

Part 70 Operating Permit Amendment

Permit Amendment No.: 3241-153-0003-V-04-2 Effective Date: April 4, 2008

Facility Name: CEMEX Southeast, LLC

Facility Address: 2720 Highway 341 South
Clinchfield, Georgia, 31013 (Houston County)

Mailing Address: P. O. Box 120
Clinchfield, Georgia, 31013

Parent/Holding Company: CEMEX, Inc.

Facility AIRS Number: 04-13-153-00003

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit and an amendment to the Part 70 Operating Permit for:

(1) Construction and operation of a new (second) tire fuel feed system for the #5 Cement Kiln, (2) authorization for use of alternative fuels such as carpet (excluding nylon 6 and nylon 6/6), tires, biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants, (3) revise the facility's current fuel sulfur content limit, and (4) establish Prevention of Significant Deterioration (PSD) avoidance limits for appropriate pollutants.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 3241-153-0003-V-04-0. Unless modified or revoked, this Permit Amendment expires simultaneously with Part 70 Permit no. 3241-153-0003-V-04-0.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. TV-16746 dated May 25, 2006; any other applications upon which this Permit Amendment or Permit No. 3241-153-0003-V-04-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **10** pages.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

(1) Construction and operation of a new (second) tire fuel feed system for the #5 Cement Kiln, (2) authorization for use of alternative fuels such as carpet (excluding nylon 6 and nylon 6/6), tires, biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants, (3) revise the facility's current fuel sulfur content limit, and (4) establish Prevention of Significant Deterioration (PSD) avoidance limits for appropriate pollutants.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1 Emission Units

| Emission Units | | Specific Limitations/Requirements | | Air Pollution Control Devices | |
|----------------|----------------|---|--|-------------------------------|---------------|
| ID No. | Description | Applicable Requirements/Standards | Corresponding Permit Conditions | ID No. | Description |
| 560 | #5 Cement Kiln | 40 CFR 52.21 40 CFR 63 Subpart LLL 391-3-1-.02(2)(g) 40 CFR 64 | 3.2.1, 3.2.2, 3.2.4, 3.3.2, 3.3.3, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 5.2.1, 5.2.2, 5.2.5, 5.2.6, 5.2.7, 5.2.8, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.3, 6.2.4, 6.2.9, 3.4.3, 5.2.11, 5.2.12 | 0400 | Kiln Baghouse |

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

3.2 Equipment Emission Caps and Operating Limits

Revised

3.2.2 The Permittee is authorized to fire the following fuels in Cement Kiln #5 only:
[391-3-1-.03(2)(c)]

- a. Fuel oils that meet the specifications of fuel oil numbers 1, 2, 4, 5, and 6 as defined by ASTM D396 "Standard Specifications of Fuel Oils."
- b. Natural gas, propane, coal, tires, carpet (excluding nylon 6 and nylon 6/6), biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants. The sulfur content for all combusted fuels combined shall on average be less than or equal to 3% by weight as determined on a monthly average basis. As an alternative, the Permittee shall demonstrate, using a certified continuous emission monitoring system (CEMS), that the sulfur dioxide emissions in the exhaust gases are not greater than 6.0 pounds per 100 pounds of fuel charged to the #5 Cement Kiln (E.U. 560), as determined on a monthly average basis."
- c. On-site generated raw materials listed in Attachment D of this permit (part of the 13,000 gallons per 12 consecutive month period its use is authorized in condition 3.2.1).

Revised

3.2.4 The Permittee shall not discharge, or cause the discharge into the atmosphere, from the #5 Cement Kiln (E. U. 560) stack emissions:
[391-3-1-.03(2)(c), 40 CFR 52.21 (PSD avoidance)]

- a. The twelve-month rolling total of which contains:
 - i. Sulfur dioxide in excess of 1,480.4 tons,

- ii. Nitrogen oxides in excess of 1,702.1 tons,
 - iii. Carbon monoxide (CO) in excess of 4,750.0 tons,
 - iv. Volatile organic compounds (VOC) in excess of 200.0 tons (*Compliance with this limit shall be determined by multiplying the VOC emission factor "in pounds per ton clinker," determined via testing, by the 12-month rolling total clinker produced*),
 - v. Particulate matter (PM) in excess of 214.0 tons,
 - vi. Particulate matter less than 10 microns (PM₁₀) in excess of 173.7 tons.
- b. Which contain particulate matter in excess of 0.29 lb per ton of kiln feed (dry basis). This limit shall supersede the 40 CFR 63 Subpart LLL emission limit denoted in 3.3.2a.i. upon the completion of Phase 2 of the "*Clinchfield 2000 Project*."

Revised

- 3.2.5 Prior to the completion of Phase 2 of the "*Clinchfield 2000 Project*," the Permittee shall not process more than 1,583,000 tons of dried raw feed in the #5 Cement Kiln (E. U. 560) during any 12 consecutive months.
[391-3-1-03(2)(c), 40 CFR 52.21 (PSD avoidance)]

3.4 Equipment SIP Rule Standards**Revised**

- 3.4.3 The Permittee shall comply with the applicable provisions of Georgia Air Quality Control Rule 391-3-1-.02(2)(g) "*Sulfur Dioxide*;" for all subject equipment {for reference see listing in Section 3.1}. In particular, the Permittee shall not exhaust gases, which contain more than 6 lb. SO₂ per 100 lb. of fuel charged to the #5 Cement Kiln (E. U. 560), as determined on a monthly average basis, or 2.5 percent sulfur by weight in the Roller Mill (E. U. 320).
[391-3-1-.03(2)(c)]

PART 4.0 REQUIREMENTS FOR TESTING**Revised**

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's **Procedures for Testing and Monitoring Sources of Air Pollutants**. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 are as follows:

- a. Method 1 shall be used for selection of sampling site and number of traverse points.
- b. Method 2 shall be used for stack gas flow rate.
- c. Method 3 shall be used for gas analysis.
- d. Method 3B shall be used for the emissions rate correction factor for excess air (Method 3A may be used as an alternative).
- e. Method 4 shall be used for moisture.
- f. Method 5 shall be used for particulate matter.
- g. Method 6C shall be used for sulfur dioxide concentration.
- h. Method 7E shall be used for nitrogen oxides concentration.
- i. Method 9 and the procedures of Section 1.3 of the Division's **Procedures for Testing and Monitoring Sources of Air Pollutants** shall be used for opacity.
- j. Method 23 shall be used for dioxin/furan (D/F) emissions.
- k. Method 25 (A,C): Volatile Organic Compounds (flame ionization detection)
- l. Method 202: Condensable Particulate Matter
- m. Method 201A: PM₁₀ (particulate matter less than 10 microns in diameter)

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.

[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

4.2.6 Within 60 days after achieving the maximum production rate at which the sources will be operated, but no later than 180 days after the initial startup of the equipment changes and modifications, which are part of “Alternative Fuels Project” as identified in Application No. 16746 affecting the #5 Kiln (E. U. 560) and Roller Mill (E. U. 320) and, when pertinent, subject to the detailed applicable provisions of 40 CFR 63 Subpart LLL, the Permittee shall conduct:

[40 CFR 63.1349 (e)(1) and (e)(3)]

- a. PM, PM₁₀, visible emissions, CO, NO_x, SO₂, Dioxin/furan, and VOC performance tests on the #5 Kiln/Roller Mill baghouse stack (APCD 0400) to determine the pound per hour emission of each pollutant. These performance tests shall be conducted during at maximum firing rate for each fuel and during separate usage of each fuel (ie. biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants. These performance tests shall be used to determine pound per hour emissions of PM, PM₁₀, CO, NO_x, SO₂, Dioxin/furan, and VOC per specific fuel source combusted (ie. biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants.
- b. Particulate matter and visible emissions performance tests on the Clinker Cooler (E. U. 606).
- c. Particulate matter and visible emissions performance tests on the Baghouses controlling Finish Mill Systems No. 4 (APCDs 0716 & 0722), No. 5 (APCDs 0814 & 0821), No. 6 (APCDs 0909 & 0916) and all the Baghouses mentioned in Condition 3.2.6(b).

All tests shall be conducted at the maximum anticipated production rate. The results of the performance test(s) shall be submitted to the Division within 60 days of the completion of testing.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS**6.1 General Record Keeping and Reporting Requirements****Revised**

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)
 - i. Any six-minute average opacity that exceeds 20% as recorded by the Continuous Opacity Monitoring Systems (COMS) installed on the baghouse controlling emissions from the #5 Kiln (E. U. 560).
 - ii. Any six-minute average opacity that exceeds 10% as recorded by the Continuous Opacity Monitoring Systems (COMS) installed on the baghouse controlling emissions from the Clinker Cooler (E. U. 606).
- b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)
 - i. Deleted.
 - ii. Any time the 12-month rolling total dry feed of the #5 Kiln (E. U. 560) exceeds 1,583,000 tons after Phase 2 has been completed.
 - iii. Any time the 12-month rolling total VOC emissions exceed 200.0 tons.
 - iv. Any time the 12-month rolling total sulfur dioxide exhausted from the #5 Kiln (E. U. 560) exceeds 1,480.4 tons.
 - v. Any time the 12-month rolling total nitrogen oxides exhausted from the #5 Kiln (E. U. 560) exceeds 1,702.1 tons.
 - vi. Any time the 12-month rolling total waste oil fired in the #5 Kiln (E. U. 560) exceeds 13,000 gallons.
 - vii. Deleted.

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- viii. Any opacity from a finishing mill or raw mill baghouse that exceeds 10% as determined while following the monitoring procedures that require Method 9 to quantify the visible emissions.
 - ix. Any opacity from a storage bin/silo, conveying system transfer point, bagging system, bulk loading, or unloading system, or dryer that exceeds 10% as determined while following the monitoring procedures that require Method 9 to quantify the visible emissions.
 - x. Any failure to comply with any provision of the Operational and Maintenance Plan developed in accordance with Condition 5.2.8.
 - xi. Each 180-minute average temperature at the inlet of the Kiln Baghouse (APCD 0400) that exceeds the average temperature determined in accordance with Condition 4.2.4(c) while the raw mill was operating.
 - xii. Each 180-minute average temperature at the inlet of the Kiln Baghouse (APCD 0400) that exceeds the average temperature determined in accordance with Condition 4.2.4(c) while the raw mill was not operating.
 - xiii. Any failure to verify the calibration of a temperature monitoring device required by Condition 5.2.7(c).
 - xiv. Any time fuel oil that does not meet specifications of No. 2, 4, 5 and 6 fuel oils is burned in the #5 Kiln (E. U. 560) and/or the Roller Mill (E. U. 320).
 - xv. Any time that fuel with sulfur content greater than 3.0 percent by weight is burned in the #5 Kiln (E. U. 560).
 - xvi. Any time that fuel with sulfur content greater than 2.5 percent by weight is burned in the Roller Mill (E. U. 320).
 - xvii. Any time the 12-month rolling total particulate matter (PM) in excess of 214.0 tons, or
 - xviii. Any time the 12-month rolling total particulate matter less than 10 microns (PM₁₀) in excess of 173.7 tons.
 - xix. Any time the 12-month rolling total carbon monoxide (CO) in excess of excess of 4,750.0 tons.
- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

- i. For the Baghouses specified in Condition 5.2.9, any two consecutive required daily determinations of visible emissions that require action in accordance with 5.2.9(a) or 5.2.9(b).
- ii. Any visible emissions, mechanical failure, or malfunction discovered during the walk through described in Condition 5.2.10 that are not eliminated or corrected with 24 hours of first discovering the visible emissions, mechanical failure, or malfunction.
- iii. Any abnormal condition discovered during the inspection of the #5 Kiln (E. U. 560) or in-line kiln raw mill combustion system required by Condition 5.2.5.

6.2 Specific Record Keeping and Reporting Requirements

Revised

- 6.2.1 The Permittee shall retain operation records for five years after the date and year of record. The records shall be available for inspection and/or submittal to the Division and contain: [391-3-1-.03(2)(c) and 40 CFR 60.63(a)]
- a. A log of the monthly total hours of operation of the #5 Kiln (E. U. 560). The 12-month rolling total of hours of operation must be included in each month's log.
 - b. A log of the monthly total usage of fuel in the #5 Kiln (E. U. 560) and its auxiliary air heater systems, broken down into each species (i.e., natural gas, propane, coal, tires, carpet (excluding nylon 6 and nylon 6/6), biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes), and non-hazardous wastes from sewage treatment plants). Usage of coal, tires, carpet (excluding nylon 6 and nylon 6/6), biomass (wood chips, sawdust), agricultural wastes (sugar cane baggasse, rice hulls, peanut shells, corn husks and cotton gin wastes)), and non-hazardous wastes from sewage treatment plants shall be recorded in tons. Usage of oil shall be recorded in gallons. Usage of natural gas shall be recorded in million cubic feet. The 12-month rolling total fuel use must be included in each month's log.
 - c. A daily log (24 hour total) and a monthly log of the total input of dried raw feed into the #5 Kiln (E. U. 560) (in tons) and the daily and monthly total production of clinker (in tons). The 12-month rolling total raw feed input and clinker production must be included in each month's log.

Revised

- 6.2.4 The Permittee shall include the following information in the report required in Condition 6.1.4:
- a. A summary of the fuel supplier certifications required by Condition 6.2.3.
 - b. The results of any combustion system component inspection conducted within the reporting period.

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- c. A statement signed by a responsible official that the summaries submitted represent all of the fuel oil combusted during the reporting period. A summary of the analysis of all coal used during the reporting period, including results of on-site sulfur content testing required by 6.2.3a(ii).
 - d. The sulfur dioxide and nitrogen oxides emissions (in tons) for each day during any reporting period in which the #5 Kiln (E. U. 560) operated.
 - e. The total sulfur dioxide and nitrogen oxides emissions for each month in the reporting period.
 - f. The 12-month rolling total sulfur dioxide and nitrogen oxides emissions for each month in the reporting period.
 - g. The 12-month rolling total emissions (in tons) of carbon monoxide.
 - h. The 12-month rolling total emissions (in tons) of VOC.
 - i. Total consumption (in tons) of each fuel in the #5 Kiln (E. U. 560) for each month in the reporting period.
 - j. The #5 Kiln (E. U. 560) daily raw feed and clinker production rates.
 - k. Total tonnage of dried raw feed into the #5 Kiln (E. U. 560) for each month in the reporting period, and total tonnage of feed for the previous twelve consecutive months.
 - l. Total production of cement clinker (in tons) for each month in the reporting period, and the total production for the previous twelve consecutive months.
 - m. The 12-month rolling total emissions (in tons) of PM.
 - n. The 12-month rolling total emissions (in tons) of PM₁₀.
- 6.2.9 The Permittee shall use the PM and PM₁₀ performance tests on the #5 Kiln/Roller Mill baghouse stack (APCD 0400) required in Condition 4.2.6 to calculate the 12-month rolling total of PM and PM₁₀ emissions from the entire facility for each calendar month in the reporting period. Each 12-month rolling total shall be included in the semiannual period report specified in Condition 6.1.4. The Permittee shall notify the Division in writing if any 12-month rolling total of PM and PM₁₀ emissions from the entire facility equals or exceeds the limits stated in Condition 3.2.4. This notification shall be postmarked by the fifteenth day of the following month.
[391-3-1-.03(2)(c)]

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.12 Revocation of Existing Permits and Amendments

The following Air Quality Permits, Amendments, and 502(b)10 Changes are subsumed by this permit and are hereby revoked:

| Air Quality Permit and Amendment Number(s) | Dates of Original Permit or Amendment Issuance |
|--|--|
| 3241-153-0003-V-04-1 | November 13, 2007 |

ATTACHMENT B

NOTE: Attachment B contains information regarding insignificant emission units/activities and groups of generic emission units/activities in existence at the facility at the time of Permit issuance. Future modifications or additions of insignificant emission units/activities and equipment that are part of generic emissions groups may not necessarily cause this attachment to be updated.

INSIGNIFICANT ACTIVITIES BASED ON EMISSION LEVELS

| Description of Emission Units / Activities | Quantity |
|--|-----------------|
| Alternative Fuel Storage, Handling, and Feed Systems | 1 |