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BUREAU OF
AIR REGULATION

KA 307-08-07
August 18, 2010

Mr. Jonathan Holtom
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**RE: Air Permit Project; 0530021-021-AV
Cemex Construction Materials Florida, LLC
Revised Continuous Assurance Monitoring Plan – Kiln 2 System**

Dear Mr. Holtom,

This letter follows up on your request for a revision of the CAM plan submitted by letter dated November 20, 2009 from Steve Cullen of Koogler & Associates. The revision is to include in the CAM Plan for the Kiln 2 system (EU044) at the Cemex Construction Materials Florida, LLC, Brooksville South Cement Plant continuous assurance monitoring of the bag house pressure drop and opacity. This information is submitted as a portion of the information needed to finalize the Title V permit revision (0530021-021-AV) for incorporating the Kiln 2 system constructed under permit 0530021-009-AC (PSD-FL-351) into the facility Title V permit.

Please contact me if you have any questions regarding this information. I look forward to working with you to finalize this permit.

Sincerely,

Max Lee, Ph.D., P.E.

Enc.

Cc: George Townsend, CEMEX
Lillian Deprimo, CEMEX (email only)
James Daniel, CEMEX (email only)

APPENDIX CAM

Compliance Assurance Monitoring Requirements

CEMEX Construction Materials Florida, LLC.

Brooksville South, Cement Plant, Kiln 2 System

Permit No. 0530021-021-AV

Revision: 8/18/2010
307-08-07 CAM2010_08FINAL.doc

Introduction

CEMEX Brooksville South Kiln No. 2 CAM Applicability Analysis and CAM Plan

This document describes fabric filters at the referenced facility and CAM implications. The pollutant is particulate matter (PM and PM10).

Fabric Filters

This section describes the fabric filters associated with Kiln #2.

	<u>EU ID</u>	<u>Activity Description</u>	<u>ID</u>
1.	044	Kiln/Cooler/Raw Mill	331.BF300
2.	045	Filter Dust Bin	331.BF640
3.	045	Filter Dust Bin Loadout Spout	311.LS609
4.	046	Raw Meal Transport	341.BF400
5.	047	Blend Silo Discharge	341.BF410
6.	047	Kiln Feed Bin	351.BF410
7.	047	Kiln Feed Transport	351.BF420
8.	048	Clinker Transport	471.BF110
9.	050	Clinker Silo Discharge 1	481.BF155
10.	050	Clinker Silo Discharge 2	481.BF165
11.	050	Clinker Storage Silo	471.BF120
12.	051	Finish Mill Collecting Bin	511.BF650
13.	052	Finish Mill	531.BF500
14.	054	Finish Mill Bucket Elevator	531.BF020
15.	057	Finish Mill Cement Transport	531.BF400
16.	057	Finish Mill Rejects Transport	531.BF290
17.	058	Cement Silo 5	612.BF005
18.	058	Cement Silo 5 Loading Bin	612.BF620
19.	058	Cement Silo 5 Loadout Spout N	622.LS140
20.	058	Cement Silo 5 Loadout Spout S	622.LS160
21.	059	Multi-Cell Cement Loadout	611.BF005
22.	059	Multi-Cell Cement Silo Alleviator	611.BF045
23.	059	Multi-Cell Loadout Transport	611.BF610
24.	059	Multi-Cell Loadout Spout	611.LS760
25.	060	Coal Mill	461.BF400
26.	061	Fine Coal Bin	461.BF560
27.	No ID	Packing Plant	641.BF150

CAM Not Applicable

This section describes the activities where CAM is not applicable, and provides justification.

	<u>EU ID</u>	<u>Activity Description</u>	<u>ID</u>
2.	045	Filter Dust Bin	331.BF640
3.	045	Filter Dust Bin Loadout Spout	311.LS609
12.	051	Finish Mill Collecting Bin	511.BF650
13.	052	Finish Mill	531.BF500
25.	060	Coal Mill	461.BF400
26.	061	Fine Coal Bin	461.BF560
27.	No ID	Packing Plant	641.BF150

Potential Pre-Control Device Emissions Less than Major Source

Certain activities have potential pre-control device emissions of the applicable regulated air pollutant (PM and PM10) that are less than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (100 TPY); in accordance with 40CFR64.2(a)(3). This section provides brief justification.

<u>2.</u>	<u>045</u>	<u>Filter Dust Bin</u>	<u>331.BF640</u>
<u>3.</u>	<u>045</u>	<u>Filter Dust Bin Loadout Spout</u>	<u>311.LS609</u>

These activities have a pre-control device potential to emit under 100 TPY based on their physical and operational design. The design rate for these activities is 30 tons per hour. The uncontrolled emission factors are from webFIRE and its predecessor AFSEF, for SCC 30500612: Cement Manufacturing – Raw Material Transfer.

$$\text{PM, TPY} = (30 \text{ TPH} \times 8760 \text{ hours/year} \times 0.3 \text{ lb/ton}) / 2000 = 39 \text{ TPY}$$

$$\text{PM}_{10}, \text{TPY} = (30 \text{ TPH} \times 8760 \text{ hours/year} \times 0.15 \text{ lb/ton}) / 2000 = 20 \text{ TPY}$$

<u>12.</u>	<u>051</u>	<u>Finish Mill Collecting Bin</u>	<u>511.BF650</u>
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This activity has a pre-control device potential to emit under 100 TPY based on an operational limitation on the capacity of a source to emit an air pollutant, as an enforceable restrictions on the amount of material processed. This activity processes the materials other than clinker that go into finished cement. The PSD permit limits cement production to 1,301,138 TPY and clinker production to 1,022,000 TPY. The difference (279,138 TPY) constitutes an effective and enforceable restriction on the amount of material processed by this emissions unit. The uncontrolled emission factors are from webFIRE and its predecessor AFSEF, for SCC 30500612: Cement Manufacturing – Raw Material Transfer.

$$\text{PM, TPY} = (279,138 \text{ TPY} \times 0.3 \text{ lb/ton}) / 2000 = 42 \text{ TPY}$$

$$\text{PM}_{10}, \text{TPY} = (279,138 \text{ TPY} \times 0.15 \text{ lb/ton}) / 2000 = 21 \text{ TPY}$$

26. 061 Fine Coal Bin 461.BF560

This activity has a pre-control device potential to emit under 100 TPY based on its physical and operational design. The design rate for this activity is 25 tons per hour. The uncontrolled emission factors are from webFIRE's predecessor AFSEF, for SCC 30501010: Mineral Products – Coal Crushing.

$$\text{PM, TPY} = (25 \text{ TPH} \times 8760 \text{ hours/year} \times 0.02 \text{ lb/ton}) / 2000 = 2 \text{ TPY}$$

$$\text{PM}_{10}, \text{TPY} = (25 \text{ TPH} \times 8760 \text{ hours/year} \times 0.01 \text{ lb/ton}) / 2000 = 1 \text{ TPY}$$

27. No ID Packing Plant 641.BF150

This activity has a pre-control device potential to emit under 100 TPY based on its physical and operational design. The design rate for this activity is 17 tons per hour. The uncontrolled emission factors are from webFIRE and its predecessor AFSEF, for SCC 30500619: Cement Manufacturing – Cement Load Out.

$$\text{PM, TPY} = (17 \text{ TPH} \times 8760 \text{ hours/year} \times 0.24 \text{ lb/ton}) / 2000 = 18 \text{ TPY}$$

$$\text{PM}_{10}, \text{TPY} = (17 \text{ TPH} \times 8760 \text{ hours/year} \times 0.2 \text{ lb/ton}) / 2000 = 15 \text{ TPY}$$

Inherent Process Equipment

Certain activities are considered inherent process equipment, and are not subject to CAM. This inherent process equipment is material recovery equipment that the owner has installed and operated primarily for purposes other than compliance with air pollution regulations. The equipment is operated at an efficiency during normal process operations that is higher than is necessary in order to comply with the applicable emission limitation. For the purposes of this document, inherent process equipment is not considered a control device.

Both these activities are mills (finish mill and coal mill) that use fabric filters primarily for product capture after milling. The finish mill produces powdered cement, and the coal mill provides pulverized coal. All mill product is captured by the fabric filters.

13. 052 Finish Mill 531.BF500

25. 060 Coal Mill 461.BF400

Compliance Assurance Monitoring Plan: Fabric Filters for PM Control

I. Background

A. Emissions Units

	<u>EU</u>	<u>Description</u>	<u>Identification</u>
1.	044	Kiln/Cooler/Raw Mill	331.BF300
4.	046	Raw Meal Transport	341.BF400
5.	047	Blend Silo Discharge	341.BF410
6.	047	Kiln Feed Bin	351.BF410
7.	047	Kiln Feed Transport	351.BF420
8.	048	Clinker Transport	471.BF110
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17.	058	Cement Silo 5	612.BF005
18.	058	Cement Silo 5 Loading Bin	612.BF620
19.	058	Cement Silo 5 Loadout Spout N	622.LS140
20.	058	Cement Silo 5 Loadout Spout S	622.LS160
21.	059	Multi-Cell Cement Loadout	611.BF005
22.	059	Multi-Cell Cement Silo Alleviator	611.BF045
23.	059	Multi-Cell Loadout Transport	611.BF610
24.	059	Multi-Cell Loadout Spout	611.LS760

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

For Emissions Unit EU044

Regulation No.: 62-212, F.A.C. (BACT)

Emission limits:

Particulate matter (PM): 0.23 lb/ton of clinker, 3 hr avg.

Particulate matter (PM10): 0.20 lb/ton of clinker, 3 hr avg.

Visible emissions: 10% opacity (no visible emissions)

Monitoring requirements: Visible emissions tests, annual monitoring (M5 & M9), COMS

For Emissions Units listed above except EU044

Regulation No.: 62-212, F.A.C. (BACT) and 62-296, F.A.C.

Emission limits:

Particulate matter (PM): 0.01 gr/dscf, 3 hr avg.

Particulate matter (PM10): 0.007 gr/dscf, 3 hr avg.

Visible emissions: 5% opacity (no visible emissions)

Monitoring requirements: Visible emissions tests, annual monitoring (M9)

C. Control Technology

Pulse-jet baghouses operated under negative pressure.

II. Monitoring Approach

The key elements of the monitoring approach are presented below:

A. Indicator

Baghouse pressure drop will be used as an indicator. For EU044, the COMS will be used as a secondary indicator.

B. Measurement Approach

Pressure drop across the baghouse will be monitored daily. For EU044, the COMS is continuous readings of duct opacity.

C. Indicator Range

The indicator range is between 2" and 8" w.g. For EU044, the COMS indicator range is 0% to 10% opacity.

D. QIP Threshold

The QIP threshold is nine (9) excursions in a six month reporting period.

E. Performance Criteria

Data Representativeness: Measurements are being made at the control devices.

Verification of Operational Status: Daily recording will note operational status.

QA / QC Practices and Criteria: The recorded data will be reviewed by the Environmental Manager.

Monitoring Frequency and Data Collection Procedure: Each baghouse pressure drop will be recorded daily from the magnahelic or photohelic gauge. For EU044, the COMS is audited annually.

III. Justification

A. Background

This facility manufactures Portland cement. The pollutant-specific emission units are material handling processes, controlled by fabric filters (baghouses).

B. Rationale for Selection of Performance Indicator

Pressure drop was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate matter and visible emissions standards. When the baghouse is operating properly, there will not be any visible emissions from the exhaust.

Any increase or decrease in pressure drop, approaching the limits of the stated range, indicates reduced performance of a particulate control device, therefore the observed pressure drop is used as a performance indicator. For EU044, an increase in monitored opacity indicates reduced performance of the particulate control device, therefore the opacity monitored by the COMS is used as a secondary performance indicator.

C. Rationale for Selection of Indicator Level

Operation of the baghouses with pressure drops within the selected indicator range will generally result in no visible emissions. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

The indicator range was provided by the equipment manufacturer (*FLS Instruction 70001855, page 20*). An indicator range using pressure drop was selected because:

- (1) an increase or decrease in pressure drop outside the selected range can result in visible emissions, indicative of an increase in particulate emissions; and
- (2) a monitoring technique which does not require a Method 9 certified observer is desired.

For EU044, the COMS is a secondary indicator. Based on available data under normal operation, opacity varies with load and operating conditions. Variability is typically a gradual increase or decrease, with occasional sudden spikes and dips. A sudden and sustained step-increase in opacity could indicate a failure in one or more of the baghouse compartments.

The selected QIP threshold for baghouse visible emissions is nine (9) excursions in a 6-month reporting period. This level is 5 percent of the total pressure drop observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

Table 1. Monitoring Approach

	Indicator 1. All EU subject to CAM	Indicator 2. For EU044 only
I. Indicator	Baghouse pressure drop	Change in duct opacity
Measurement Approach	Gauge monitored daily	Continuous opacity monitoring system (COMS).
II. Indicator Range	2" – 8" w.g. An excursion is defined as a pressure drop outside the stated range.	An excursion is defined as any sudden and sustained step-change (increase) in opacity as documented by the trend of the consecutive 6-minute averages (other than startup and shutdown periods).
III. Performance Criteria		
A. Data Representativeness	Pressure drop was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate matter and visible emissions standards. When the baghouse is operating properly, there will not be any visible emissions from the exhaust.	Based on available data under normal operation, opacity varies with load and operating conditions. Variability is typically a gradual increase or decrease, with occasional sudden spikes and dips. A sudden and sustained step-increase in opacity could indicate a failure in one or more of the baghouse compartments.
B. Verification of Operational Status	Daily recording will note operational status of gauge and control device.	The COM system is audited annually.
C. QA/QC Practices and Criteria	The recorded data will be reviewed by the Environmental Manager.	Install and operate COMS according to 40 CFR Part 60 Appendix B, Performance Specification 1 and general provisions 60.13.
D. Monitoring Frequency	Each baghouse pressure drop will be recorded daily from the magnahelic or photohelic gauge.	Continuous.
E. Data Collection Procedures	Personnel designated by the operator will observe and record the baghouse pressure drop.	The COMS collects data that are reduced to 6-minute averages. Consecutive 6-minute averages are tracked through the Distributed Control System (DCS) and CEM software.
F. Averaging Period	None.	None.



August 10, 2010

Via FedEx Overnight Delivery

Ms. Danielle D. Henry
Compliance Manager
Florida Department of Environmental Protection
Division of Air Resource Management
Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, FL 33637

Re: Air Construction Permit No. 0530021-018-AC CEMEX Construction Materials Florida, LLC - Brooksville South Cement Plant "As-Built" Construction Permit

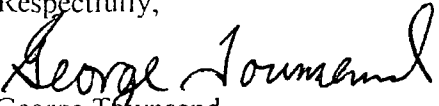
Dear Ms. Henry:

Please find enclosed two (2) copies of the initial compliance test report for Finish Mill No. 2 (Kiln Line No. 2); conducted on June 30, 2010; for NO_x, CO and PM and a VE test report for Silo No. 1 Truck Loadout (SW Exit), Line No. 1; conducted on June, 29, 2010.

The three (3) run test average emission rates were 0.50 Lbs/Hr – NO_x, 0.23 Lbs/Hr CO, PM as PM₁₀ 3.69 Lbs/Hr and 0.085 gr/dscf; with the *Air Heater On*. The NO_x emissions were below the limit of 30.92 Lbs/Hr and CO was below the limit of 17.84 Lbs/Hr. The PM as PM₁₀ emission were less than the permitted 6.0 Lbs/Hr, but slightly above the 0.007 gr/dscf limit. The PM as PM₁₀ emissions were 3.72 Lbs/Hr and 0.0192 gr/dscf; with the *Air Heater Off*; less than the limit of 6.0 Lbs/Hr, but above the limit of 0.007 gr/dscf. As PM, all of the particulate matter tests would have passed; with the exception of 0.0192 gr/dscf. CEMEX has been and continues to change out bags in the finish mill dust collector and will reschedule the PM testing as soon as practical. The signed RO sheet for the VE test report will follow under separate cover; Mr. Jim Daniel is not available to sign the RO sheet.

Should you have any questions and/or comments concerning this submittal or require additional information, please contact me at 352-799-6088, ext 104, email – gtownsend@cemexusa.com.

Respectfully,


George Townsend
Environmental Manager

pc: James S. Daniel, Cement Plant Manager
Steven L. Bassler, Production Manager
Mara Nasca, FDEP
Rhonda Hughes, FDEP
Nedin Bahtic, FDEP