Florida Department of Environmental Protection

Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

FINAL PERMIT

PERMITTEE

CEMEX Construction Materials Florida, LLC
10311 Cement Plant Road,
Brooksville, Florida 34601

Authorized Representative:
Mr. James S. Daniel, Plant Manager

Air Permit No. 0530021-022-AC
Permit Expires: 06/30/2011
Site Name : Brooksville South Cement Plant
Minor Air Construction Permit
Project Name: Kiln 1 Downcomer Water Spray/ Injection System

This permit authorizes the after-the-fact construction of the Kiln 1 Downcomer Water Spray/Injection System. The proposed work will be conducted at the Brooksville South Cement Plant (Standard Industrial Classification No. 3241). The facility is located in Hernando County at 10311 Cement Plant Road, in Brooksville, Florida. The UTM coordinates are Zone 17, 360.0 km East, and 3162.5 km North. As noted in the Final Determination provided with this final permit, no changes or 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 Hillsborough County, Florida

Mara Grace Nasca — December 4, 2009

Mara Grace Nasca
District Air Program Administrator
Southwest District

Effective Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and the Final Permit and the Appendices) 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 12/4/2009 to the persons listed below.

Mr. James S. Daniel, Plant Manager, CEMEX Construction Materials Florida, LLC
(jdaniel@cemexusa.com)

Mr. Steve Cullen, P.E., Koogler and Associates, Inc.
(SCullen@kooglerassociates.com)

Jeff Koerner, New Source Review Administrator, DARM Office
(jeff.koerner@dep.state.fl.us)

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.

Carol S. Moore — 12/4/2009

(Clerk) (Date)

PROJECT DESCRIPTION

Project Description and Affected Emission Units

The existing facility is an integrated facility that includes a Portland cement manufacturing plant (CEMEX Construction Materials, LLC Brooksville South Cement Plant), a co-located electric generation power plant (Central Power and Lime Brooksville Power Plant), and a shared coal yard. The cement plant and the power plant share a main baghouse emission control device and exhaust stack. A new second cement manufacturing line at this facility (Kiln 2) is currently in the initial phase of operation. The portion of the facility affected by this permit is Cement Kiln 1 (EU 020) at the Brooksville South Cement Plant.

The project is the after-the-fact authorization of the construction of the Kiln 1 Downcomer Water Spray/Injection System, installed to minimize the formation of dioxins and furans (D/F) in order to comply with the requirements of NESHAP 40 CFR 63 Subpart LLL during periods of operation of Kiln 1 when the raw mill and the power plant are both down (out of service) at the same time. This project will add this emission control device to the following emissions unit.

Facility ID No. 0530021	
ID No.	**Emission Unit Description**
020	Cement Kiln 1, In-Line Kiln/Raw Mill and Clinker Cooler 1 with Baghouse

NOTE: Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has an emission unit 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.

PERMIT HISTORY/AFFECTED PERMITS

This facility is currently operating under Title V Air Operation Permit 0530021-011-AV, as modified by Title V Air Operation Permit Revision 0530021-013-AV.

This permit modifies (replaces) Specific Condition No. 1 in Section 3. of Construction Permit 0530021-010-AC, and Specific Condition No. F.6.b. in Title V Air Operation Permit 0530021-011-AV. *(See Specific Condition No. A.3.)*

1. Permitting Authority -

   A. For This Project - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

   Florida Department of Environmental Protection
   Southwest District Office
   Air Resource Management Section
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-632-7600

   B. For Title V Operation Permits and Other Construction Permit Projects - The permitting authority for Title V operation permits and future construction permit projects for this facility (unless otherwise notified by the Department) is the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Management is:

   Florida Department of Environmental Protection
   Division of Air Resource Management
   Bureau of Air Regulation
   2600 Blair Stone Road, MS 5505
   Tallahassee, Florida 32399-2400

   All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see mailing address and phone number in Specific Condition 1.A. above).

3. Appendices - The following Appendices are attached as part of this permit: (add appendices as necessary)

   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 - Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Source Obligation (PSD Major facilities only) -

   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. Application for Title V Air Operation Permit - This permit authorizes construction and initial operation of the permitted emission control device. A Title V air operation permit revision is required for continued operation of the permitted emissions control device. The owner or operator shall apply for a Title V air operation permit revision no later than 180 days after final issuance of this permit. To apply for a Title V air operation permit revision, the applicant shall submit the following:

   a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

   b. copies of the most recent two months of records specified in Specific Condition No(s). A.9. and A.10.

   The application shall be submitted to the Permitting Authority.

   [Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.220 and 62-213.420(1)(a)3., F.A.C.]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
020	Cement Kiln 1, In-Line Kiln/Raw Mill and Clinker Cooler 1 with Baghouse

The project is the installation of a water spray/injection system on the downcomer of the Kiln 1 preheater tower. Through the use of micro- droplet water sprays the water spray/injection system provides sufficient cooling to rapidly quench/cool the temperature of the gas leaving the preheater below the D/F formation temperature zone of 750 – 450°F, thereby minimizing the formation of D/F. The installed Turbosonic system currently consists of 3 spray lances, each equipped with micro-droplet spray nozzles. (Based on operation of the system, additional spray nozzles may need to be added to enhance the performance of the system to adequately cool the gases.) The system is only required to be used during periods of operation of Kiln 1 when the raw mill and the power plant are both out of service at the same time.

IMPORTANT Permitting Note – The Essential Potential to Emit (PTE) Parameters, Emissions Standards and Operating Limitations, Testing Requirements, Monitoring Requirements, Notification Recordkeeping and Reporting Requirements, for this emission unit can be found in the current Title V operation permit for this facility (Title V Air Operation Permit 0530021-011-AV). This construction modification permit only addresses **additional** requirements related to the addition of the Kiln 1 Downcomer Water Spray/Injection System for the control of D/F formation.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements - This emission unit is subject to 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*, which is adopted by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(11)(b), F.A.C.; 40 CFR 63 Subpart LLL]

(Permitting Note – See current facility Title V Air Operation Permit 0530021-011-AV for applicable requirements of 40 CFR 63 Subpart LLL 40 CFR 63.1340 through 63.1356.)

A.2. Kiln 1 Water Injection/Spray Tower Operating Hours - The hours of operation of the Kiln 1 Water Injection/Spray system are not limited (i.e., permitted for operation 8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(Potential to Emit), F.A.C.]

A.3. Kiln 1 Water Injection/Spray Tower Operation Requirements -

a. Required Periods of Operation - The Kiln 1 Water Injection/Spray Tower shall be in service at all times that Kiln 1 is operating (including startup) with the raw mill down (i.e., not operating) (RMD) and the power plant is also down (i.e., not operating) (PPD) (i.e., operating in the RMD/PPD mode of operation).

b. Maximum Downcomer Exit/Fan Inlet Gas Temperature - The Kiln 1 Downcomer Water Spray/Injection System shall be operated such that the maximum gas temperature at the downcomer exit/kiln fan inlet thermocouple (at the new K13 thermocouple - ID T1207A) shall not exceed 395°F on a 60 minute rolling average basis, unless otherwise established by D/F compliance testing and approved by the Department in writing.

c. Maintenance of Proper Operation - CEMEX will maintain proper operation of the water spray/injection system by removal, as needed, of any solids buildup in the downcomer resulting from the water sprays. If necessary, the buildup removal will be accomplished by kiln shutdown, installation of a drop-out chamber or other suitable method.

This condition replaces the requirements of Specific Condition No. 1 in Section 3. (Emission Unit Specific Requirements) of Construction Permit 0530021-010-AC, and Specific Condition No. F.6.b. in Title V Air Operation Permit 0530021-011-AV (i.e., the requirements of the above specific conditions, which addressed operation of Kiln 1 when the power plant and raw mill are both down, are no longer in effect and are superseded by the requirements of Specific Conditions A.3.a. and b. above).

[Rule 62-4.070(3), and 62-210.650, F.A.C.; construction permit application dated 06/12/09; D/F compliance test report information submitted electronically with a 05/18/09 email from George Townsend of CEMEX Construction Materials, LLC]

TESTING REQUIREMENTS

A.4. Compliance Tests - D/F compliance testing in the raw mill down/power plant down (RMD/PPD) mode of operation shall be conducted in accordance with Specific Condition No. A.6. below and any applicable Department consent order in effect for this emission unit. [Rule 62-4.070(3), F.A.C.]

A.5. Test Method(s) - Required D/F tests shall be performed in accordance with the reference method(s) specified in the current facility Title V air operation permit and NESHAP 40 CFR 63 Subpart LLL and any applicable Department consent order in effect for this emission unit. [Rules 62-204.800(11)(b) and 62-297.100, F.A.C.; Appendix A of 40 CFR 63]

A.6. D/F Compliance Testing Frequency in the PPD/RMD Mode of Operation - In order to provide reasonable assurance of ongoing compliance with the D/F standard while operating in the Power Plant Down Raw Mill Down (PPD/RMD) mode of operation, the permittee shall conduct special D/F compliance tests in this mode of operation once every federal fiscal year (i.e., October 1 – September 30), with no two tests less than nine months or more than 15 months apart from the previous test. Testing shall be continued on this schedule until three consecutive FFY compliance tests showing compliance with the applicable D/F standard are conducted, after the final issuance of this permit*. At that time, the D/F compliance test frequency reverts back to the once every 30-month frequency required by NESHAP Subpart LLL 40 CFR 63.1349(d).
[Rules 62-4.070(3), 62-213.440(1)(b), and 62-297.310((7)(b), F.A.C.]

(Permitting Note – The permittee has notified the Department of its intentions to conduct D/F*

testing on Kiln 1 in the PPD/RMD mode of operation during the month of November, 2009. This planned testing, regardless of when it is conducted, does not qualify as one of the three consecutive FFY tests.)

MONITORING REQUIREMENTS

A.7. Downcomer Exit/ID Fan Inlet Gas Temperature Monitoring - The owner or operator shall continuously monitor temperature at the downcomer exit/K13 ID kiln fan inlet area (at the new K13 thermocouple – Thermocouple ID T1207A), during all periods of operation of Kiln 1 when the raw mill is down and the power plant is down (i.e., during PPD/RMD mode of operation). The monitoring system shall also determine and show rolling 60-minute average temperature. [Rule 62-4.070(3), F.A.C.]

A.8. Water Spray/Injection System Water Flow Rate - The owner or operator shall continuously monitor the rate of water flow through the Kiln 1 spray system nozzles (gallons/minute or gallons/hour) during all periods of operation of Kiln 1 when the raw mill is down and the power plant is down (i.e., during PPD/RMD mode of operation).
[Rule 62-4.070(3), F.A.C.]

NOTIFICATION REQUIREMENTS

A.9. Test Notification - The owner or operator shall notify the Compliance Authority in writing prior to any required tests in accordance with the current facility's Title V air operation permit, 40 CFR 63 Subpart LLL, and any applicable Department consent order in effect for this emission unit.

{Permitting Note: The notification should also include the relevant emission unit ID No(s)., test method(s) to be used, and pollutants to be tested.}

[Rules 62-4.070(3), 62-204.800(11) and 62-297.310(7)(a)9., F.A.C.; 40 CFR 63 Subparts A and LLL]

RECORDS AND REPORTS

A.10. Kiln 1 Operational Data - The owner or operator shall keep records of all periods of operation of Kiln 1. The records shall show each time that the raw mill was taken out of service or put back in service, and each time that the power plant was taken out of service or put back in service (records shall indicate when the power plant was in start-up mode). For all periods of Kiln 1 operation when the raw mill is down and the power plant is down (i.e., the RMD/PPD mode of kiln operation) the records shall show the operating status of the Kiln 1 Downcomer Water Spray/Injection System (in or out of service).
[Rule 62-4.070(3), F.A.C.]

A.11. Kiln 1 Downcomer Water Spray/Injection System Operational Data - The owner or operator shall keep continuous records of the following Kiln 1 Downcomer Water Spray/Injection System operational data during all periods of operation of Kiln 1 when the raw mill is down and the power plant is down (i.e., the RMD/PPD mode of kiln operation);

a. the gas temperature (°F) at the downcomer exit/fan inlet (at the new K13 thermocouple – Thermocouple ID T1207A) (the monitoring system shall also

determine and show rolling 60-minute rolling average temperatures); and

b. the Kiln 1 Downcomer Water Spray/Injection System water flow rate (gallons/minute) (the monitoring system shall also determine and record rolling 60 minute rolling average gallon/minute flow rate).

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

A.12. Record Maintenance - The owner or operator shall maintain the above records on site in a form suitable and readily available for inspection and review. The records shall be retained for at least five years following the date of each occurrence, measurement, or record. [Rule 62-213.440(1)(b)2.b., F.A.C.]

A.13. Additional Test Report Requirements Reports – In addition to other applicable test report requirements, the owner or operator shall include the following Kiln 1 Downcomer Water Spray/Injection System operation information with all test reports for testing conducted during operation of Kiln 1 when the raw mill is down and the power plant is down (i.e., in the RMD/PPD mode of kiln operation).

a. Operating status of the Kiln 1 Downcomer Water Spray/Injection System *(see Specific Condition No. A.10.)*;

b. Average Kiln 1 Downcomer Water Spray/Injection System water flow rate (hourly average gallons/minute) for each run of the test *(see Specific Condition No. A.11.b)*; and

c. Average downcomer exit/ID fan inlet gas temperature as measured by Thermocouple ID T1207A for each run of the test *(see Specific Condition No. A.11.a).*

[Rule 62-297.310(8), F.A.C.]

ADDITIONAL REQUIREMENTS

A.13. Maintenance of Proper Operation –

a. The permittee shall maintain the Downcomer Water Spray System nozzles, valves, piping and other associated equipment in accordance with the manufacturer's specification and recommendations.

b. The permittee shall maintain proper operation of the water spray/injection system by removal, as needed, of any solids buildup in the downcomer resulting from the water sprays. If necessary, the buildup removal will be accomplished by kiln shutdown, installation of a drop-out chamber or other suitable method.

[Rules 62-4.070(3) and 62-210.650, F.A.C.]

A.14. Facility Startup, Shutdown and Malfunction (SSM) Plan - Within 30 days of initial operation of the Kiln 1 Downcomer Water Spray/Injection System after final issuance of this construction permit, the owner or operator shall incorporate the Kiln 1 Downcomer Water Spray/Injection System into the facility Startup, Shutdown and Malfunction (SSM) Plan required by NESHAP Subpart A 40 CFR 63.6(e)(3). The owner or operator shall maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Department. [Rule 62-204.800(11)(d), F.A.C; NESHAP Subpart A 40 CFR 63.6(e)(3)]