Title V Air Operation Permit Renewal
Permit No. 0530010-045-AV

## APPLICANT

The applicant for this project is CEMEX Construction Materials Florida, LLC. The applicant's responsible official and mailing address are: Mr. James Daniel, Plant Manager, CEMEX Construction Materials Florida, LLC, 10311 Cement Plant Road, Brooksville, Florida 32669.

## FACILITY DESCRIPTION

The applicant operates the Brooksville North Cement Plant, which is located at 16301 Ponce De Leon Boulevard, Brooksville, Florida.

This facility consists of two Polysius GEPOL preheater kilns (Kilns 1 and 2), two clinker coolers and associated raw mills, finish mills, cement and clinker handling equipment, cement rail and truck loadout equipment, cement bagging equipment, coal handling equipment, silos, and associated air pollution control devices. The nominal capacity of each kiln is 780,000 tons per year of clinker.

Air pollution emission controls include Selective Non-Catalytic Reduction (SNCR) systems on both kilns for control of NOx emissions, and baghouse dust collectors on most of the emission units for control of particulate matter ($PM/PM_{10}$). This facility consists of the following regulated emissions units and their associated air pollution controls:

| EU ID No. | Brief Description (Control Device ID No.) |
|---|---|
| 002 | Kiln No. 1 Feed System (Baghouse D-31) |
| 003 | Cement Kiln No. 1 (Baghouse E-55) |
| 004 | Cement Plant Clinker Cooler No. 1 (Baghouse F-18) |
| 005 | Finish Mills Nos. 1 & 2 (Baghouses G-23-1 & G-23-2) |
| 006 | Clinker Storage Silo Nos. 1 & 2 (Baghouse F-31) |
| 008 | Kiln No. 1 Blending Silo Nos. 1 and 2 (Baghouse Nos. F-17 & E-36) |
| 009 | Portland Cement Storage Silos Nos. 1-5 (Baghouse H-03) |
| 011 | Raw Material Storage Silos & Feed System (Baghouses C-11 & C-11A) |
| 012 | Kiln No. 2 Blending Silo (No. 5 Blending Silo) (Baghouse G-11) |
| 013 | Kiln No. 2 Feed System (Baghouse H-13) |
| 014 | Cement Kiln No. 2 (Baghouse E-19) |
| 015 | Cement Clinker Cooler No. 2 (Baghouse K-09) |
| 016 | Clinker Silo No. 3 (Baghouse L-07) |
| 017 | Clinker/Gypsum Transfer Belt (Baghouse M-09) |
| 018 | Finish Mill No. 3 Clinker Day Tank & Gypsum Day Silo (Baghouse M-10) |
| 019 | Finish Mill No. 3 (Baghouse N-23) |
| 021 | Cement Silos Nos. 7 & 8 (Baghouse P-05) |
| 022 | Masonry Cement Silo (Baghouse P-07) |
| 023 | Truck Loadout System (Baghouse Q-17) |
| 024 | Raw Material Pre-Mix Bins (Baghouse M-2280) |
| 025 | Additive Material Storage Bin and Outsized Clinker Feed (Baghouse M-1171) |
| 026 | Cement Bag Loadout System (Line No. 1) (Baghouse M-3514) |
| 027 | Cement Bagging Line No. 2 (Baghouse M-3515) |
| 028 | Facility Wide Fugitive Particulate Matter Emissions |
| 031 | Raw Material (Limestone) Quarrying, Crushing and Storage |
| 032 | Coal Handling and Grinding |
| 034 | Two Emergency Spark Ignition Engines (4SRB existing stationary RICE) |

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

This permit also contains a compliance plan for dioxin/furan (D/F) emissions from Kiln No. 2 and for the installation of a $SO_2$ CEMS to demonstrating compliance with the $SO_2$ standards for Kilns No. 1.

## PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit for the above referenced facility. At the time the renewal permit application was received, the facility had been shut down since December 12, 2008. The facility will not resume operation (start up) before December 12, 2013 and therefore will exceed a shut down period of five years. The Department received a letter from the facility's Responsible Official, Mr. James Daniel, Plant Manager, dated May 21, 2013. Based on information provided in the letter, the facility is a viable operation that CEMEX will depend on to produce additional cement as the economy improves and the renewal of the Title V air operation permit is necessary for the company to meet future demands in the Florida market.

## PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit No. 0530010-015-AV issued November 25, 2008.
Title V Air Operation Permit Administrative Correction No. 0530010-015-AV issued April 24, 2009.
Application for a Title V Air Operation Permit Renewal received April 12, 2013.
Additional Information Request dated May 24, 2013
Additional Information Response received July 8, 2013
Notice of Intent to Issue Air Permit issued **[Month day, year]**
Public Notice Published **[Month day, year]**

## PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates emissions units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility operates emissions units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM:
- CAM does not apply to the baghouse collectors on each of the emission units as they are considered product recovery devices with the collected material returned to the process.
- CAM does not apply to the Selective Non-Catalytic Reduction (SNCR) NOx control systems on Kiln Nos. 1 and 2 because each Kiln is equipped with NOx CEMS and therefore exempt from CAM. See 40 CFR 64.2(b)(1)(vi).

## PROJECT REVIEW

In this renewal, the Title V permit was reformatted from the old format to the new and revised format that became the new standard for Title V renewal projects in 2011. Emissions units previously listed in sections A through U of Title V permit No. 0530010-015-AV were also re-ordered to better represent the facility's process flow. To simplify the permit and take advantage of the fact that similar emissions units share essentially the same rule requirements, similar emissions (e.g., Kiln Nos. 1 and 2) which were previously listed in independent sections of

the previous permit were combined into common sections. The following is a summary of emissions units that were combined into common section in the renewal permit:

- EU No. 008 (Kiln Nos. 1 Blending Silo) and EU No. 012 (Kiln Nos. 2 Blending Silo) were combined into one section, Section D;
- EU No. 002 (Kiln No. 1 Feed System) and EU No. 013 (Kiln No. 2 Feed System) were combined into one section, Section E;
- EU Nos. 003 and 004 (Kiln No. 1 and Clinker Cooler No. 1.) and EU Nos. 014 and 015 (Kiln No. 2 and Clinker Cooler No. 2.) were combined into one section, Section F; and
- EU No. 005 (Finish Mill Nos. 1 & 2) and EU No. 019 (Finish Mill No. 3) were combined into one section, Section G.

This renewal permit incorporates provisions of the latest version of 40 CFR 63 Subpart LLL (2/12/2013) and provisions from Construction Permit No. 0530010-030-AC (BART Permit). The latest version of Subpart LLL includes several changes that affect the Kilns and Clinker Coolers. New or revised standards and continuous monitoring requirements were added for PM, Mercury, THC, and HCl. The opacity standards for the Kilns and Clinker Coolers were eliminated from the new subpart because the new PM emissions limits and monitoring requirements are better and more accurate than the opacity limits and monitoring requirements in previous subpart. The compliance date for the new Subpart LLL requirements is September 9, 2015. A summary of the conditions incorporated from Construction Permit No. 0530010-030-AC is listed below.

1. EU No. 003 (Kiln No. 1) incorporates the NOx emissions limit of 2.0 lb/ton of clinker.
2. EU No. 003 (Kiln No. 1) incorporates the SO2 emissions limit of 0.17 lb/ton of clinker and added CEMS as the compliance method.

   *Note: Based on conditions in the permit, a $SO_2$ CEMS is to be installed on EU Nos. 003 (Kiln No. 1) and operational by January 1, 2014. Because the facility has been shutdown since December 12, 2008, the installation of $SO_2$ CEMS was not complete at the time of this renewal. $SO_2$ CEMS was incorporated into the permit and added to the facility's compliance plan.*
3. EU Nos. 003 (Kiln No. 1) incorporates the $PM/PM_{10}$ emissions limit of 0.31 lb/ton of clinker.
4. EU Nos. 004 (Cooler No. 1) incorporates the $PM/PM_{10}$ emissions limit of 0.15 lb/ton of clinker.
5. EU No. 003 (Kiln No. 1) incorporates the new visible emissions opacity standard of 10% which becomes effective January 1, 2014. The visible emissions opacity standard was 20% in the previous Title V permit.
6. EU No. 003 (Cooler No. 1) incorporates the visible emissions opacity standard of 10% which becomes effective January 1, 2014. The visible emissions opacity standard already exist the previous Title V permit.
7. Incorporates a visible emissions opacity standard of 5% which will become effective on January 1, 2014 for the emissions units listed below.
   - EU No. 002 (Kiln No. 1 Feed System)
   - EU No. 005 (Finish Mills Nos. 1 & 2)
   - EU No. 006 (Clinker Storage Silo Nos. 1 & 2)
   - EU No. 008 (Kiln 1 Blending Silo No. 1 & 2)
   - EU No. 009 (Portland Cement Storage Silo Nos. 1-5)
   - EU No. 011 (Raw material storage silos and Transfer belt)

*Note: The visible emissions opacity standard was 10% in the previous Title V permit*

The hours of operation for EU No. 006 (Clinker Storage Silo Nos. 1 & 2) was corrected from 7,896 to 8,760 hours per year. The previous operation permit (0530010-015-AV) specified the hours of operation as 7,896 based on the limit specified in Construction Permit No. AC27-191616; however, an amendment increasing the hours of operation to 8,760 hours per year was issued on March, 3, 1992.

## CONCLUSION

This project renews Title V Air Operation Permit No. 0530010-015-AV, which was issued on November 25, 2008. This renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.