Florida Department of Environmental Protection

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PERMITTEE

CEMEX Construction Materials, LLC
1200 NW 137 Avenue
Miami, Florida 33182

Project No. 0250014-047-AC
Miami Cement Plant
Permit Expires: December 31, 2013

Authorized Representative:
Mr. Luis Lopez, Cement Plant Manager

Carbon Monoxide Compliance
Miami-Dade County, Florid

PROJECT

This is the final air construction permit, which authorizes the installation of a certified continuous emissions monitoring system in the kiln main stack to demonstrate compliance with the carbon monoxide (CO) emission limits. The existing cement plant is located at 1200 NW 137 Avenue, Miami, Florida. This facility is categorized under Standard Industrial Classification Code No. 3241-Cement, Hydraulic. The UTM coordinates Zone 17, 558.00 km East, and 2852.20 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); and Section 3 (Emissions Unit Specific Conditions).

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 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 Tallahassee, Florida
For the Division of Air Resource Management
(Electronic Signature)

for Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

Enclosures
JFK/al/th

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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 the date indicated below to the following persons.

Luis G. Lopez, Cement Plant Manager, CEMEX: luisguillermo.lopez@cemex.com
John Koogler, Ph.D., P.E., Koogler and Associates, Inc. jkoogler@kooglerassociates.com
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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.
(Electronic Signature)

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FACILITY DESCRIPTION

The Miami Cement Plant is an existing Portland cement manufacturing plant, which is categorized under Standard Industrial Classification Code No. 3241. CEMEX operates a 1,300,000 tons clinker per year dry-process F.L. Smidth preheater/precalciner kiln with clinker cooler. Also part of the facility is a raw mill system, six finish mills, two packhouses, thirty two cement silos, a limestone quarry and crushing system, material receiving facilities (both by rail and truck), open short-term material storage piles, a storage building for intermediate raw material and clinker storage, a stone dryer and soil thermal treatment plant, a rail and truck bulk loadout facility, and a liquid fuel tank farm. CEMEX also operates a concrete batch plant and a concrete block plant (Sweetwater) located adjacent to the main plant.

This project will affect the following existing permitted emissions unit.

ID No.	Emission Unit Description
018	In-Line Kiln/Raw Mill/Clinker Cooler/TIMS/Clean Biomass Feeder System

Controls. Emissions of particulate matter (PM) from the preheater/precalciner kiln exhaust as well as exhausts from the clinker cooler, raw mill and coal mill are controlled by a baghouse. Emissions of carbon monoxide (CO), nitrogen oxides (NOx) and volatile organic compounds (VOC) are controlled by the efficient combustion design (long residence times at high temperatures) and good operating practices. Potential dioxin and furan emissions are controlled by high-temperature combustion followed by rapid combustion gas cooling. Acid gases such as sulfur dioxide (SO_2) and hydrochloric acid (HCl) are controlled by limestone scrubbing as part of the raw material feed and clinker production.

Continuous Emission Monitoring Systems (CEMS). To demonstrate compliance with the emission limits specified in the current Title V permit (0250014-044-AV), continuous emission monitoring systems (CEMS) in the main kiln/raw mill stack measure and record emissions of NO_X, SO_2, total hydrocarbons or "THC" (which serves as a surrogate for VOC emissions), and CO_2. A continuous opacity monitoring system (COMS) measures and records the opacity of the process gas exhaust in the main kiln/raw mill stack. Prior to issuance of the present construction permit, CO was monitored with a process monitor for reasonable assurance. The baghouse inlet temperature is continuously monitored and recorded to ensure that it is maintained below that of the most recent compliance stack test, which provides assurance of effective control of dioxins and furans.

Fuels: The permittee is authorized through the current Title V permit to fire the following fuels: bituminous coal, propane, No. 2 fuel oil, residual oil, flyash, on-specification and off-specification used oil, natural gas, petroleum coke paper currency, oil filters, booms and rags from clean petroleum spill clean ups, unused paper by-products, clean non-chlorinated plastic by-products, whole tires, tire-derived fuel, clean cellulosic biomass, agricultural organic fibrous byproducts. In accordance with Permit 0250014-047-AC, the permittee is authorized to fire alternate fuel such as engineered fuels, tire-derived fuel (TDF), roofing materials, plastics, agricultural biogenic materials, cellulosic biomass (untreated and treated), carpet-derived fuel, biosolids, and alternative fuel (AF) mix.

FACILITY 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 in accordance with Rule 62-212.400(PSD), F.A.C.
- The facility operates units subject to the 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources.
- The facility operates units subject to 40 CFR Part 63 – National Emission Standards for Hazardous Air Pollutants.

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PROJECT DESCRIPTION

This permit authorizes the applicant to establish a carbon monoxide (CO) emission standard applicable to the cement kiln on a 30-day basis with compliance by a new certified continuous emission monitoring system (CEMS).

RELEVANT DOCUMENTS

Several documents shown in the following link are not a part of this permit, but helped form the basis for this permitting action. Documents related to this permitting action are posted under permit No. 0250014-047-AC at the following web site address: http://appprod.dep.state.fl.us/air/emission/apds/default.asp.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to Miami-Dade County Permitting, Environment and Regulatory Affairs at 701 NW 1st Court, Suite 400, Miami, FL 33136.
2. Compliance Authority: All documents related to compliance activities such as reports, tests and notifications shall be submitted to Miami-Dade County Permitting, Environment and Regulatory Affairs at 701 NW 1st Court, Suite 400, Miami, FL 33136.
3. 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.
4. 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.]
5. 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) & 62-212.300(1)(a), F.A.C.]
6. Expiration: This permit does not authorize any physical construction. This air construction permit shall expire on June 30, 2013. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rules 62-210.300(1), 62-4.070(4) 62-4.080, and 62-4.210, F.A.C]
7. Application for Title V Permit Revision: This permit authorizes specific modifications on the affected emissions unit 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 revision 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 revision, 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 62-213.420, F.A.C.]

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This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
018	In-Line Kiln/Raw Mill/Clinker Cooler/TIMS/Clean Biomass Feeder System

COMPLIANCE WITH EXISTING PERMIT CONDITIONS

1. Existing Permits: This permit supplements all existing valid air permits. Unless otherwise specified below, the permittee shall continue to comply with all applicable conditions from valid air construction and facility Title V operation permits. [Rule 62-4.070(3), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

{The following condition replaces and supersedes Air Construction Permit 0250014-016-AC, Section III, Condition 3., that is also contained in facility Title V Operation Permit 0250014-044-AV, Section III, Condition B.24.b. Said condition specified a carbon monoxide (CO) process alarm that required operators to take appropriate corrective actions to return CO emissions below the alarm set point of 1,200 parts per million by volume.}

2. Continuous Emission Monitoring System (CEMS) for CO: The permittee shall install, calibrate, operate and maintain a CEMS to measure and record concentrations of CO in the kiln system exhaust stack in a manner sufficient to demonstrate continuous compliance with the CO emissions standards. Compliance with the CO emission limits of 2.81 pounds per ton of clinker (lb/ton) and 455 lb/hour shall be based on a 30-operating day rolling average. The CO CEMS shall express the results in units of lb/ton and lb/hr. The following requirements apply to the CEMS:

   a. *Certification of CO CEMS:* The CO CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATAs shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards;

   b. *Valid Hourly Averages:* The CO CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour. Each 1-hour block average shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel (or produced clinker) during that quadrant of an hour. Notwithstanding this requirement, a 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid.

      - Hours during which there is no kiln feed and no fuel fired are not valid hours.
      - Hours during which the plant is firing fuel but producing no clinker are valid, but these hours are excluded from the production-normalized emission rate computation (pounds per ton of clinker). These hours are included in any pollutant mass emission rate computation (pounds per hour).

   c. *30-day Rolling Averages*: Each 30-day rolling average shall be the arithmetic average of all valid hourly averages collected during the last 30 operating days. A new 30-day rolling average shall be recomputed after every day of operation for the new day and the preceding 29 operating days. For purposes of computing these emission limits, an operating day is any day that the kiln produces clinker or fires fuel.

   d. *Data Exclusion*: Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, the CEMS shall monitor and record emissions during all operations including episodes

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of startups, shutdowns, and malfunctions. Malfunctions do not include process upsets that occur as a normal part of cement production. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.

e. *Data Availability*. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority.

f. *Excess Emissions Notification and Reporting*. The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report emissions for the Annual Operating Report.

[Rule 62-4.070(3), and Rule 62-4.130, F.A.C.; Applicant Request]

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