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Northeast District
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Jacksonville, Florida 32256-7590

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PERMITTEE

Florida Rock Industries, Inc.
4000 NW County Road 235
Newberry, Florida 32669

Authorized Representative:
Mr. Chris Horner, Plant Manager

Air Permit No. 0010087-040-AC
Permit Expires: June 15, 2012
Thompson S. Baker Cement Plant - Newberry
Minor Source Air Construction Permit
Feasibility Trial Burn (EU003 & 010)

This is the final air construction permit, which authorizes a 120- day Feasibility Trial Burn at EU003 Kiln System- Line 1 & EU010 Kiln / Raw Mill- Line 2 of pre-consumer reject paper as an alternative fuel. The proposed work will be conducted at the Thompson S. Baker Cement Plant - Newberry, which is a cement manufacturing plant (Standard Industrial Classification No. 3241). The facility is located in Alachua County at 4000 NW County Road 235, in Alachua, Florida. The UTM coordinates are Zone 17, 346.4 km East and 3285.7 km North. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

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 proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, 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 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

3/15/2011

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on March 15, 2011 to the persons listed below.

Chris Horner- Florida Rock Industries, Inc. (hornerc@vmcmail.com)
Henry Gotsch- Florida Rock Industries, Inc. (Gotsch@vmcmail.com)
Max Lee, Ph.D., P.E. of Record, Koogler & Associates (mlee@kooglerassociates.com)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

3/15/2011

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

Florida Rock Industries, Inc.- Thompson S. Baker Cement Plant - Newberry is a Portland cement plant. This facility consists of raw material handling and storage, raw mill systems, kiln systems clinker handling, finish grinding operations, cement handling, loading, and bagging operations, and coal handling and grinding operations.

Facility ID No. 0010087

ID No.	Emission Unit Description
003	Kiln System- Line 1. 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. A high efficiency electrostatic precipitator controls particulate emissions. Selective Non-Catalytic Reduction System (SNCR) is a nitrogen oxides control technology. This (SNCR) will provide an alternate/backup/additional control technology at the facility to achieve compliance with the best available control technology (BACT). This can be used in conjunction with or in lieu of the strategy of staged combustion in the calciner and tire introduction at the kiln inlet. The process utilizes injection of ammonia solutions near the lowest preheater cyclone. The equipment consists of a storage tank, piping, pumps, compressed air delivery and injectors.
010	Kiln / Raw Mill- Line 2. The Kiln/Raw Mill from the preheater to the clinker cooler. This EU has one emission point, the stack of the in-line kiln/raw mill, designated 2E21. The kiln system (or pyroprocessing system) includes multi-stage combustion (MSC) calciner and a tire feed system, and two (front and calciner) burner systems. The front end burner includes an additional burner to use for alternative fuels. A high efficiency electrostatic precipitator controls particulate emissions. Selective Non-Catalytic Reduction System (SNCR) is a nitrogen oxides control technology.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection, Northeast District Office, Air Resource Section. The Permitting Authority's mailing address and telephone number are: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7590; Telephone: 904/256-1700. All documents related to applications for permits shall be submitted to the Permitting Authority.

2. Compliance Authority: The compliance authority for this project is the Florida Department of Environmental Protection, Northeast District Office, Air Permitting Section. The Compliance Authority's mailing address and telephone number are: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256; Telephone: 904/256-1700. All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Compliance Authority.

3. Appendices: The following Appendices are attached as part of this permit:
   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions; and
   d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units 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. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. 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.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be 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.]

7. Source Obligation:
   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

Condition 7 continued:

(b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

8. Application for Non Title V Permit: This project authorizes a temporary trial burn to collect operational and emissions data to evaluate the feasibility of firing pre-consumer reject paper as an alternative fuel. Based on the data collected, the permittee may seek permanent authorization to burn pre-consumer reject paper. Permanent authorization will require submittal of an application for an air construction permit as well a revision to the Title V air operation permit. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

9. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      1) The name, address and telephone number of the owner or operator of the major stationary source;

      2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

Condition 9.c. continued:

For this project Emissions Units 003 & 010, the Department requires the annual reporting of actual NO_X based on data from the existing CEM, SO_2 based on data from the existing CEM, VOC (measured as THC) based on data from the existing CEM for Kiln 2 only, Opacity based on data from the existing COM, Opacity serves as a surrogate for PM emissions for these units and a CO test.

[Application 0010087-040-AC; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU01 Kiln System- Line 1 and EU010 Kiln/ Raw Mill - Line 2

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
003	Kiln System- Line 1.
010	Kiln/ Raw Mill - Line 2.

1. **Other Permits**. The conditions of this permit temporarily supplement all previously issued air construction and operation permits for this emissions unit. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc.

[Rule 62-4.070, F.A.C.]

EQUIPMENT

2. **Temporary Equipment**. This construction permit authorizes the temporary installation and operation of calciner ports at Kilns Line 1, identified as (K1) and Line 2, identified as K(2), and any construction necessary for the portable IPPC fuel cubes handling system for injecting Envirofuel Cubes (EFC) into the precalciner.

[Application No. 0010087-040-AC]

PERFORMANCE RESTRICTIONS

3. **Restricted Operation**. The trial operations are limited to 120- kiln operating days. In the event of operational problems, FRI is allowed to request in writing for an additional 60 more days to complete the trial. The total of the trial shall not exceed 180 kiln operating days.

[Application No. 0010087-040-AC and Rule 62-210.200(PTE), F.A.C.]

TEMPORARY PROJECT

4. **Trial Period**. The permittee is authorized to conduct a 120-day (kiln operating days) trial burn for a total of up to 5,000 tons of pre-consumer reject paper as an alternative fuel. Pre-consumer reject paper will be supplied by International Paper Products Corporation (IPPC). The pre-consumer reject paper will come in Envirofuel Cubes (EFC). The EFC will be injected at the front and back end of both kilns by an automated system provided by IIPC. In the event of operational problems, FRI is allowed to request in writing for an additional 2000 tons to complete the trial. The total of the trial shall not exceed 7,000 tons of pre-consumer reject paper. The EFC will be delivered to Florida Rock Industries (FRI) by trucks in walking floor trailers and each delivery truck carries approximately 23 tons of material.

   - The average number of trucks delivering the EFC during the trial period of kiln operation will be two trucks per day.
   - FRI shall not store more than 500 tons at any time.

5. **Authorization**. Only pre-consumer paper and coal shall be fired during this trial test. The alternative fuel material shall consist of the following:

   Pre-Consumer Paper- This material consists of pre-consumer: printing and writing paper; household and sanitary paper; wrapping and packaging paper; paper board; chipboard; Kraft liner, writing and packaging paper; fluting; other wrapping and packaging paper; folding boxboard; other paperboard; polymer laminated wrapping paper; game boards and boxes; foil wrapping paper; thermal papers; specialty papers for filtration or hygienic applications; adhesive labels; waxed corrugated cardboard; and other miscellaneous coated papers. This group of materials also includes fabrics and textiles such as dyed/finished natural fibers, dyed/finished natural fiber woven/scrap trim, polymer fiber woven scrap trim, and un-dyed/unfinished natural or synthetic fiber scrap trim.

   Expiration and Revocation- Authorization to fire the alternative fuel material expires with this permit, at the end of 120 kiln operating days of firing the alternative fuel or when permitted amount of material has been fired. The Department may require the trial of alternative fuel material to stop if:

   a) The permittee accepts alternative fuel material that does not meet the acceptance criteria based on this permit.
   b) The firing of an alternative fuel material causes frequent upsets to kiln operation resulting in non-steady state operation; or
   c) The pyroprocessing kiln is unable to comply with the emissions standards in the Title V air operation permit.

[Application No. 0010087-040-AC and Rule 62-210.200(PTE), F.A.C.]

6. **Fuel (EFC) Delivery, Storage and Transport Requirements.**

   - Walking floor trailers will offload the EFC into the Line 1 covered coal shed for temporary storage.
   - When the EFC are ready for use, they will be reloaded by front end loader to a walking floor trailer. The trailer will be moved into position at the EFC injection system.
   - The material will be pneumatically blown into the injection points at the front and back ends of the calciners of Kilns Line 1 (K1) and Line 2 K(2).

7. **Best Management Practices for Envirofuel Cubes (EFC).** The facility shall follow the Best Management Practices as proposed in the attached Appendix BPM to minimize fugitive dust, pile management and fire prevention.

[Application No. 0010087-040-AC]

TESTING REQUIREMENTS

8. **Test Schedule**. At least thirty (30) days prior to conducting the trial pre-consumer reject paper compliance testing, the permittee shall submit a preliminary schedule detailing the test protocol. The permittee shall submit updates to the test protocol and schedule as necessary.

[Rule 62-4.070(3), F.A.C.]

9. **Trial Test Schedule.** The pre-consumer reject paper test schedule proposes to conduct at each kiln front and end burner system at three test levels of 10%, 20%, and <30% (e.g. 29.5%) heat replacement for coal for four days at each level.

- EU003: The total maximum heat input permitted limit is 364 MMbtu/hr (coal usage rate shall not exceed 14.0 TPH).
- EU010: Total maximum heat input permitted limit is 400 million Btu per hour (coal usage rate shall not exceed 15.4 TPH).

[Application No. 0010087-040-AC; Title V Permit No. 0010087-038-AV]

10. **Test Methods.** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
10 or 10A	Determination of Carbon Monoxide Emissions from Stationary Sources (The method shall be based on a continuous sampling train.)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

CONTINUOUS EMISSIONS MONITORING REQUIREMENTS

11. **Emissions Monitoring**. During the trial period, the permittee shall continue to monitor: NO_X, SO_2, and VOC (THC) emissions with the existing certified CEMS; opacity with the existing certified COMS .

[Application No. 0010087-040-AC and Rule 62-4.070(3), F.A.C.]

12. **Process Monitoring**. For the trial, the plant will monitor the fuel feed rates, the kiln feed rates, the clinker production rates and pre-calciner temperature.

[Application No. 0010087-040-AC and Rule 62-4.070(3), F.A.C.]

13. **Upsets**. If an upset condition causes the plant to stop firing EFC alternative fuel that results in non-steady state operation, the permittee shall record each incident and identify the cause of the upset as well as the corrective action taken.

[Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

14. Trial Burn Summary Report. Within 90-days of completing the trial, FRI shall submit a report to DEP summarizing: problems with unloading, storing or handling the EFC; the emissions monitoring data; kiln production/ process data; and a conclusion as to the feasibility and practicality of firing EFC as an alternative fuel. The report shall identify any problem that occurred during the trial and the expected cause of the problem.