Florida Department of Environmental Protection

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PERMITTEE:

CEMEX Cement, Inc.
16301 Ponce De Leon Boulevard
Brooksville, Florida 34614-0849

Authorized Representative:
Jimmy L. Rabon, Plant Manager

Air Permit No 0530010-018-AC
Brooksville North Cement Plant
Facility ID No. 0530010
SIC No. 3241 Cement, Hydraulic
Cement Processing Lines 1 and 2
Permit Expires: September 30, 2008

PROJECT AND LOCATION

This permit authorizes the installation of cooling dampers on Kiln 1 and adjustments to the material loading and transfer rates for raw material and product silos and bins related to Lines 1 and 2. It also allows use of supplier-provided records in lieu of sampling by the operator of each shipment.

The Brooksville North Cement Plant is located on Highway 98, northwest of Brooksville, in Hernando County, Florida.

STATEMENT OF BASIS

This 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 perform the proposed work 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 of Environmental Protection (Department).

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Joseph Kahn, Director
Division of Air Resource Management

1/23/08
(Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility consists of two Portland cement lines (Lines 1 and 2) including: two Polysius GEPOL preheater kilns (Kilns 1 and 2), two clinker coolers and associated raw mills, finish mills, cement and clinker handling equipment, coal handling equipment, silos, and air pollution control devices. The nominal capacity of each kiln is 780,000 tons per year of clinker.

This permit authorizes the installation of two cooling dampers on Kiln 1 and adjustments to the material loading and transfer rates for raw material and product silos and bins related to Lines 1 and 2. It also allows use of supplier-provided records in lieu of sampling by the operator of each shipment.

The emissions units affected by this action are:

EU ID	Emissions Unit Description
003	Cement Kiln No. 1
014	Cement Kiln No. 2
005	Finish Mills 1 and 2
006	Clinker Storage Silos 1 and 2
011	Raw Material Storage Silos and Feed System
016	Clinker Storage Silos 3
024	Raw Material Pre-Mix Bin
025	Additive Material Storage Bin
026	Cement Bag Loadout System

REGULATORY CLASSIFICATION

The facility is a major source of hazardous air pollutants (HAP).

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 (PSD-major source) in accordance with Rule 62-212.400, F.A.C.

The facility operates units subject to the Standards of Performance for New Stationary Sources pursuant to 40 CFR Part 60.

The facility operates units subject to National Emissions Standards for Hazardous Air Pollutants pursuant to 40 CFR Part 63.

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; and the Department's Technical Evaluation and Preliminary Determination.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office. The mailing address and phone number of the Southwest District Office is: 13051 N. Telecom Parkway, Temple Terrace, FL 33637-0926; 813-632-7600.
3. Appendices: The following Appendices are attached as part of this permit: Appendix SC (Standard Conditions); Appendix GC (General Conditions).
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: No emissions unit 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.]
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.
   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. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. 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. The application shall be submitted to the Bureau of Air Regulation with copies to the Compliance Authority.
   [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Cement Kilns 1 and 2 (EU ID 003 and 014)

This section of the permit addresses the following existing emissions units.

Emissions Unit 003 and 014 (Kilns 1 and 2)
Description: Dry preheater process kiln and clinker cooler systems employing the Polysius GEPOL preheater design. *Fuels*: Each kiln is limited to a fuel heat input of 300 million British thermal units (MMBtu) per hour. Allowable fuels include: coal, Nos. 2, 4, 5, and 6 fuel oil, natural gas, and on-site generated non-hazardous waste used oil and grease. Kiln No. 1 is also permitted to fire whole tire derived fuel. *Capacity*: Each kiln is limited to 150 tons of preheater feed per hour (rolling 30-day average), with a maximum of 165 tons in any one hour, and a maximum annual limit of 1,300,000 TPY. *Controls*: A baghouse is used on each kiln for the control of particulate matter (PM) emissions. Raw material properties, chemical reactions in the kiln, absorption into the clinker, and combustion controls minimize emissions of nitrogen oxides (NO_X), sulfur dioxide (SO_2), carbon monoxide (CO) and volatile organic compounds (VOC). Selective non catalytic reduction (SNCR) systems have been installed on each kiln for NO_X control. *Monitors*: Emissions of CO and NO_X are continuously monitored on both kilns. *Stack Parameters*: The stack for Kiln No. 1 has the following characteristics: stack height is 150 feet, exit diameter is 13 feet, exit temperature is 285 °F, and actual volumetric flow rate is approximately 315,000 acfm. The stack for Kiln No. 2 has the following characteristics: stack height is 105 feet, exit diameter is 14 feet, exit temperature is 250 °F, and actual volumetric flow rate is approximately 315,000 acfm.

ADMINISTRATIVE REQUIREMENTS

1. Relation to Other Permits: The conditions of this permit subsection, supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of these 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 DESCRIPTION

2. Kiln No. 1 Cooling Dampers: The permittee is authorized to install, operate, and maintain: two cooling dampers (designated as 323 E and 323 N) on the existing Kiln No. 1 bypass duct system; an automatic damper positioner for damper 323 N; and a damper monitoring system. The automatic damper positioner makes adjustments based on the current baghouse inlet temperature. Damper 323 N is automatically adjusted by the system to maintain the baghouse inlet temperature established during the most recent dioxin and furan (D/F) compliance test. Damper position is recorded on the programmable logic controller (PLC) in the control room. [Application; Design]

EMISSIONS AND TESTING REQUIREMENTS

3. Emissions Standards: This permit does not establish any new emissions standards or testing requirements for Kilns 1 and 2. These kilns shall continue to comply with the requirements of all existing, valid Department permits. [Rule 6-4.070 (3), F.A.C.]

MONITORING AND RECORD KEEPING REQUIREMENTS

4. Kiln No. 1 Cooling Damper Process Monitoring: The following parameters shall be continuously monitored and recorded during all modes of operation including raw mill on and raw mill off, and all transition periods between operational modes:
   a. The position of each damper associated with gas cooling for the purpose of D/F control (closed or position with respect to fully open);
   b. Any monitored airflows within the bypass duct system; and
   c. Any monitored temperature within the bypass duct system.

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

5. Kiln No. 1 Process Monitor Data: For each parameter for which monitoring is required in Specific Condition 4 of this subsection, the information shall be recorded and stored as an electronic file and shall be available for inspection and printing within at least three days of a request by the Department.
   [Rule 62-4.070(3), F.A.C.]

6. Kiln No. 1 and 2 Liquid Fuel (No. 2, 4, 5 and 6 fuel oil) Records: The permittee is already required by previous or current permits to maintain and make available records of sulfur content and heating value (Btu/gal) of each liquid fuel oil shipment based upon analysis of a representative sample of the shipment. The permittee may use records provided by the fuel suppliers to satisfy this existing requirement. If supplier records are used, the applicant shall prepare a purchasing specification that requires the suppliers to provide the same information to the applicant as presently required of the applicant.
   [Permits 0530010-003-AC/PSD-FL-233 and 0530010-002-AV; Applicant Request]

7. Kiln No. 1 and 2 On-Specification Used Oil Fuel Records: The permittee is already required by previous or current permits to maintain records to insure the on-specification used fuel oil burned in Kilns 1 and 2 meets the requirements listed in 40 CFR Part 279, Standards for the Management of Used Oil (PCB reference added). The permittee is already required to keep records of the results of the analysis of representative as-received samples taken from each daily shipment received or collected at the facility. The permittee may use records provided by the fuel suppliers to satisfy this existing requirement for daily shipments received. If supplier records are used, the applicant shall prepare a purchasing specification that requires the suppliers to provide the same information to the applicant as presently required of the applicant.
   [Permits 0530010-003-AC/PSD-FL-233 and 0530010-002-AV; Applicant Request]

B. Emissions and Operating Rates Modifications

This section addresses the following emissions units:

EU ID	Emissions Unit Description
005	Finish Mills 1 and 2 with two dust collectors (Baghouse G-23)
006	Clinker Storage Silos 1 and 2 (Baghouse F-31)
011	Raw Material Storage Silos and Feed System (Baghouse C-11 and C-11A)
016	Clinker Storage Silos 3 (Baghouse L-07)
024	Raw Material Pre-Mix Bin (Baghouse M-2280)
025	Additive Material Storage Bin (Baghouse M-1171)
026	Cement Bag Loadout System (Baghouse M-3514)

ADMINISTRATIVE REQUIREMENTS

1. Relation to Other Permits: The conditions of this permit subsection, supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulatory requirements. The permittee shall continue to comply with the conditions of these permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, testing, record keeping, reporting, etc. [Rule 62-4.070, F.A.C.]

PERFORMANCE REQUIREMENTS

2. Finish Mill Nos. 1 and 2 Process Rate Limitation: The maximum transfer rate of these two finish mills combined shall not exceed 105 tons per hour. [Rule 62-4.070(3), F.A.C.; Applicant request]
3. Clinker Storage Silos Nos. 1 and 2 Process Rate Limitation: The maximum clinker loading rate of these two silos shall not exceed 93 tons per hour. [Rule 62-4.070(3); Applicant request]
4. Raw Materials Storage and Feed System Process Rate Limitation: The maximum transfer rate from the Raw Materials Silos to the Raw Materials Pre-Mix Bin shall not exceed 330 tons per hour (daily average dry basis). [Rule 62-4.070(3), F.A.C.; Applicant request]
5. Clinker Storage Silos No. 3 Process Rate Limitation: The maximum loading rate of this silo shall not exceed 93 tons per hour. [Rules 62-4.070(3) F.A.C.; Applicant request]
6. Raw Materials Pre-mix Bin Process Rate Limitation: The maximum loading rate of raw materials to the Raw Materials Pre-Mix Bins and material handling system shall not exceed 330 tons per hour (daily average dry basis). [Rule 62-4.070(3) F.A.C.; Applicant request]
7. Additive Material Storage Bin Process Rate Limitation: The maximum loading rate of the Additive Material Storage Bin shall not exceed 36 tons per hour. [Rule 62-4.070(3) F.A.C.; Applicant request]
8. Cement Bag Loadout System Hours of Operation: The operation time for this system shall not exceed 7400 hours per year. [Rule 62-4.070(3) F.A.C.; Applicant request]

EMISSIONS AND TESTING REQUIREMENTS

9. Particulate Matter (PM/PM_{10}) and Visible Emissions Limits Cement Bag Loadout System:

   This permit does not establish any new emissions standards or testing requirements except to change the annual emissions limit for Emissions Unit 026, Cement Bag Loadout System, given in existing permits from 1.87 to 2.22 tons per year. The presently applicable visible emissions testing requirements in lieu of stack testing continue to apply. [Permit AC27-185904; Rule 62-297.620(4), F.A.C.; Applicant Request]

10. Particulate Matter and Visible Emissions Limits for Finish Mills 1 and 2 (baghouse G-23):

    PM/PM_{10} emissions for the Finish Mill 1 and 2 (baghouse G-23) shall not exceed 9 lb/hr and 39.4 tons per year (each). Visible emissions shall not exceed 10 % opacity.

11. Testing Requirements: The finish mills 1 and 2 (baghouse G-23) shall be stack tested by September 30, 2007 to demonstrate initial compliance with the applicable emission standards for PM/PM_{10} and visible emissions. Thereafter, compliance with the PM/PM_{10} limits shall be demonstrated during each federal fiscal year (October 1st to September 30th). After conducting the initial stack test, the applicant may request a revision of the visible emissions standard to 5% opacity and rely on adherence to that standard in lieu of annual stack test demonstrations. [Rules 62-297.310(7)(c) and 62-297.620(4), F.A.C.]

12. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix SC (Standard Conditions) of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
5	Determination of Particulate Matter from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

ADDITIONAL REPORTING AND RECORD KEEPING

13. Baghouse O&M Plan: For each baghouse the permittee shall maintain an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to any compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

14. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]