the clinker production rate. The preheater dry feed rate is

limited to 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.

FROM

5. 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 SO_2 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, SO_2, NO_x, VOC, and CO, is optimized. The Department shall issue the final SO_2 emission limits within 120 days following receipt of all test results required by this 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.

TO

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

FROM

Table I Allowable Opacity Limitations
Florida Rock Industries

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

TO

Table I Allowable Opacity Limitations
Florida Rock Industries

Stack #	Description	Grain Loading	OPACITY
Emission Unit 1: Raw Material			
Fugitive	Material Processing		10
Fugitive	Handling and Storage		10
Fugitive	Crusher		15
Emission Unit 2: Raw Mill System			
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			
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			
L-03	Clinker cooler discharge and breaker	0.01 gr/dscf	5
L-06	Clinker into clinker silos	0.01 gr/dscf	5
L-08	Clinker into clinker silos	0.01 gr/dscf	5
K-15	Clinker Cooler (ESP)		10
Emission Unit 5: Finish Grinding Operations			
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			
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			
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

FROM

Table II

Allowable Emissions
Florida Rock Industries

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_2SO_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 SO_2 limit to less than 0.28 lb/ton clinker based on compliance test and continuous monitoring data.

TO

Table II

Allowable Emissions
Florida Rock Industries

Pollutant	Emission Limit		Emission Rate[1]		Basis
	lb/ton clinker	lb/ton dry feed[2]	lb/hr	ton/yr	
PM (kiln)	0.235	0.138	25.90	94	Permittee
PM_{10} (kiln)	0.20	--	22.08	79.9	Permittee
PM (cooler)	0.139	0.082	15.39	55.70	BACT-NSPS
PM_{10} (cooler)	0.118	--	13.03	47.3	BACT
SO_2 (kiln)[3]	0.16	--	17.67	64	Permittee
NO_x (kiln)[4]	2.45	--	270.53	980	Permittee
H_2SO_4 (kiln)	0.0025	--	0.276	1	BACT
CO (kiln)	2.50	--	276.05	1000	Permittee
VOC (kiln)[5]	0.107	--	11.81	42.90	BACT

Notes:

[1] The kiln emission rate does not include fuel oil combustion emissions from the raw mill air heater.
[2] Emissions in units of lb/ton of dry feed are only applicable for particulate matter.
[3] 24-hour rolling average.
[4] 30-day rolling average.
[5] 24-hour rolling average.

2. **Describe in detail the manner in which the Multi-Stage Calciner (MSC) has been operated with respect to achievement of the present NO_x emission limit (2.8 lb/ton of clinker). Advise of any projected changes or adjustments in kiln burner and MSC operational parameters that will be implemented to insure achievement of the lower proposed emission rates for NO_x and CO. These parameters should include: breakdown of fuel and air distribution between kiln burner and MSC burners; typical percent and type of reburn fuel as well as oxygen levels in the lower stage of the calciner; similar information for the upper calciner; tertiary air considerations to finalize burnout; and achieve the lower CO levels also projected. Attach flow diagrams as necessary.**

Response: The Multi-Stage Calciner System (MSC) conversion was executed for the purpose of complying with the permitted NOx emission limit of 2.8 lb/ton clinker under normal and abnormal operating conditions, and provide operating latitude and process flexibility, while recognizing that the best conditions for reduction of NOx and CO are at the highest sustainable production rates within the capacity levels of the entire pyro-processing system, including all ancillary equipment, i.e. raw material and product conveying and combustion air requirements. A flow diagram of the original kiln/calciner system is attached as Figure I (sheets 1 and 2), to show the base configuration to which the MSC conversion was added. Data under various operating conditions are shown on Table III. These operating scenarios include eight short-term trial periods after the MSC conversion, and typical data from operation prior to the MSC conversion.

Present Operating Conditions and Parameters

Subsequent to the installation of the Multi-Stage Calciner System (MSC), kiln operations have been maintained at a maximum daily rate of 2,300-tpd clinker. Compliance with emission limits of NOx and CO has been achieved by adhering to good operating practices, the main goals of which are the following:

1 Keep fuel consumption at the lowest possible level to satisfactorily convert the raw materials to high quality clinker, which is defined as having less that 1.5% unreacted (free) calcium oxide.

2 Produce kiln feed of sufficient fineness and in compliance with ASTM and AASHTO/FDOT chemical specifications, which is as uniform from day to day as can be achieved, using the most modern on-line and laboratory analytical test methods available.

3 Maintain sufficient kiln feed inventory to ward against undesirable fluctuations in physical and chemical properties due to external causes, i.e. excess moisture resulting from prolonged rain and raw material composition changes.

4 Operate the pyro-processing system in an anticipatory manner to avoid process upsets and temporary excursions from emissions limits, caused by needed corrections to bring the process back to normal operating parameters.

Physical Conversion of the Pyro-Processing System to MSC

The outlet gas duct from the calciner was disconnected and turned 90 degrees. A new identical duct segment was added in parallel to the turned duct and the two duct segments were tied together with a deflection chamber at the bottom and a new outlet connected to stage 1 cyclone in the existing location. The deflection chamber provides the gas residence time to convert CO to CO2 with additional oxygen provided through the upper tertiary air duct (upper TA), a branch off the existing (lower TA) tertiary air duct. Due to the change in velocity of the gas stream, a nominal amount of raw mix drops out, which is collected in the deflection chamber hoppers and returned to the kiln via the

kiln meal chute discharging from cyclone 1. The material collected in stage 2 cyclone was partially rerouted with the installation of a branch meal chute and a material splitter. The new meal chute discharges into the calciner approximately 15 feet above the calciner burner elevation.

A flow sheet showing the revised preheater system after the installation of the MCS is shown as Figure II. Four sheets of this Figure are attached with data entered from Table III (trial periods 2, 4, 6, and 8).

Explanation of the revised preheater operation

The staged introduction of feed allows the reduction of NOx to elemental nitrogen to occur over a larger volume of the calciner. At the junction of the Y, an adjustable splitter allows routing of the meal to the elevation of the calciner, at which the best NOx reduction occurs.

The CO created from the reduction of NOx is oxidized to CO2 in the deflection chamber. The oxygen is supplied through the new upper tertiary air duct. As the temperature in this chamber is between 1500 and 1800 degrees F, additional fuel is not required to provide the energy to oxidize CO.

As shown in Table III, the MSC system is highly efficient for the reduction of NOx and the oxidation of CO.

Additional assurance that the allowable limits of the regulated emissions (i.e., NOx and CO) will not be exceeded under various operating conditions, including those that may be considered to be outside normal production practices, was provided through short-term trial operation scenarios. The kiln was "pushed" through a series of feed rate changes. Such feed rate changes are not normally considered prudent for good kiln operation. The results of this exercise confirm that the kiln / preheater system can maintain emissions within the proposed permitted limits, even under upset or abnormal conditions.

As the process is manually controlled, the operator must maintain management of many variable inputs, i.e. coal, airflow, oxygen content, various temperatures, damper positions and motor amps. Simultaneously, the operator watches the NOx and CO emissions.

With increased feed rates the NOx level stayed generally low, which tracks the very low oxygen content at the kiln inlet. These observations show that the NOx level is controllable at constant feed rates over sustained periods of time as the operator tunes the process, keeping in mind that the heat value of coal is not uniform.

As the feed rates were increased, the fuel input was escalated ahead of its actual requirements. The excess fuel resulted in increased NOx generation. During these tests the airflow lagged behind the fuel increase, which explains the low oxygen level at the kiln inlet.

At the stack, the CO level is very low at all levels of feed rates. The operator attempts to maintain a constant excess oxygen level at the kiln stack, a further indication of the absence of combustibles to protect the electrostatic precipitator against explosions.

The most suitable ratio of calciner and kiln fuel must be adjusted to a variety of conditions and cannot be expected to be constant. Over the short-term test periods, the optimum ratio was not established.

While the coal ratio distributed to the kiln main burner and the calciner burner totals 100%, the weight of tires burned was constant. Under the test conditions, the range of tires burned as a portion of total

fuel by weight was 9% at the low feed level and 7% at the high rate of feed. The tire feed rate must be manually set and is not maintained as a constant percentage of the total fuel input, as it affects potential plugging of the preheater.

There are some other relationships between operating parameters, from which significant conclusions can be drawn. The most important information that can be gleaned from the test series is the assurance that the proposed emission limits will not be exceeded, even though the operating conditions may vary from the desired, preferred and necessary mode to produce a high quality clinker, while maintaining low emission rates.

Table III – NOx and CO Emissions under Various Operating Conditions

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

Operating Parameter	Trial Period 1	2	3	4	5	6	7	8	Prior to MSC Conversion
Kiln Feed Rate, STPH	125	125	145	165	170	155	169	174	154
Clinker Production (SPTH)	76	76	88	100	103	94	102	105	93
Clinker Production (SPTD)	1818	1818	2109	2400	2473	2255	2458	2531	2240
TA Damper A, % Open To Calciner	99	99	54	55	55	70	65	65	75
TA Damper B, % Open To Mix Chamber	0	0	10	10	10	0	0	0	0
Secondary Air Temp, deg F	1658	1637	1507	1644	1672	1501	1703	1703	1750
Tertiary Air Temp, deg F	1513	1524	1458	1798	1782	1527	2123	2121	1580
Kiln Inlet O2, %	2.4	1.7	4.3	2.5	1.3	0.4	0.4	0.5	2
Kiln Inlet CO, ppm	99	244	10000	676	8760	10000	10000	9400	2000
ID Fan O2, %	4.4	4.5	3.7	3.7	4.3	3.8	4	4.4	5
ID Fan CO, ppm	7.2	7.2	8	8	8	3.6	10.4	16	20
Coal to Kiln Main Burner, STPH	4.9	4.7	6.2	6.2	6.2	6.2	6.6	6.7	6
% of total	59.8	56.7	59.1	60	58	63	60	60	60
Coal to Calciner, STPH	3.3	3.6	4.3	4.2	4.4	3.6	4.4	4.5	4
% of total	40.2	43.3	40.9	40	42	37	40	40	40
NOx at Stack, lbs/ton-clinker	3.05	3.3	1.8	1.61	2	1.54	1.65	2.44	2.85
Tires (coal replacement in STPH)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0

3. **Continuous Emission Monitoring: Explain the data collection and calculation procedures during start up and shutdown and low load operation. Describe how the CEM software calculates the 30-day rolling average NO_x limit. Propose permit conditions regarding the manner by which data are to be included or excluded (e.g. span data, zero production, etc.).**

Response: The data collection by the continuous emissions monitoring system (CEM) is done on a continuous basis, regardless of the raw mill or kiln operating status. It records data on one-minute intervals, and summarizes it into one-hour results. These results are recorded both in a database and printed onto a hard copy. In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

The monitor is checked for accuracy daily with zero and span gases and by annual accuracy audits.

The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average, and dropping the first day in the rolling average.

Proposed permit conditions for the CEM are included with this response as Attachment 1.

4. **Attached is a submittal from the Alachua County Environmental Protection Department. Please provide information they have requested when submitting the above requested information.**

Response: All of the Alachua County information request items have been reproduced, preserving their numbering. Responses follow each item.

1) **Florida Rock is requesting that the proposed permit emission rates for PM (kiln), PM10 (kiln) SO2 (kiln), NOx (kiln) and CO (kiln) be reduced. What are their current actual emissions (from CEMS or stack test data) based on their clinker production? How much PM, PM10, SO2, NOx, and CO are they actually emitting now at their maximum production rates?**

Response: As discussed in preceding sections of this letter, the MSC system has recently been installed as required by permit, and plant and operational refinements are essentially complete. As a result, a two-year plant operating record necessary to establish "actual emissions" as defined by Rule 62-210.200(11)(a), F.A.C., does not exist. Florida Rock believes, therefore that the Department (FDEP) should define "actual emissions" as unit-specific allowable emissions per Rule 62-210.200(11)(b) for purposes of this application. These emissions are summarized in response to FDEP Item No. 1 in Table II as permitted.

2) **Has the permittee supplied sufficient actual data to show that after production rates are increased, the emission rates would go down from present permitted levels as indicated in the Fred Cohrs letter. This data should be supplied.**

Response: See Response to FDEP Item No. 1 with specific reference to Permit Condition No. 5 (Table II, as permitted and Table II, as proposed).

3) **Has the permittee supplied reasonable assurance or data to indicate that Dioxin emissions will be below the new MACT standards? Is any actual emission data available?**

Response: Reasonable assurance of compliance with the MACT standard for dioxin emissions can be derived from emission data provided to the City of Newberry, for measurements performed quarterly during the first year of plant operation. The data (summarized in the table below) shows that the average emission rate of dioxins/furans (toxicity equivalents, TEQ) was 0.029 nanograms per dry standard cubic meter of stack gas (ng/dscm), when corrected to 7% oxygen. As the standard is 0.4 ng/dscm, reasonable assurance of compliance is demonstrated.

Table IV – Summary of Dioxin/Furan Emission Data for the First Year of Plant Operation

Florida Rock Industries
Thompson S. Baker Cement Plant

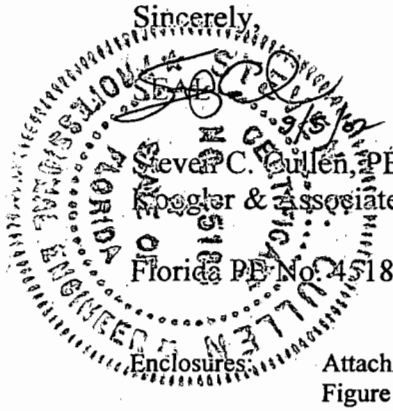
Test Date	Preheater Feed Rate (ton/hr)	Fuel		Dioxin/Furan Emissions (TEQ)	
		Type	Heat Input (MMBtu/hr)	Conc. @ 7% 0_2 (ng/dscm)*	Mass (lb/hr)
7/26/2000	140.0	Coal	170	0.064	0.0000000286
10/17/2000	146.3	Coal	152	0.020	0.0000000039
2/5-6/2001	124.2	Coal	128	0.023	0.0000000071
4/18/2001	155.1	Coal	253	0.008	0.0000000023
Average				**0.029**	0.0000000105

* NESHAP (40 CFR 63, Subpart LLL) Limit - 0.4 ng/dscm

The reports containing the above data were provided to the City of Newberry. The testing was not as a result of state requirements, so the reports were not submitted to the Department of Environmental Protection.

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

Sincerely,



Steven C. Cullen, PE
Kopogler & Associates
Florida PE No. 45188

Enclosures: Attachment 1: Proposed Permit Conditions for CEM
Figure I: Original Kiln/Calciner Configuration (2 Sheets)
Figure II: Kiln/Calciner Configuration after MSC Conversion (4 sheets)

cc: J. Thomas
D. Galbraith
C. Kirts, NED
J. Bunyak, NPS
B. Wolfe, EPA
C. Bird, Alachua Co.
P. Reynolds, Tallahassee DEP

Attachment 1 – Proposed Permit Conditions for CEM

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

(1) The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring SO2 and NOx.

(2) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR 60, data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the reference test methods.

(3) The span value of the continuous emission monitoring system shall be no less than 150 percent of the maximum permitted emissions of the inline kiln/raw mill.

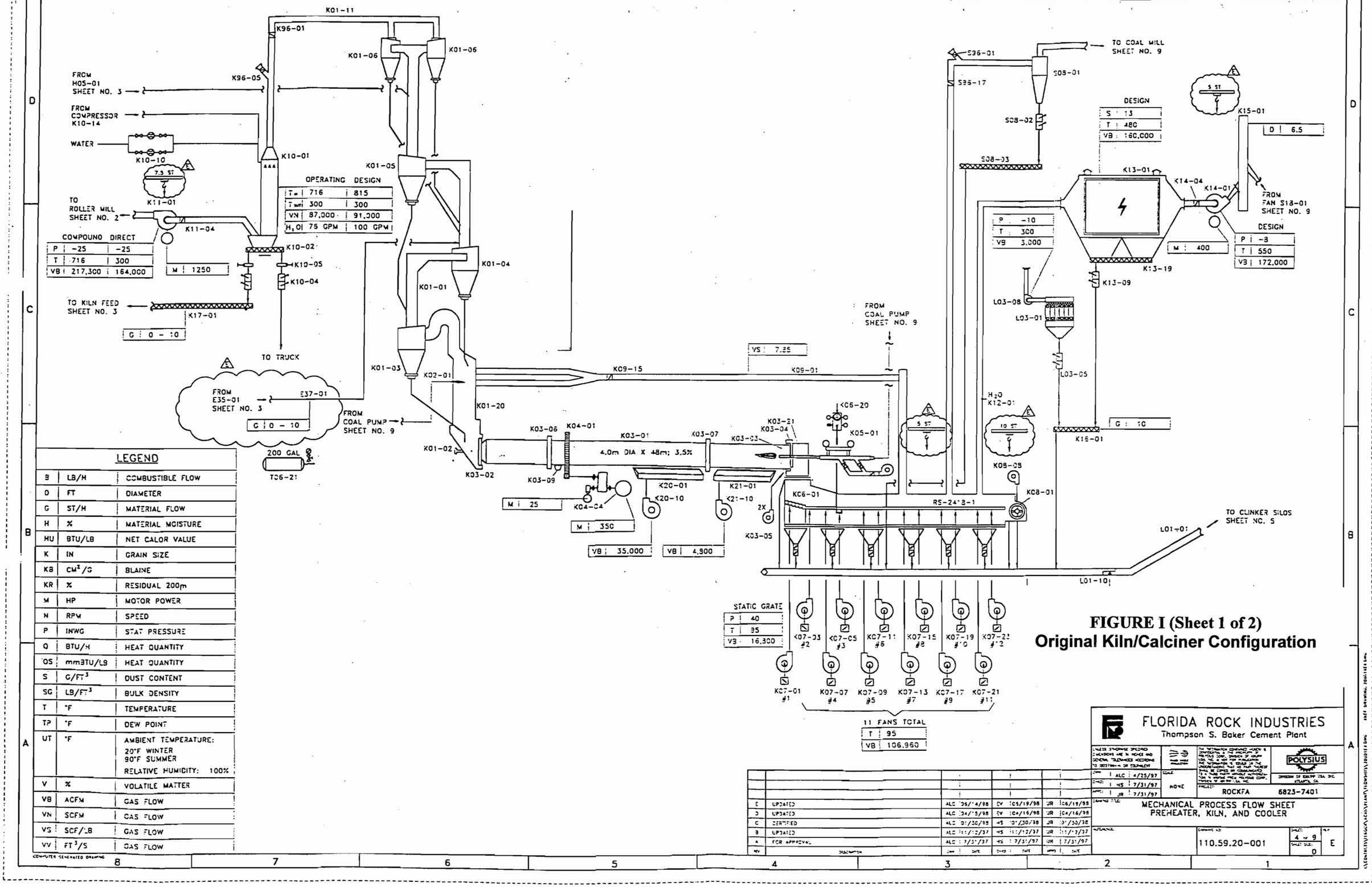
(4) The 24-hour daily arithmetic averages shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume (dry basis). The 1-hour arithmetic averages shall be calculated using the one-minute data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.

(5) 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, the permittee will provide a report with corrective actions.

(6) 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 paragraph (5), emissions data shall be obtained using other monitoring systems as approved by the Department to provide, as necessary, reasonable assurance.

(7) In the event the plant is not in operation and there is no data, the system records zeroes. These zeroes are not included in the calculations of rolling averages, and are removed from the tabulation.

(8) The 30-day NOx rolling average is calculated through the use of spreadsheet software, using data generated by the CEM. The daily data are entered into a spreadsheet for these calculations. The 30-day NOx rolling average is calculated by adding the current day's average and dropping the first day in the rolling average.



LEGEND		
B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

FIGURE I (Sheet 1 of 2)
Original Kiln/Calciner Configuration

REV	DESCRIPTION	DRN	DATE	CHKD	DATE	APPD	DATE
E	UPDATED	ALC	06/24/98	EV	05/19/98	JR	06/19/98
D	UPDATED	ALC	04/15/98	EV	04/16/98	JR	04/16/98
C	CERTIFIED	ALC	01/30/98	MS	01/30/98	JR	01/30/98
B	UPDATED	ALC	11/12/97	MS	11/12/97	JR	11/17/97
A	FOR APPROVAL	ALC	7/31/97	MS	7/31/97	JR	7/31/97

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND GENERAL TOLERANCES ACCORDING TO ISO2768-m OR EQUIVALENT

THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF POLYSIUS CORP., DIVISION OF KHD HUMBOLDT WEDAG, INC. AND IS NOT FOR PUBLICATION, REPRODUCTION, OR USE BEYOND THAT EXPRESSLY AUTHORIZED IN WRITING BY POLYSIUS CORP., DIVISION OF KHD HUMBOLDT WEDAG, INC. OR ITS AUTHORIZED AGENTS. ANY UNAUTHORIZED USE OR DISCLOSURE WILL RESULT IN LEGAL ACTION BEING TAKEN TO THE FULLEST EXTENT OF THE LAW.

POLYSIUS
DIVISION OF KHD HUMBOLDT WEDAG INC. ATLANTA, GA.

DRN ALC 4/25/97
CHKD MS 7/31/97
APPD JR 7/31/97
SCALE NONE
PROJECT ROCKFA 6823-7401

DRAWING TITLE
MECHANICAL PROCESS FLOW SHEET
PREHEATER, KILN, AND COOLER

REFERENCE

DRAWING NO. 110.59.20-001
SHEET 4 OF 9
SHEET SIZE D
REV E

COMPUTER GENERATED DRAWING

OPERATING	WINTER	SUMMER
P	–	–
T	203	203
TP	123	130
VN	142,631	142,631
VB	194,000	194,000

DESIGN	
P	-38
T	230
VB	200,000

DESIGN	COMPOUND	DIRECT
S	25	18
T	205	300
VB	194,000	200,000

DESIGN	
P	-9
T	356
VB	220,000

	WINTER	SUMMER
G	212	212
T	34	79
H	10	10

	WINTER	SUMMER
Q	-3	-3
T	549	600
VN	106,705	106,705

	WINTER	SUMMER
T	20	90
VN	11,213	14,696

	WINTER	SUMMER
Q	15.7	7.5
T	1,800	1,800
VN	6,716	3,233

LEGEND		
B	LB/H	COMBUSTIBLE FLOW
D	FT	DIAMETER
G	ST/H	MATERIAL FLOW
H	%	MATERIAL MOISTURE
HU	BTU/LB	NET CALOR VALUE
K	IN	GRAIN SIZE
KB	CM^2/G	BLAINE
KR	%	RESIDUAL 200m
M	HP	MOTOR POWER
N	RPM	SPEED
P	INWG	STAT PRESSURE
Q	BTU/H	HEAT QUANTITY
QS	mmBTU/LB	HEAT QUANTITY
S	G/FT^3	DUST CONTENT
SG	LB/FT^3	BULK DENSITY
T	°F	TEMPERATURE
TP	°F	DEW POINT
UT	°F	AMBIENT TEMPERATURE: 20°F WINTER 90°F SUMMER RELATIVE HUMIDITY: 100%
V	%	VOLATILE MATTER
VB	ACFM	GAS FLOW
VN	SCFM	GAS FLOW
VS	SCF/LB	GAS FLOW
VV	FT^3/S	GAS FLOW

COMPUTER GENERATED DRAWING

FROM RAW MATERIAL STORAGE SHEET NO. :

D14-01 · D02-01 · D11-01 · D12-01 · 90 ST · E01-01

7.5 ST E89-01 · E16-01 · E16-11 · E17-01 · E17-11 · E18-03 · E18-01 · E96-05 · E96-10 · M 1750

F01-01 · F01-02

G 144

E15-01 · 10 ST E88-01 · M 125

20 ST E87-01

F02-01 · F02-02

G 192-192 · H .5

E12-01 RMS - 315

E11-01 RM 41/20 · E13-01 · E11-05-20 · E09-01 H_2O · E11-05-21

E10-01 · E14-01

200 GAL · T05-11

13% WATER 356°F MAX (300°F - 350°F REQD FOR ESP E19-01)

E19-01 · E20-03 · E20-01 · E21-01 · 5 ST · M 500 · D 9.42

E19-19 · E19-09 · E22-01 · G 25 · E24-01 · TO HOMOGENIZING SILO SHEET NO. 3 · E23-05 · E23-01

F03-01 · F03-02 · SHEET NO. 3 · TO HOMOGENIZING SILO

E96-01 · FROM KILN ID FAN SHEET NO. 4

E96-15 · Q 32 · #2 FUEL OIL · E02-01 · E95-20 · TO KILN · M 1750 · M 50

FIGURE I (Sheet 2 of 2)
Original Kiln/Calciner Configuration

FLORIDA ROCK INDUSTRIES
Thompson S. Baker Cement Plant

C	UPDATED	ALC 06/14/95	EV 06/19/98	JR 06/19/98
B	UPDATED	ALC 04/15/98	EV 04/15/98	JR 04/15/98
C	CERTIFIED	ALC 01/30/98	HS 01/30/98	JR 01/30/98
B	UPDATED	ALC 11/12/97	HS 11/12/97	JR 11/12/97
A	FOR APPROVAL	ALC 7/31/97	HS 7/31/97	JR 7/31/97

ALC 4/25/97 · HS 7/31/97 · JR 7/31/97 · NONE

POLYSIUS

ROCKFA 6823-7401

MECHANICAL PROCESS FLOW SHEET
RAW MILL SYSTEM

110.59.20-001 · SHEET 2 - 9 · REV E · SHEET SIZE D

DWG 110591200101\SHEET1\PAGE1\110591200101

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 3.05
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1

125
KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

0
UPPER T/A DAMP POS

K14 DAMPER POSITION

TO COAL MILL

4.5
K11 % OXYGEN
1.21
K11 CO (lbs/tn-clinker)

K11 POSITION

43.3
% of TOTAL
3.6
COAL (STPH)

MEAL SPLIT POS

0.8
TIRES (TPH)

99
T/A DAMP POS
1524
T/A TEMP (F)

56.7
% of TOTAL
4.7
COAL (TPH)

INLET TEMP
1.7
INLET % OXYGEN
244
INLET CO (PPM)

KILN SPEED
1637
SECONDARY AIR TEMP (F)

1824
CLINKER (TPD)
76
CLINKER (STPH)

FIGURE II (Sheet 1 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #2	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 1.61
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1

165
KILN FEED RATE (STPH)

E19 ESP INLET TEMP

E20 DAMPER POSITION

10
UPPER T/A DAMP POS

MEAL SPLIT POS

TO COAL MILL

K14 DAMPER POSITION

3.7
K11 % OXYGEN
0.97
K11 CO (lbs/tn-clinker)

K11 POSITION

40.0
% of TOTAL
4.2
COAL (STPH)

0.8
TIRES (TPH)

55
T/A DAMP POS
1798
T/A TEMP (F)

60.0
% of TOTAL
6.2
COAL (TPH)

INLET TEMP
2.5
INLET % OXYGEN
676
INLET CO (PPM)

KILN SPEED
1644
SECONDARY AIR TEMP (F)

2400
CLINKER (TPD)
100
CLINKER (STPH)

FIGURE II (Sheet 2 of 4)
Kiln/Calciner Configuration after MSC Conversion

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #4	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS
NOx (lbs/tn-clinker) 1.54
CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP
STAGE 4B TEMP
STAGE 4A
STAGE 4B
STAGE 3
STAGE 2
STAGE 1
155
KILN FEED RATE (STPH)

E19 ESP INLET TEMP
E20 DAMPER POSITION

0
UPPER T/A DAMP POS

MEAL SPLIT POS

TO COAL MILL

K14 DAMPER POSITION

3.8
K11 % OXYGEN
1.03
K11 CO (lbs/tn-clinker)

37.0
% of TOTAL
3.6
COAL (STPH)

K11 POSITION

0.8
TIRES (TPH)

70
T/A DAMP POS
1527
T/A TEMP (F)

63.0
% of TOTAL
6.2
COAL (TPH)

2256
CLINKER (TPD)
94
CLINKER (STPH)

INLET TEMP
0.4
INLET % OXYGEN
10000
INLET CO (PPM)

KILN SPEED
1501
SECONDARY AIR TEMP (F)

FIGURE II (Sheet 3 of 4)
Kiln/Calciner Configuration after MSC Conversion

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #6	
SCALE	BY:	SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

EMISSIONS

NOx (lbs/tn-clinker) 2.44

CO

PREHEATER EXIT DRAFT

STAGE 4A TEMP

STAGE 4B TEMP

STAGE 4A

STAGE 4B

E19 ESP INLET TEMP

STAGE 3

STAGE 2

174

KILN FEED RATE (STPH)

0

UPPER T/A DAMP POS

STAGE 1

E20 DAMPER POSITION

K14 DAMPER POSITION

TO COAL MILL

4.4

K11 % OXYGEN

0.93

K11 CO (lbs/tn-clinker)

40.0

% of TOTAL

4.5

COAL (STPH)

MEAL SPLIT POS

K11 POSITION

0.8

TIRES (TPH)

65

T/A DAMP POS

2121

T/A TEMP (F)

60.0

% of TOTAL

6.7

COAL (TPH)

2520

CLINKER (TPD)

INLET TEMP

KILN SPEED

1703

SECONDARY AIR TEMP (F)

105

CLINKER (STPH)

0.5

INLET % OXYGEN

9400

INLET CO (PPM)

FIGURE II (Sheet 4 of 4)
Kiln/Calciner Configuration after MSC Conversion

FLORIDA ROCK INDUSTRIES
CEMENT GROUP

T.S. BAKER CEMENT PLANT
4000 NW CR 235
NEWBERRY, FL 32669
352-472-4722

TSB CEMENT PLANT FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
		CONDITION #8	
SCALE	BY:	SHEET	

GENERAL OFFICE: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781
FLORIDA ROCK INDUSTRIES INC Mining, Ready Mix Concrete, and Construction Products

November 22, 2002

Mr. A.A. Linero
Administrator, New Source Review Section
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Re: Draft Air Construction Permit No: 0010087-006-AC (PSD-FL-228C)
Comments by Applicant Florida Rock Industries, Inc.

Dear Mr. Linero:

Our comments concern the amount of kiln feed required to produce a given quantity of clinker. Both kiln feed and clinker are used as bases for permitted emissions in subject application.

Under Section III, Emission Unit, Specific Conditions, EU 003 Kiln System, Specific Condition 1, the ratios of kiln feed to clinker are shown for the various production rates, expressed in tons per hour (TPH), tons per day (TPD) and tons per year (TPY), both for clinker and the respective amounts of kiln feed required to produce this amount of clinker.

Both the original construction permit No.: 0010087-001-AC and the new draft permit contain the correct ratios of kiln feed to clinker. Florida Rock 's comments have to do only with the definition of kiln feed as seen by the plant's weigh scales, which measure both the 'kiln feed' and the circulating dust load.

Owing to the location of the measuring point of the amount of material fed into the preheater, the quantity of feed represents both the new 'kiln feed' and the dust recycled from the various pollution control devices, which include the ESP and a nuisance dust collector, which vents the kiln feed transport system.

The streams of 'kiln feed' and recycled dust are combined prior to measuring and controlling the total flow of material into the lift pump, which conveys the material to the preheater.

To account for this circulating load, the amount expressed as kiln feed must be increased appropriately to produce the permitted amount of clinker.
Measurements of clinker production and careful tracking of new feed production by the raw mill have shown the average circulating load to be 10.4 tons per hour. When this amount is added to the 'kiln feed' rate of 173 TPH to produce the permitted amount of

clinker of 110.5 TPH, the feed rate measured by the scale and reported by the process control devices is actually 183.4 TPH.
We respectfully request, therefore that the department recognizes the existence of the circulating dust load and agrees that the 'kiln feed' rate as seen by the scale must be increased by the amount of the recycled dust.

The above comments are for clarification only and are not intended to nor should they have any effect on the draft permit as written.

Two block flow diagrams are attached to illustrate the flow conditions.
Attachment 1 shows the flow as depicted in the draft permit.
Attachment 2 shows the actual flow and the point of measurement including the recycled dust.

We would very much appreciate your considering making these comments a part of the final permit when granted.

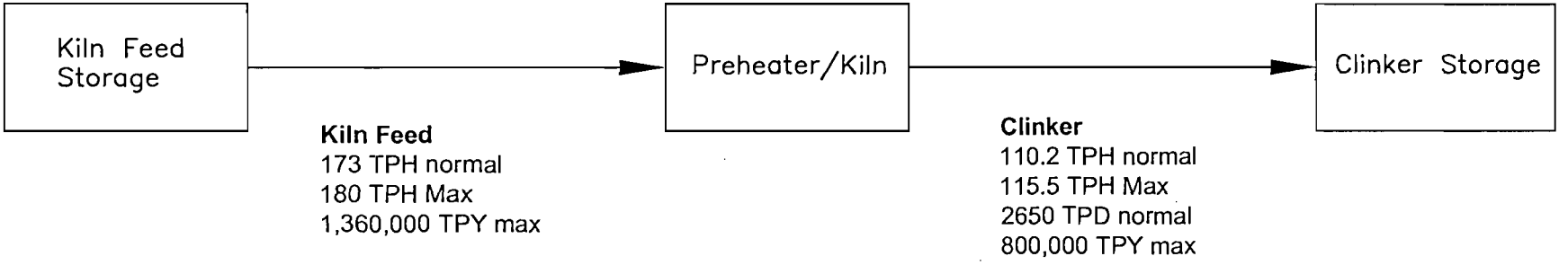
Sincerely,

Fred W. Cohrs

Fred W. Cohrs
Consultant to Florida Rock Industries, Inc.

FWC/

Attachments



Florida Rock Industries, Inc.

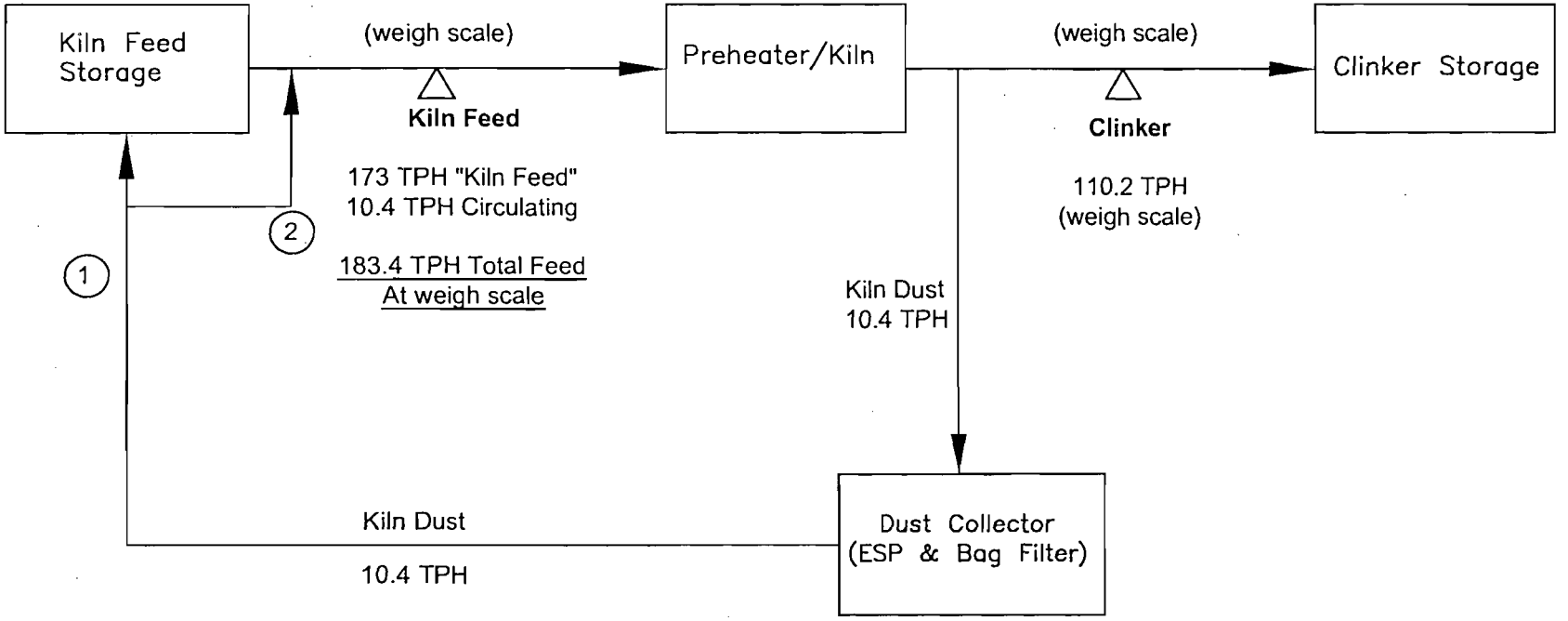
Material Flow Block Diagram
As expressed in Draft Air
Construction Permit No:
0010087-006-AC

Thompson S. Baker

Cement Plant

SCALE

Attachment 1



Note 1 - Direction of flow with raw mill operating

Note 2 - Direction of flow with raw mill down

Florida Rock Industries, Inc.

Material Flow Block Diagram
Actual Flow of Materials
and Measuring Points

Thompson S. Baker

Cement Plant

SCALE

Attachment 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 10460

SEP 28 1982

OFFICE OF
AIR, NOISE AND RADIATION

MEMORANDUM

SUBJECT: Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions

FROM: Kathleen M. Bennett

TO: Assistant Administrator for Air, Noise and Radiation
Regional Administrators, Regions I-X

This memorandum is in response to a request for a clarification of EPA's policy relating to excess emissions during Startup, shutdown, maintenance, and malfunctions.

Excess emission provisions for startup, shutdown, maintenance, and malfunctions were often included as part of the original SIPS approved in 1971 and 1972. Because the Agency was inundated with proposed SIPS and had limited experience in processing them, not enough attention was given to the adequacy, enforceability, and consistency of these provisions. Consequently, many SIPS were approved with broad and loosely-defined provisions to control excess emissions.

In 1978, EPA adopted an excess emissions policy after many, less effective attempts to rectify problems that existed with these provisions. This policy disallowed automatic exemptions by defining all periods of excess emissions as violations of the applicable standard. States can, of course, consider any demonstration by no source that excess emissions were due to an unavoidable occurrence in determining whether any enforcement action a required.

The rationale for establishing these emissions as violations, as opposed to granting automatic exemptions, is that SIPs are ambient-based standards and any emissions above the allowable may cause or contribute to violations of the national ambient air quality standards. Without clear definition and limitations, these automatic exemption provisions could effectively shield excess emissions arising from poor operation and maintenance or design, thus precluding attainment. Additionally, by establishing an enforcement discretion approach and by requiring the source to demonstrate the existence of an unavoidable malfunction on the source, good maintenance procedures are indirectly encouraged.

Attached is a document stating EPA's present policy on excess emissions. This document basically reiterates the earlier policy, with some refinement of the policy regarding excess emissions during periods of scheduled maintenance.

A question has also been raised as to what extent operating permits can be used to address excess emissions in cases where the SIP is silent on this issue or where the SIP is deficient. Where the SIP is silent on excess emissions, the operating permit may contain excess emission provisions which should be consistent with the attached policy. Were the SIP is deficient, the SIP Should be made to conform to the present policy. Approval of the operating permit as part of the SIP would accomplish that result.

If you have any questions concerning this policy, please contact Ed Reich at (382-2807).

Attachment