

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 092016 - 009      Project Number: 2015-11-033  
Installation Number: 186-0044

Parent Company: LafargeHolcim (US) Inc.

Parent Company Address: 8700 West Bryn Mawr Avenue, Chicago, IL 60631

Installation Name: Holcim (US) Inc. - Ste. Genevieve Plant

Installation Address: 2942 US Highway 61, Bloomsdale, MO 63627

Location Information: Ste. Genevieve County, S9/10, T39N, R7E

Application for Authority to Construct was made for:

Reconstruction of the existing clinker cooler to increase production. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

  
Prepared by  
Chia-Wei Young  
New Source Review Unit

  
Director or Designee  
Department of Natural Resources

SEP 13 2016

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:  
Missouri Department of Natural Resources  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102-0176  
(573) 751-4817

The regional office information can be found at the following website:  
<http://dnr.mo.gov/regions/>

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Holcim (US) Inc. - Ste. Genevieve Plant  
Ste. Genevieve County, S9/10, T39N, R7E

1. Nitrogen Oxide (NO<sub>x</sub>) Emission Limits
  - A. Holcim (US) Inc. – Ste. Genevieve Plant shall emit less than 3,160.0 tons of NO<sub>x</sub> per consecutive twelve (12) months from the entire installation.
  - B. Holcim (US) Inc. – Ste. Genevieve Plant shall track the NO<sub>x</sub> emissions from the entire installation to show compliance with Special Condition 1.A. Attachment A, or equivalent forms, shall be used for this purpose. For the equivalent forms, the same calculation method (i.e. emission factors, formulas, etc.) from Attachment A shall be used.
2. Record Retention and Stack Testing Requirements
  - A. Holcim (US) Inc. – Ste. Genevieve Plant shall maintain all records required as outlined in 40 CFR 52.21 supporting the findings of the actual-to-projected-actual applicability test used in this project. Records shall be kept for all regulated NSR pollutant, as listed in 40 CFR 52.21(b)(23), with the exception of NO<sub>x</sub>, which shall be tracked in accordance with Special Condition 1. Post-change emissions must be tracked for a five-year period.
  - B. Holcim (US) Inc. – Ste. Genevieve Plant shall report to the Missouri Air Pollution Control Program if the annual emissions, in tons per year, from the project exceed the baseline actual emissions by a significant amount for that regulated NSR pollutant, as defined in 40 CFR 52.21(b)(23). Such report shall be submitted within 60 days after the end of such year. The report shall contain, at a minimum, the following:
    - 1) The name, address, and telephone number of the major stationary source;
    - 2) The plant-wide annual emissions and annual emission increases attributable to this project; and
    - 3) An explanation as to why the emissions differ from the preconstruction projection.

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

- C. Holcim (US) Inc. – Ste. Genevieve Plant shall conduct performance testing to determine the PM<sub>2.5</sub> emissions from the coal mill stack (L61/62-BF1) and the main kiln stack (421/422-BF1) for use in compliance with Special Condition 2.A.
- D. The tests shall be performed no later than 180 days after the startup of the reconstructed clinker cooler. Subsequent performance testing is required once every five (5) years.
- E. Any required performance testing shall be conducted during periods of representative conditions and should also be conducted within 90% capacity, not to include periods of start-up, shutdown, or malfunction. For the main kiln stack (421/422-BF1), the installation operates two separate raw mills. Therefore, stack testing shall be performed for three scenarios: both raw mills on, both raw mills off, and one raw mill on. If a new performance test is conducted at a production rate which is less than 90% of the maximum rated capacity of the equipment, then ten percent (10%) above the production rate at which the performance test was conducted shall become the new maximum allowable hourly production rate for the unit.
- F. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program's Compliance/Enforcement Section at least 30 days prior to the proposed test date of any such performance tests so that a pretest meeting may be arranged, if necessary, and to assure that the test date is acceptable for an observer to be present. The Proposed Test Plan must include specification of test methods to be used and be approved by the Director prior to conducting the above-required emissions testing.
- G. One electronic and one written report of the performance test results must be submitted to the Air Pollution Control Program's Compliance Section within 90 days of completion of the performance testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required Environmental Protection Agency (EPA) Method for at least one (1) sample run for each air pollutant tested.
- H. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

3. Record Keeping and Reporting Requirements
  - A. Holcim (US) Inc. - Ste. Genevieve Plant shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request. These records shall include SDS for all materials for which SDS is required.
  - B. Holcim (US) Inc. - Ste. Genevieve Plant shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2015-11-033  
Installation ID Number: 186-0044  
Permit Number:

Installation Address:

Holcim (US) Inc. - Ste. Genevieve Plant  
2942 US Highway 61  
Bloomsdale, MO 63627

Parent Company:

LafargeHolcim (US) Inc.  
8700 West Bryn Mawr Avenue  
Chicago, IL 60631

Ste. Genevieve County, S9/10, T39N, R7E

REVIEW SUMMARY

- Holcim (US) Inc. - Ste. Genevieve Plant has applied for authority to reconstruct a portion of the existing clinker cooler to enable the cooler to achieve its maximum permitted production.
- The application was deemed complete on November 12, 2015.
- HAP emissions are expected from the project. HAPs of concern from this process include dioxins/furans, chlorine, hydrogen chloride, and compounds of lead, beryllium, mercury, arsenic, cadmium, chromium, manganese, and selenium.
- The following NSPS applies to equipment at the installation.
  - 40 CFR 60 Subpart F, "Standards of Performance for Portland Cement Plants"
  - 40 CFR Part 60, Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984"
  - 40 CFR Part 60, Subpart Y, "Standards of Performance for Coal Preparation Plants"
  - 40 CFR Part 60, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants"
- None of the NESHAPs apply to this installation.
- 40 CFR Part 63, Subpart LLL, "National Emission Standards for the Portland Cement Manufacturing Industry," of the MACT applies to the equipment at this installation.

- The control technologies being used at this installation include inherent dry scrubbing, no alkali bypass, raw feed sulfur reduction, and a lime spray drying system when the raw mills are not in operation for SO<sub>2</sub>; multi-staged combustion for NO<sub>x</sub>; selective quarrying and good combustion practices for CO and VOC; baghouses for point source particulate emissions; and enclosures, road paving, water and/or surfactant spraying for fugitive particulate emissions.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of NO<sub>x</sub> are conditioned below de minimis levels.
- This installation is located in Ste. Genevieve County, an attainment area for all criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as item number 3, Portland cement plants. The installation's major source level is 100 tons per year and fugitive emissions are counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are conditioned below de minimis levels.
- Emissions testing is required for the coal mill stack (L61/62-BF1), main kiln stack (421/422-BF1), and the clinker cooler stack (471-BF1) as a part of this permit.
- A Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

Holcim (US) Inc. owns and operates a Portland cement manufacturing installation in Ste. Genevieve. To manufacture Portland cement, raw material such as calcium, silica, alumina, and iron are sized, ground, and blended before being processed in the kiln system where they are physically and chemically transformed into cement clinker, the intermediate product of Portland cement. The permitted capacity of the plant is 4,828,074 tons of clinker per year. In the kiln system, the raw materials are exposed to temperatures reaching up to 3,500 °F through a countercurrent process in the kiln and a co-current process in the preheater. The clinkers are then further ground, mixed with additives, and processed into Portland cement.

The installation is a major source under construction permits and a Part 70 source for operating permits. The following New Source Review permits have been issued to Holcim (US) Inc. - Ste. Genevieve Plant from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
062004-005	Portland cement manufacturing plant.
022001-006T	Temporary rock crushing operation.
062004-005A	As-built changes to permit 062004-005.
032009-016	Temporary crusher and screen.
062004-005B	Changes to permit 062004-005.
062004-005C	Amendment to Permit 062004-005 for the removal of road hours.
102011-012	Track-mounted crusher.
012013-005	Barge loading.
082013-005	Dust collection upgrade.
052014-002	Temporary permit for lime injection equipment test.
062004-005D	Sorbent injection

## PROJECT DESCRIPTION

The clinker cooler was first operational in July of 2009. The existing cooler supplier guaranteed that there would be no more than 48 hours of unplanned cooler downtime per year, beyond normal cooler maintenance. However, the average annual unplanned downtime in 2013 and 2014 due to mechanical failure was 227 hours. Holcim (US) Inc. proposes to reconstruct the clinker cooler to eliminate the downtime due to mechanical failure. Specifically, Holcim plans to replace the existing cross bar cooler and modify the clinker inlet distribution system. The reconstruction will allow the facility to increase its cement production up to previously permitted levels. This project will affect other emission units at the facility because their hours of operation will be increased as well.

Furthermore, during the review for this project, it was determined that the list of baghouses and their associated equipment given in Permit No. 062004-005C is not accurate. Therefore, an updated baghouse and associated equipment list is given in Appendix A at the end of this permit.

## EMISSIONS/CONTROLS EVALUATION

Emissions from the project were calculated using the potential emissions of the effected equipment minus the baseline actual emissions from 2013/2014. The portions of the emissions that the facility could have accommodated (2,281 hours) unrelated to this project were also subtracted from the potential emissions of the project. Essentially, the project emissions are the emissions from operating the entire facility for 227 hours, which is the amount of downtime before the cooler reconstruction. Particulate emissions were calculated from a combination of the BACT emissions limit from Permit 062004-005, MACT emissions limit, emission factors from EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, and stack testing results. Combustion emissions, including SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO, from the kiln and the coal/petcoke grinding were calculated from CEMs data. Individual HAPs emissions



were calculated using emission factors derived from mass balances divided by the amount of clinkers produced per year.

The following table provides an emissions summary for this project. Emissions of NO<sub>x</sub> from the project are greater than the insignificance level of 40 tpy and the facility accepted a 40 tpy increase limit for NO<sub>x</sub> to avoid PSD. Existing potential emissions were taken from Permit 082013-005 Existing actual emissions were taken from the

installation's 2015 EIQ. The new installation potential takes into account the 40 tpy NO<sub>x</sub> emissions increase allowed under this project.

Table 2: Emissions Summary (tpy)

Pollutant	<sup>1</sup> Regulatory <i>De Minimis</i> Levels/SMAL	Existing Potential Emissions	Existing Actual Emissions (2015 EIQ)	Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	963.1	N/D	18.30	N/A
PM <sub>10</sub>	15.0	963.1	303.41	13.49	N/A
PM <sub>2.5</sub>	10.0	347.4	199.75	9.58	N/A
SO <sub>x</sub>	40.0	3,041	627.83	19.26	N/A
NO <sub>x</sub>	40.0	5,755	2864.56	104.04	<sup>2</sup> <3,160
VOC	40.0	798	293.71	12.05	N/A
CO	100.0	14,488	1128.80	41.80	N/A
GHG (CO <sub>2</sub> e)	100,000	N/D	N/D	<sup>3</sup> 116,720	N/A
GHG (mass)	100.0	N/D	N/D	<sup>3</sup> 116,500	N/A
HAPs	10.0/25.0	125.8	32.49	2.94	N/A
Acetaldehyde	9	N/D	N/D	0.77	N/A
Antimony	5	N/D	N/D	0.00006	N/A
Arsenic	0.005	N/D	N/D	0.00004	N/A
Benzene	2	N/D	N/D	0.60	N/A
Beryllium	0.006	N/D	N/D	2.3 x 10 <sup>-6</sup>	N/A
Cadmium	0.1	N/D	N/D	0.00002	N/A
Chromium	5	N/D	N/D	0.00063	N/A
Cobalt	0.1	N/D	N/D	0.00002	N/A
Formaldehyde	2	N/D	N/D	0.90	N/A
Hydrochloric Acid	10	N/D	N/D	0.18	N/A
Xylene	10	N/D	N/D	0.11	N/A
Lead	0.6/0.01	N/D	N/D	0.00008	N/A
Manganese	0.8	N/D	N/D	0.00073	N/A
Mercury	0.01	N/D	N/D	0.0025	N/A
Naphthalene	10	N/D	N/D	0.091	N/A
Nickel	1	N/D	N/D	0.00036	N/A
Selenium	0.1	N/D	N/D	0.00058	N/A

Styrene	1	N/D	N/D	0.10	N/A
Toluene	10	N/D	N/D	0.18	N/A

N/A = Not Applicable; N/D = Not Determined

Note 1: For the individual HAP emissions except lead, the number listed is SMAL. For the lead, the 0.6 tpy is the de minimis level and 0.01 tpy is the SMAL. For all other emissions, the number listed is the de minimis level.

Note 2: NO<sub>x</sub> conditioned potential calculated by adding 40 tpy increase from this project to the baseline actual emissions, which is 3,120 tpy.

Note 3: GHG-Mass and GHG-CO<sub>2</sub>e are both greater than their respective significant levels. However, in 2014, the U.S. Supreme Court issued a decision in *Utility Air Regulatory Group (UARG) vs EPA* stating that PSD permitting will no longer be required if GHG are the only pollutants that have a significant emissions increase.

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels.

## APPLICABLE REQUIREMENTS

Holcim (US) Inc. - Ste. Genevieve Plant shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
  - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

## SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070
  - *Standards of Performance for Portland Cement Plants*, 40 CFR Part 60, Subpart F
  - *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum liquid Storage Vessels) for Which Construction Reconstruction, or Modification Commenced After July 23, 1984*, 40 CFR Part 60, Subpart Kb
  - *Standards of Performance for Coal Preparation Plants*, 40 CFR Part 60, Subpart Y
  - *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 CFR Part 60, Subpart OOO
- *MACT Regulations*, 10 CSR 10-6.075
  - *National Emission Standards for the Portland Cement Manufacturing Industry*, 40 CFR Part 63, Subpart LLL
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260, and *Control of Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261
  - 10 CSR 10-6.260 was rescinded on November 30, 2015 and replaced by 10 CSR 10-6.261 in the Code of State Regulations. However, it has not yet been removed from Missouri State Implementation Plan (SIP) and as such, still remains an enforceable regulation if applicable.
  - 10 CSR 10-6.260 does not apply to emission sources subject to an applicable sulfur compound emission limit under 10 CSR 10-6.070 or if the equipment uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 or liquefied petroleum gas as defined by ASTM, or any combination of these fuels.
  - 10 CSR 10-6.261 does not apply to emission sources subject to a more restrictive sulfur compound emission or content limit under 10 CSR 10-6.070 or any other federally enforceable permit, if the equipment uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 or liquefied petroleum gas as defined by ASTM, or any combination of these fuels, or if the rated capacity for an individual indirect heating unit is less than or equal to 0.35 MMBtu/hr.

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 5, 2015, received November 12, 2015, designating LafargeHolcim (US) Inc. as the owner and operator of the installation.
  - E-mails and draft responses from LafargeHolcim (US) Inc. submitted during the review of this project.

## Attachment A – NO<sub>x</sub> Compliance Worksheet

Holcim (US) Inc. - Ste. Genevieve Plant  
 Ste. Genevieve County, S9/10, T39N, R7E  
 Project Number: 2015-11-033  
 Installation ID Number: 186-0044  
 Permit Number:

This sheet covers the month of \_\_\_\_\_ in the year \_\_\_\_\_.

Kiln (461-01)			
	Monthly Production (tons)	<sup>1</sup> Emission Factor (lb/ton)	<sup>2</sup> NO <sub>x</sub> Emissions (tons)
Coal/Petcoke Grinding 2 (L62-07)			
	Monthly Throughput (tons)	<sup>1</sup> Emission Factor (lb/ton)	<sup>2</sup> NO <sub>x</sub> Emissions (tons)
Coal/Petcoke Grinding 1 (L61-08)			
	Monthly Throughput (tons)	<sup>1</sup> Emission Factor (lb/ton)	<sup>2</sup> NO <sub>x</sub> Emissions (tons)
Cement Mill Heaters #1, #2, #3, and #4 (561-HG1, 562-HG1, 563-HG1, 564-HG1)			
	Monthly Throughput (MMBtu)	<sup>1</sup> Emission Factor (lb/MMBtu)	<sup>2</sup> NO <sub>x</sub> Emissions (tons)
		0.225 lb/MMBtu	
		0.225 lb/MMBtu	
Emergency Generators (M51-PU1, M51-PU2, E31-EG1, E31-EG2, E31-EG3, E31-EG4)			
	Monthly Throughput (MMBtu)	<sup>1</sup> Emission Factor (lb/MMBtu)	<sup>2</sup> NO <sub>x</sub> Emissions (tons)
Engines ≤ 600 hp		4.41	
Engines > 600 hp		3.2	
<b><sup>3</sup>Total NO<sub>x</sub> Emissions This Month (tons):</b>			
<b><sup>4</sup>Total NO<sub>x</sub> Emissions from the Last 12 Months (tons):</b>			
<b><sup>5</sup>Total NO<sub>x</sub> Emission Same Month Last Year (tons):</b>			
<b>Total NO<sub>x</sub> Emissions for the Current 12-Month Period (tons):</b>			

Note 1: Emission factor for the Kiln (461-01) and the Coal/Petcoke Grinding 1 and 2 (L62-07 and L61-08) shall be taken from the NO<sub>x</sub> CEMS based on the monthly average. For the Cement Mill Heaters, emission factors shall be from mass balances. For the emergency generators, emission factors can be obtained from the proper chapters of EPA document AP-42 or stack testing data. In AP-42, the emission factor for engines with horsepower 600 or below is 4.41 lb/MMBtu. The emission factor for engines with horsepower greater than 600 is 3.2 lb/MMBtu.

Note 2: Emissions calculated using [Monthly Production/Throughput (tons or MMBtu)] x [Emission Factor (lb/ton or lb/MMBtu)] ÷ 2,000 lb/ton.

Note 3: Sum of the NO<sub>x</sub> emissions from each emission point.

Note 4: Taken from the previous month's Attachment A.

Note 5: Monthly NO<sub>x</sub> emission (tons) taken from Attachment A of the same month last year.

Note 6: NO<sub>x</sub> emissions from the current 12-month period calculated using [Total NO<sub>x</sub> Emissions from the Last 12 Months (tons)] – [Total NO<sub>x</sub> Emissions of the Same Month Last Year (tons) (ton)] + [Total NO<sub>x</sub> Emissions This Month (tons)]. A total less than **3,160.0 tons per year** shows compliance.

<b>Appendix A: Fabric Filter Listing</b>			
<b>EP</b>	<b>Emission Units</b>	<b>Fabric Filter</b>	<b>Description</b>
<b>211 Limestone Crushing</b>			
211-BF1	211-03	211-BF1	Transfer from Gyratory Crusher (GC1) to AF1
	211-04		Transfer from AF1 to BC1
211-BF2	211-04	211-BF2	Transfer from BF1 to BC1
	211-05		Transfer from BC1 to VS1
	211-06		Transfer from VS1 to 291-BC2
	211-07		Transfer from VS1 to CZ1
	211-08		Transfer from BF2 to 291-BC2
	211-09		Transfer from CZ1 to 291-BC2
211-BF3	211-10	211-BF3	Transfer from BF3 to 291-BC2
	211-11		Vibrating Screen VS1
	211-12		Crusher CZ1
<b>291 Limestone Transport &amp; Storage</b>			
291-BF1	291-01	291-BF1	Transfer from BC2 to MS1
	291-02		Transfer from MS1 to X11-BC3
	291-03		Transfer from MS1 to BC3
	291-04		Transfer from BF1 to BC3
<b>31A Limestone Reclaiming and Transport</b>			
RCTun	31A-01	31A-BF1	Transfer from RE1 to VF1
	31A-04		Transfer from BF1 to BC1
RCTun	31A-02	31A-BF2	Transfer from RE1 to BC1
	31A-05		Transfer from BF2 to BC1
RCTun	31A-03	31A-BF3	Transfer from VF1 to BC1
	31A-06		Transfer from BF3 to BC1
31A-BF4	31A-07	31A-BF4	Transfer from BC1 to BI5
	31A-08		Transfer from BF4 to BI5
<b>X14 Additive/Corrective/Fuel Truck/Rail Unloading and Handling</b>			
X14-BF1	X14-01	X14-BF1	Transfer from rail car or truck to HP1
	X14-02		Transfer from HP1 to AF1
	X14-04		Transfer from BF1 to SC1
	X14-05		Transfer from BF2 to SC1
	X14-06		Transfer from SC1 to BC1
X14-BF2	X14-03	X14-BF2	Transfer from AF1 to BC1
X11-BF6	X14-07	X11-BF6	Transfer from BC2 to X11-BC6
<b>X11 Additive/Corrective/Fuel Barge Unloading and Transport</b>			
X11-BF6	X11-05	X11-BF6	Transfer from BC5 to BC6
	X11-06		Transfer from BF6 to BC6
X11-BF7	X11-07	X11-BF7	Transfer from BC6 to BC7
	X11-08		Transfer from BF7 to BC7
<b>X12 Fly Ash Barge Unloading and Transport</b>			
X12-BF1	X12-01	X12-BF1	Transfer from PL1 to fly ash bin BI1
	X12-02		Transfer from PLA to fly ash bin BI1
	X12-03		Transfer from PLB to fly ash bin BI1
	X12-04		Transfer from PL1 to fly ash bin BI2
	X12-05		Transfer from PL1 to fly ash bin BI3

EP	Emission Units	Filter	Description
<b>X12 Fly Ash Barge Unloading and Transport Continued</b>			
X12-BF1	X12-06	X12-BF1	Transfer from PLC to fly ash bin BI3
	X12-07		Transfer from PLD to fly ash bin BI3
	X12-08		Transfer from PL1 to fly ash bin BI4
<b>32A Correctives Reclaiming and Transport</b>			
31A-BF1	32A-01	31A-BF1	Transfer from Pile to RE1
31A-BF2	32A-02	31A-BF2	Transfer from Pile to RE2
31A-BF3	32A-03	31A-BF3	Transfer from RE1 to BC1
31A-BF4	32A-04	31A-BF4	Transfer from RE2 to BC1
32A-BF1	32A-05	32A-BF1	Transfer from BF1 to BC1
	32A-06		Transfer from BC1 to BC2
31A-BF4	32A-11	31A-BF4	Transfer from BC3 to Mill Scale Bin BI1
32A-BF2	32A-10	32A-BF2	Transfer from BC2 to BC3
	32A-12		Transfer from BC3 to Diaspore Bin BI2
	32A-13		Transfer from BC3 to Sand Bin BI4
	32A-14		Transfer from BF2 to Sand Bin BI4
	32A-15		Transfer from BC3 to BI3
<b>52A Transport to Feed Bin</b>			
52A-BF1	52A-03	52A-BF1	Transfer from BC1 to BC2
	52A-04		Transfer from BF1 to BC2
52A-BF2	52A-05	52A-BF2	Transfer from BC2 to BC3
	52A-06		Transfer from BF2 to BC3
531-BF1	52A-07	531-BF1	Transfer from BC3 to 521-3B2
532-BF1	52A-08	532-BF1	Transfer from BC3 to 522-3B2
533-BF1	52A-09	533-BF1	Transfer from BC3 to 523-3B2
534-BF1	52A-10	534-BF1	Transfer from BC3 to 524-3B2
<b>33A Raw Mill Feed</b>			
31A-BF4	33A-01	31A-BF4	Transfer from AW5 to BC1
	33A-02		Transfer from WF1 to BC1
33A-BF1	33A-03	33A-BF1	Transfer from WF3 to BC1
	33A-04		Transfer from WF2 to BC1
	33A-05		Transfer from WF4 to BC1
	33A-06		Transfer from BF1 to BC1
33A-BF3	33A-07	33A-BF3	Transfer from BF3 to BC1
331-BF1	33A-08	331-BF1	Transfer from BC1 to MW1
	33A-09		Transfer from MW1 to 331-BC1
332-BF1	33A-10	332-BF1	Transfer from MW1 to 332-BC1
<b>32B Fly Ash Silo Withdrawal</b>			
32B-BF1	32B-01	32B-BF1	Transfer from AS1 to BI1
	32B-02		Transfer from BF1 to SC1
	32B-03		Transfer from SC1 to VA1
33B-BF1	32B-04	33B-BF1	Transfer from AS2 to BI2
33B-BF2	32B-05	33B-BF2	Transfer from AS3 to BI3
32B-BF2	32B-06	32B-BF2	Transfer from AS4 to BI4
	32B-07		Transfer from BF2 to SC2
	32B-08		Transfer from SC2 to MW2
	32B-09		Transfer from MW2 to VA1

EP	Emission Units	Filter	Description
<b>32B Fly Ash Silo Withdrawal Continued</b>			
32B-BF2	32B-10	32B-BF2	Transfer from VA1 to 33D-AS1
<b>33B Fly Ash Feed to Raw Mill 1</b>			
32B-BF1	33B-01	32B-BF1	Transfer from 32B-BI1 to AS1
33B-BF1	33B-02	33B-BF1	Transfer from 32B-BI2 to AS2
	33B-03		Transfer from BF1 to VA1
	33B-09		Transfer from VA1 to 361-SG1
33B-BF1	33B-04	33B-BF1	Transfer from AS1 and AS2 to VA1
33B-BF2	33B-05	33B-BF2	Transfer from 32B-BI3 to 33C-AS1
	33B-06		Transfer from BF2 to 33C-AS1
32B-BF2	33B-07	32B-BF2	Transfer from MW4 to 33C-AS2
	33B-08		Transfer from MW4 to 33D-AS2
33A-BF3	33B-10	33A-BF3	Transfer from VA1 to 33A-BC1
<b>33C Fly Ash Feed to Raw Mill 2</b>			
33B-BF2	33C-01	33B-BF2	Transfer from AS1 and AS2 to VA1
	33C-02		Transfer from VA1 to 362 SG1
<b>33D Fly Ash Feed to Calciner</b>			
32B-BF2	33D-01	32B-BF2	Transfer from AS1 to VA1
	33D-02		Transfer from VA1 to calciner (451-PR1)
<b>331 Raw Mill Feed 1</b>			
331-BF1	331-01	331-BF1	Transfer from BC1 to BI1
	331-02		Transfer from BI1 to AF1
	331-03		Transfer from BF1 to BI1
	331-04		Transfer from AF1 to BC2
	331-05		Transfer from BC2 to MW1
421-BF1	331-06	421-BF1	Transfer from MW1 to 361-RM1
<b>361 Raw Mill 1</b>			
361-BFA	361-02	361-BFA	Transfer from BC1 to BE1
	361-03		Transfer from BFA to BE1
	361-04		Transfer from BI1 to BC2
	361-05		Transfer from BC2 to BC3
	361-06		Transfer from BC3 to BC1
421-BF1	361-01	421-BF1	Transfer from RM1 to BC1
	361-07		Transfer from RM1 to CN1
	361-08		Transfer from RM1 to CN2
	361-09		Transfer from RM1 to CN3
	361-10		Transfer from RM1 to CN4
	361-11		Transfer from CN1 to 391-AS1
	361-12		Transfer from CN2 to 391-AS1
	361-13		Transfer from CN3 to 391-AS2
	361-14		Transfer from CN4 to 391-AS2
	361-15		Raw Mill 1
<b>332 Raw Mill Feed 2</b>			
332-BF1	332-01	332-BF1	Transfer from BC1 to BI1
	332-02		Transfer from BI1 to AF1
	332-03		Transfer from BF1 to BI1



EP	Emission Units	Filter	Description
<b>332 Raw Mill Feed 2 Continued</b>			
	332-04		Transfer from AF1 to BC2
	332-05		Transfer from BC2 to MW1
422-BF1	332-06	422-BF1	Transfer from MW1 to RM1
<b>362 Raw Mill 2</b>			
362-BFA	362-02	362-BFA	Transfer from BC1 to BE1
	362-03		Transfer from BFA to BE1
	362-04		Transfer from BI1 to BC2
	362-05		Transfer from BC2 to BC3
	362-06		Transfer from BC3 to BC1
422-BF1	362-01	422-BF1	Transfer from RM1 to BC1
	362-07		Transfer from RM1 to CN1
	362-08		Transfer from RM1 to CN2
	362-09		Transfer from RM1 to CN3
	362-10		Transfer from RM1 to CN4
	362-11		Transfer from CN1 to 392-AS1
	362-12		Transfer from CN2 to 392-AS1
	362-13		Transfer from CN3 to 392-AS2
	362-14		Transfer from CN4 to 392-AS2
	362-15		Raw Mill 2
<b>391 Raw Meal Transport 1</b>			
391-BFA	391-01	391-BFA	Transfer from AS1 to AS3
	391-02		Transfer from AS2 to AS3
	391-03		Transfer from BFA to AS3
391-BFB	391-04	391-BFB	Transfer from AS3 to AS4
	391-05		Transfer from BFB to AS4
	391-06		Transfer from AS4 to BE1
	391-07		Transfer from AS4 to 392-BE1
391-BFC	391-08	391-BFC	Transfer from BE1 to AS5
	391-09		Transfer from AS5 to AS6
	391-10		Transfer from AS6 to 3S1
	391-11		Transfer from 392-AS6 to 392-3S1
	391-12		Transfer from SQ1 to 411-3B1
	391-13		Blending Silo
<b>411 Raw Meal Transport to Kiln Feed 1</b>			
432-BFA	411-01	432-BFA	Transfer from AS1 to 432-BI1
<b>392 Raw Meal Transport 2</b>			
392-BFA	392-01	392-BFA	Transfer from AS1 to AS3
	392-02		Transfer from AS2 to AS3
	392-03		Transfer from BFA to AS3
392-BFB	392-04	392-BFB	Transfer from AS3 to AS4
	392-05		Transfer from BFB to AS4
	392-06		Transfer from AS4 to BE1
	392-07		Transfer from AS4 to 391-BE1
392-BFC	392-08	392-BFC	Transfer from BE1 to AS5
	392-09		Transfer from AS5 to 391-AS5
	392-10		Transfer from SQ1 to 412-3B1

EP	Emission Units	Filter	Description
<b>392 Raw Meal Transport 2 Continued</b>			
392-BFC	392-11	392-BFC	Blending Silo
<b>412 Raw Meal Transport to Kiln Feed 2</b>			
431-BFA	412-01	431-BFA	Transfer from AS1 to 431-BI1
<b>421 Dedusting of Kiln System 1</b>			
421/2-BF1	421-01	421-BF1 , 422-BF1	Transfer from 361 CN1-4 to SC8
	421-02		Transfer from BF1 to SC2
	421-03		Transfer from BF1 to SC2
	421-04		Transfer from BF1 to SC2
	421-05		Transfer from BF1 to SC2
	421-06		Transfer from BF1 to SC2
	421-07		Transfer from BF1 to SC1
	421-08		Transfer from BF1 to SC1
	421-09		Transfer from BF1 to SC1
	421-10		Transfer from BF1 to SC1
	421-11		Transfer from BF1 to SC1
	421-12		Transfer from SC1 to SC 3
	421-13		Transfer from SC2 to SC 3
	421-14		Transfer from SC8 to SC 3
	421-15		Transfer from SC3 to SC 4
	421-16		Transfer from SC4 to SC 5
	421-17		Transfer from SC5 to SC 6
391-BFB	421-18	391-BFB	Transfer from SC6 to 391-BE1
421-BF2	421-19	421-BF2	Transfer from SC6 to BE1
	421-20		Transfer from BE1 to AS1
	421-21		Transfer from BF2 to AS1
431-BFA	421-22	431-BFA	Transfer from AS2 to 431 Bin
<b>422 Dedusting of Kiln System 2</b>			
421/2-BF1	422-01	421-BF1, 422-BF1	Transfer from 362 CN1-4 to SC8
	422-02		Transfer from BF1 to SC2
	422-03		Transfer from BF1 to SC2
	422-04		Transfer from BF1 to SC2
	422-05		Transfer from BF1 to SC2
	422-06		Transfer from BF1 to SC2
	422-07		Transfer from BF1 to SC1
	422-08		Transfer from BF1 to SC1
	422-09		Transfer from BF1 to SC1
	422-10		Transfer from BF1 to SC1
	422-11		Transfer from BF1 to SC1
	422-12		Transfer from SC2 to SC 3
	422-13		Transfer from SC1 to SC 3
	422-14		Transfer from SC8 to SC 3
	422-15		Transfer from SC3 to SC 4
	422-16		Transfer from SC4 to SC 5
	422-17		Transfer from SC5 to SC 6
391-BFB	422-18	391-BFB	Transfer from SC6 to 392-BE1

EP	Emission Units	Filter	Description
<b>422 Dedusting of Kiln System 2 Continued</b>			
421-BF2	422-19	421-BF2	Transfer from SC6 to 421-BE1
<b>431 Kiln Feed 1</b>			
431-BFA	431-01	431-BFA	Transfer from BI1 to AS1
	431-02		Transfer from BI1 to PF1
	431-03		Transfer from PF1 to AS1
	431-04		Transfer from BFA to AS1
	431-05		Transfer from AS1 to ASA/AS2
431-BFC	431-06	431-BFC	Transfer from ASA to 432-BE1
	431-07		Transfer from AS2 to BE1
	431-08		Transfer from BFC to BE1
	431-09		Transfer from BFC to 432-BE1
431-BFB	431-10	431-BFB	Transfer from BE1 to AS3
	431-11		Transfer from BFB to AS3
	431-12		Transfer from AS3 to AS4
	431-15		Transfer from AS3 to kiln PH1
	431-16		Transfer from AS3 to kiln PH1
	431-17		Transfer from AS3 to kiln PH1
391-BFC	431-13	391-BFC	Transfer from AS4 to 391-AS5
432-BFB	431-14	432-BFB	Transfer from AS3 to 432-AS3
<b>432 Kiln Feed 2</b>			
432-BFA	432-01	432-BFA	Transfer from BI1 to AS1
	432-02		Transfer from BI1 to PF1
	432-03		Transfer from PF1 to AS1
	432-04		Transfer from BFA to AS1
	432-05		Transfer from AS1 to ASA/AS2
431-BFC	432-06	431-BFC	Transfer from ASA to 431-BE1
	432-07		Transfer from AS2 to BE1
432-BFB	432-08	432-BFB	Transfer from BE1 to AS3
	432-09		Transfer from BFB to AS3
	432-10		Transfer from AS3 to 431-AS4
	432-11		Transfer from AS3 to 431-AS3
	432-12		Transfer from AS3 to kiln PH1
	432-13		Transfer from AS3 to kiln PH1
	432-14		Transfer from AS3 to kiln PH1
<b>451 Precalcining</b>			
421/2-BF1	451-01	421-BF1, 422-BF1	All Calciner Transfer Points
<b>461 Kiln</b>			
421/2-BF1	461-01	421-BF1, 422-BF1	Kiln Hood KH1
<b>471 Clinker Cooler</b>			
471-BF1	471-01	471-BF1	Transfer from clinker cooler AQ1 to 491-SG1
	471-02		Transfer from clinker cooler to 491-SG2
	471-03		Transfer from RC1 to 491-PN1
	471-04		Transfer from RC1 to 491-PN2

EP	Emission Units	Filter	Description
<b>491 Clinker Transport &amp; Storage</b>			
471-BF1	491-01	471-BF1	Transfer from 471-BF1 to CV2
	491-02		Transfer from 471-BF1 to CV2
	491-03		Transfer from 471-BF1 to CV2
	491-04		Transfer from 471-BF1 to CV2
	491-05		Transfer from 471-BF1 to CV2
	491-06		Transfer from 471-BF1 to CV1
	491-07		Transfer from 471-BF1 to CV1
	491-08		Transfer from 471-BF1 to CV1
	491-09		Transfer from 471-BF1 to CV1
	491-10		Transfer from 471-BF1 to CV1
	491-11		Transfer from AQ1 to CV3
	491-12		Transfer from AQ1 to CV3
491-BF1	491-13	491-BF1	Transfer from BF1 to CV5
	491-14		Transfer from CV5 to PN1
	491-15		Transfer from CV5 to PN2
491-BF2	491-17	491-BF2	Transfer from BF2 to 3S3
	491-18		Transfer from PN1 to PN2
	491-19		Transfer from PN2 to FV3
	491-20		Transfer from FV3 to 3S3
	491-21		Transfer from Pan conveyors to MW2
	491-22		Transfer from MW2 to MW3
	491-23		Transfer from DG 2 to 3S3
	491-24		Transfer from DG 3 to PN4
491-BF3	491-26	491-BF3	Transfer from PN3 to 3S1
	491-16		Transfer from BF3 to 3S1
491-BF4	491-27	491-BF4	Transfer from PN4 to 3S2
	491-28		Transfer from BF4 to 3S2
<b>531 Clinker Transport to Mill Feed 1</b>			
531-BF1	531-01	531-BF1	Transfer from 3B1 to WF1
	531-02		Transfer from 3B2 to WF2
	531-03		Transfer from WF1, WF2 to PN1
	531-04		Transfer from BF1 to PN1
531-BF2	531-05	531-BF2	Transfer from PN1 to BC1
	531-06		Transfer from PN1 to BC1
	531-07		Transfer from BF2 to BC1
561-BFA	531-08	561-BFA	Transfer from BC1 to 561-BC3
491-BF2	531-09	491-BF2	Transfer from 491-3S1 to 531-PN1
	531-10		Transfer from 491-3S1 to 531-PN1
	531-11		Transfer from 491-3S1 to 531-PN1
	531-12		Transfer from 491-3S1 to 531-PN1
<b>532 Clinker Transport to Mill Feed 2</b>			
532-BF1	532-01	532-BF1	Transfer from 3B1 to WF1
	532-02		Transfer from 3B2 to WF2
	532-03		Transfer from WF1, WF2 to PN1
	532-04		Transfer from BF1 to PN1

EP	Emission Units	Filter	Description
<b>532 Clinker Transport to Mill Feed 2 Continued</b>			
532-BF2	532-05	532-BF2	Transfer from PN1 to BC1
	532-06		Transfer from PN1 to BC1
	532-07		Transfer from BF2 to BC1
562-BFA	532-08	562-BFA	Transfer from BC1 to 562-BC3
491-BF2	532-09	491-BF2	Transfer from 491-3S1 to 532-PN1
	532-10		Transfer from 491-3S1 to 532-PN1
	532-11		Transfer from 491-3S1 to 532-PN1
	532-12		Transfer from 491-3S1 to 532-PN1
	532-13		Transfer from 491-3S3 to 532-BC2
53 2-BF3	532-14	532-BF3	Transfer from BC2 to PN1
	532-15		Transfer from BF3 to PN1
<b>533 Clinker Transport to Mill Feed 3</b>			
533-BF1	533-01	533-BF1	Transfer from 3B1 to WF1
	533-02		Transfer from 3B2 to WF2
	533-03		Transfer from WF1, WF2 to PN1
	533-04		Transfer from BF1 to PN1
533-BF2	533-05	533-BF2	Transfer from PN1 to BC1
	533-06		Transfer from PN1 to BC1
	533-07		Transfer from BF2 to BC1
563-BFA	533-08	563-BFA	Transfer from BC1 to 563-BC3
491-BF2	533-09	491-BF2	Transfer from 491-3S2 to 533-PN1
	533-10		Transfer from 491-3S2 to 533-PN1
	533-11		Transfer from 491-3S2 to 533-PN1
	533-12		Transfer from 491-3S2 to 533-PN1
	533-13		Transfer from 491-3S3 to 533-BC2
533-BF3	533-14	533-BF3	Transfer from BC2 to PN1
	533-15		Transfer from BF3 to PN1
<b>534 Clinker Transport to Mill Feed 4</b>			
534-BF1	534-01	534-BF1	Transfer from 3B1 to WF1
	534-02		Transfer from 3B2 to WF2
	534-03		Transfer from WF1, WF2 to PN1
	534-04		Transfer from BF1 to PN1
534-BF2	534-05	534-BF2	Transfer from PN1 to BC1
	534-06		Transfer from PN1 to BC1
	534-07		Transfer from BF2 to BC1
564-BFA	534-08	564-BFA	Transfer from BC1 to 561-BC3
491-BF2	534-09	491-BF2	Transfer from 491-3S2 to 534-PN1
	534-10		Transfer from 491-3S2 to 534-PN1
	534-11		Transfer from 491-3S2 to 534-PN1
	534-12		Transfer from 491-3S2 to 534-PN1
<b>561 Cement Mill 1</b>			
561-BFA	561-01	561-BFA	Transfer from BE1 to BC3
	561-02		Transfer from BFA to SC1
	561-03		Transfer from SC1 to CH3
	561-04		Transfer from BC3 to MW1
	561-05		Transfer from MW1 to RM1
	561-06		Transfer from MW1 to BI1
	561-07		Transfer from BI1 to BC4
561-BFB	561-08	561-BFB	Transfer from BC4 to MW2

EP	Emission Units	Filter	Description
<b>561 Cement Mill 1 Continued</b>			
561-BFB	561-09	561-BFB	Transfer from MW2 to BC2
	561-10		Transfer from BC2 to BE1
	561-11		Transfer from BFB to BE1
561-BF1	561-12	561-BF1	RM1 Exhaust to BF1
	561-13		Transfer from RM1 to BC1
	561-14		Transfer from BC1 to BC2
	561-15		Transfer from RM1 to CN1
	561-16		Transfer from RM1 to CN2
	561-17		Transfer from CN1, CN2 to BF1
	561-18		Cement Mill #1
<b>562 Cement Mill 2</b>			
562-BFA	562-01	562-BFA	Transfer from BE1 to BC3
	562-02		Transfer from BFA to SC1
	562-03		Transfer from SC1 to CH3
	562-04		Transfer from BC3 to MW1
	562-05		Transfer from MW1 to RM1
	562-06		Transfer from MW1 to BI1
	562-07		Transfer from BI1 to BC4
562-BFB	562-08	562-BFB	Transfer from BC4 to MW2
	562-09		Transfer from MW2 to BC2
	562-10		Transfer from BC2 to BE1
	562-11		Transfer from BFB to BE1
562-BF1	562-12	562-BF1	Transfer from BC1 to BC2
	562-13		RM1 Exhaust to BF1
	562-15		Transfer from RM1 to BC1
	562-16		Transfer from RM1 to CN1
	562-17		Transfer from RM1 to CN2
	562-18		Transfer from CN1, CN2 to BF1
<b>563 Cement Mill 3</b>			
563-BFA	563-01	563-BFA	Cement Mill #2
	563-02		Transfer from BE1 to BC3
	563-03		Transfer from BFA to SC1
	563-04		Transfer from SC1 to CH3
	563-05		Transfer from BC3 to MW1
	563-06		Transfer from MW1 to RM1
	563-07		Transfer from MW1 to BI1
563-BFB	563-08	563-BFB	Transfer from BI1 to BC4
	563-09		Transfer from BC4 to MW2
	563-10		Transfer from MW2 to BC2
	563-11		Transfer from BC2 to BE1
563-BF1	563-12	563-BF1	Transfer from BFB to BE1
	563-13		Transfer from BC1 to BC2
	563-14		RM1 Exhaust to BF1
	563-15		Transfer from RM1 to BC1
			Transfer from RM1 to CN1

EP	Emission Units	Filter	Description
<b>563 Cement Mill 3 Continued</b>			
563-BF1	563-16	563-BF1	Transfer from RM1 to CN2
	563-17		Transfer from CN1, CN2 to BF1
	563-18		Cement Mill #3
<b>564 Cement Mill 4</b>			
564-BFA	564-01	564-BFA	Transfer from BE1 to BC3
	564-02		Transfer from BFA to SC1
	564-03		Transfer from SC1 to CH3
	564-04		Transfer from BC3 to MW1
	564-05		Transfer from MW1 to RM1
	564-06		Transfer from MW1 to BI1
	564-07		Transfer from BI1 to BC4
564-BFB	564-08	564-BFB	Transfer from BC4 to MW2
	564-09		Transfer from MW2 to BC2
	564-10		Transfer from BC2 to BE1
	564-11		Transfer from BFB to BE1
	564-14		Transfer from BC1 to BC2
564-BF1	564-12	564-BF1	RM1 Exhaust to BF1
	564-13		Transfer from RM1 to BC1
	564-15		Transfer from RM1 to CN1
	564-16		Transfer from RM1 to CN2
	564-17		Transfer from CN1, CN2 to BF1
	564-17		Cement Mill #4
<b>591 Cement Transport 1 to Silos</b>			
591-BFA	591-01	591-BFA	Transfer from 561-CN1 to AS1
	591-02		Transfer from 561-CN2 to AS1
	591-03		Transfer from 561-BF1 to AS1
	591-04		Transfer from AS1 to CQ1
	591-05		Transfer from AS1 to AS2
	591-06		Transfer from CQ1 to AS2
	591-07		Transfer from AS2 to AS3
	591-08		Transfer from AS3 to BE1
	591-09		Transfer from BE1 to AS4
	591-10		Transfer from BFA to BE1
591-BFB	591-11	591-BFB	Transfer from BFB to AS4
	591-12		Transfer from AS4 to BE2
591-BFC	591-13	591-BFC	Transfer from BE2 to AS5
	591-14		Transfer from BFC to AS5
591-BFD	591-15	591-BFD	Transfer from BFD to 593-AS8
	591-16		Transfer from BFD to 593-AS6
	591-17		Transfer from AS5 to AS8
	591-18		Transfer from AS5 to AS6
	591-19		Transfer from AS5 to DG
	591-20		Transfer from AS5 to 593-AS8
	591-21		Transfer from AS5 to 593-AS6
	591-22		Transfer from DG to 593-AS7

EP	Emission Units	Filter	Description
<b>591 Cement Transport 1 to Silos Continued</b>			
	591-23		Transfer from DG to AS7
59A-BF1	591-24	59A-BF1	Transfer from AS7 to 59A-3SC Silo top
	591-27		Transfer from 59A-BF1 to 59A-3SC Silo Top
	591-28		Transfer from AS8 to 59A-3S3 Silo top
	591-29		Transfer from AS8 to 59A-3S1 Silo top
59A-BF2	591-25	59A-BF2	Transfer from AS6 to 59A-3S5 Silo top
	591-26		Transfer from AS6 to 59A-3S7 Silo top
<b>592 Cement Transport 2 to Silos</b>			
591-BFA	592-01	591-BFA	Transfer from 562-CN1 to AS1
	592-02		Transfer from 562-CN2 to AS1
	592-03		Transfer from 562-BF1 to AS1
	592-04		Transfer from AS1 to AS2
	592-05		Transfer from AS1 to CQ1
	592-06		Transfer from CQ1 to AS2
	592-07		Transfer from AS2 to AS3
<b>593 Cement Transport 3 to Silos</b>			
593-BFA	593-01	593-BFA	Transfer from 563-CN1 to AS1
	593-02		Transfer from 563-CN2 to AS1
	593-03		Transfer from 563-BF1 to AS1
	593-04		Transfer from AS1 to CQ1
	593-05		Transfer from AS1 to AS2
	593-06		Transfer from CQ1 to AS2
	593-07		Transfer from AS2 to AS3
	593-08		Transfer from AS3 to BE1
	593-09		Transfer from BE1 to AS4
	593-10		Transfer from BFA to BE1
593-BFB	593-11	593-BFB	Transfer from BFB to AS4
	593-12		Transfer from AS4 to BE2
593-BFC	593-13	593-BFC	Transfer from BE2 to AS5
	593-14		Transfer from BFC to AS5
	593-15		Transfer from AS5 to 591-AS8
	593-16		Transfer from AS5 to 591-AS6
	593-17		Transfer from AS5 to DG
	593-18		Transfer from AS5 to AS8
	593-19		Transfer from AS5 to AS6
	593-20		Transfer from DG to AS7
59A-BF2	593-21	59A-BF2	Transfer from DG to 591-AS7
	593-22		Transfer from AS6 to 59A-3S6 Silo top
	593-23		Transfer from AS6 to 59A-3S8 Silo top
	593-24		Transfer from AS7 to 59A-3SD Silo top
	593-25		Transfer from AS8 to 59A-3S4 Silo top
	593-26		Transfer from AS8 to 59A-3S2 Silo top
	593-27		Transfer from 59A-BF2 to 59A-3SD Silo Top
<b>594 Cement Transport 4 to Silos</b>			
593-BFA	594-01	593-BFA	Transfer from 564-CN1 to AS1



EP	Emission Units	Filter	Description
<b>594 Cement Transport 4 to Silos Continued</b>			
	594-02		Transfer from 564-CN2 to AS1
	594-03		Transfer from 564-BF1 to AS1
	594-04		Transfer from AS1 to AS2
	594-05		Transfer from AS1 to CQ1
	594-06		Transfer from CQ1 to AS2
	594-07		Transfer from AS2 to AS3
<b>611 Cement Transport 1 to Loading</b>			
SiloVnt1	611-01	611-BF1	Transfer from AS1 to 61L-AS1
<b>612 Cement Transport 2 to Loading</b>			
SiloVnt2	612-01	612-BF1	Transfer from AS1 to AS2
	612-02		Transfer from AS2 to 61L-AS1
<b>621 Bulk Loading Road 1</b>			
SiloVnt1	621-01	611-BF1	Transfer from AS1 to AS2
SiloVnt1	621-03	621-BF1	Transfer from AS2 to AS4
	621-05		Transfer from BF1 to AS3
	621-06		Transfer from AS3 to 622-AS3
SiloVnt1	621-07	621-BF2	Retractable Bulk Cement truck Loading Spout LA1
SiloVnt2	621-02	622-BF1	Transfer from AS2 to AS3
	621-04		Transfer from 621-AS2 and 622-AS2 to 622-AS4
<b>622 Bulk Loading Road 2</b>			
SiloVnt1	622-01	621-BF1	Transfer from AS1 to AS2
	622-03		Transfer from AS2 to AS3
SiloVnt2	622-02	622-BF1	Transfer from AS2 to AS4
	622-05		Transfer from BF1 to AS4
SiloVnt2	622-04	622-BF2	Retractable Bulk Cement truck Loading Spout LA1
<b>613 Cement Transport 3 to loading</b>			
SiloVnt3	613-01	613-BF1	Transfer from BI1 to AS1
	613-02		Transfer from AS1 to 61L-AS1
<b>61C Cement Transport C to Loading</b>			
61L-BFA	61C-01	61L-BFA	Transfer from AS1 to 61L-AS1
SiloVnt2	61C-02	622-BF1	Transfer from AS2 to AS3
	61C-03		Transfer from AS3 to 621-AS3
<b>614 Cement Transport 4 to Loading</b>			
SiloVnt4	614-01	614-BF1	Transfer from BI1 to 61L-AS1
<b>615 Cement Transport 5 to Loading</b>			
SiloVnt5	615-01	615-BF1	Transfer from BI1 to AS1
	615-02		Transfer from AS1 to 61L-AS2
<b>616 Cement Transport 6 to Loading</b>			
SiloVnt6	616-01	616-BF1	Transfer from BI1 to 61L-AS2
<b>617 Cement Transport 7 to Loading</b>			
SiloVnt7	617-01	617-BF1	Transfer from BI1 to 61L-AS2

EP	Emission Units	Filter	Description
<b>618 Cement Transport 8 to Loading</b>			
SiloVnt8	618-01	618-BF1	Transfer from BI1 to AS1
	618-02		Transfer from AS1 to 61L-AS2
<b>61D Cement Transport D to Loading</b>			
61L-BFB	61D-01	61L-BFB	Transfer from BI1 to 61L-AS2
<b>61L Cement Transport L to Loading</b>			
61L-BFA	61L-01	61L-BFA	Transfer from BFA to AS1
	61L-02		Transfer from AS1 to AS3
	61L-03		Transfer from AS1 to AS4
	61L-08		Transfer from AS4 to BE2
61L-BFB	61L-04	61L-BFB	Transfer from AS3 to BE1
	61L-05		Transfer from BFB to AS2
	61L-06		Transfer from AS2 to AS4
	61L-07		Transfer from AS2 to AS3
61L-BFC	61L-09	61L-BFC	Transfer from BE1 to AS5
	61L-10		Transfer from BE2 to AS6
	61L-11		Transfer from AS5 to buffer bin BI1
	61L-12		Transfer from AS6 to buffer bin BI1
	61L-13		Transfer from BFC to buffer bin BI1
	61L-14		Transfer from BI1 to TB1
61L-BFD	61L-15	61L-BFD	Transfer from TB1 to BI2
	61L-16		Transfer from BFD to SC1
	61L-17		Transfer from SC1 to BI2
	61L-18		Transfer from BI2 to AS7
	61L-19		Transfer from BI2 to AS8
	61L-20		Transfer from AS7 to BIA
	61L-21		Transfer from AS8 to BIB
<b>631 Bulk Loading Rail</b>			
Rail-Load	631-01	631-BF1	Transfer from BF1 to LA1
	631-02		Transfer from 61L-BIA to AS1
	631-03		Transfer from 61L-BIB to AS2
	631-04		Transfer from AS1, AS2 TO LA1
	631-05		Retractable Bulk Rail Car Loading Spout LA1
	631-06		Transfer from 61L-BIA to 64A-AS2
	631-07		Transfer from 61L-BIB to 64B-AS2
<b>64A Silo Extraction 1</b>			
Rail-Load	64A-01	631-BF1	Transfer from 61L-BIA to 641-AS1
	64A-02		Transfer from 61L-BIA to 642-AS1
	64A-03		Transfer from AS2 to 641-AS1
	64A-04		Transfer from AS2 to 642-AS1
<b>64B Silo Extraction 2</b>			
Rail-Load	64B-01	631-BF1	Transfer from 61L-BIB to 641-AS1
	64B-02		Transfer from 61L-BIB to 642-AS1
	64B-03		Transfer from AS2 to 641-AS1
	64B-04		Transfer from AS2 to 642-AS1
<b>641 Bulk Loading Barges 1</b>			
641-BF1	641-01	641-BF1	Transfer from AS1 to BE1
	641-02		Transfer from BF1 to BE1

EP	Emission Units	Filter	Description
<b>641 Bulk Loading Barges 1 Continued</b>			
641-BF2	641-03	641-BF2	Transfer from BE1 to AS2
	641-04		Transfer from BF2 to AS2
BargeDC1	641-05	641-BF3	Transfer from AS2 to AS3
	641-07		Retractable Bulk Barge Loading Spout LA1
BargeDC2	641-06	641-BF4	Transfer from AS2 to AS4
	641-08		Retractable Bulk Barge Loading Spout LA2
<b>642 Bulk Loading Barges 2</b>			
642-BF1	642-01	642-BF1	Transfer from AS1 to BE1
	642-02		Transfer from BF1 to AS1
642-BF2	642-03	642-BF2	Transfer from BE1 to AS2
	642-04		Transfer from BF2 to AS2
BargeDC1	642-05	642-BF3	Transfer from AS2 to AS3
	642-07		Retractable Bulk Barge Loading Spout LA1
BargeDC2	642-06	642-BF4	Transfer from AS2 to AS4
	642-08		Retractable Bulk Barge Loading Spout LA2
<b>L61 Coal/Petcoke Grinding 1</b>			
L61/2-BF1	L61-03	L61-BF1, L62-BF1	Transfer from BC1 to MW1
	L61-04		Transfer from MW1 to RM1
	L61-05		RM1 Exhaust to BF1
	L61-06		RM1 exhaust to L62-RM1
	L61-08		Coal Mill #1
<b>L62 Coal/Petcoke Grinding 2</b>			
L61/2-BF1	L62-03	L61-BF1, L62-BF1	Transfer from BC1 to MW1
	L62-04		Transfer from MW1 to RM1
	L62-05		RM1 Exhaust to BF1
	L62-07		Coal Mill #2
<b>L91 Pulverized Coal/Petcoke Transport and Storage 1</b>			
L91-BF3	L91-01	L91-BF3	Transfer from L61-BF1 to PL1
	L91-02		Transfer from PL1 to MW1
	L91-03		Transfer from MW1 to MW2
L91-BF1	L91-04	L91-BF1	Transfer from MW2 to BI1
	L91-05		Transfer from BI1 to calciner burners
L91-BF2	L91-06	L91-BF2	Transfer from MW2 to BI2
	L91-07		Transfer from BI2 to calciner burners
L92-BF1	L91-08	L92-BF1	Transfer from MW1 to L92-BI1
<b>L92 Pulverized Coal/Petcoke Transport and Storage 2</b>			
L92-BF2	L92-01	L92-BF2	Transfer from L62-BF1 to PL1
	L92-02		Transfer from PL1 to MW1
	L92-03		Transfer from MW1 to MW2
L91-BF1	L92-04	L91-BF1	Transfer from MW2 to L91-BI1
L91-BF2	L92-05	L91-BF2	Transfer from MW2 to L91-BI2
L92-BF1	L92-06	L92-BF1	Transfer from MW1 to BI1
	L92-07		Transfer from BI1 to calciner burners

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>m/s</b> .....	meters per second
<b>°F</b> .....	degrees Fahrenheit	<b>Mgal</b> .....	1,000 gallons
<b>acfm</b> .....	actual cubic feet per minute	<b>MW</b> .....	megawatt
<b>BACT</b> .....	Best Available Control Technology	<b>MHDR</b> .....	maximum hourly design rate
<b>BMPs</b> .....	Best Management Practices	<b>MMBtu</b> ....	Million British thermal units
<b>Btu</b> .....	British thermal unit	<b>MMCF</b> .....	million cubic feet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAS</b> .....	Chemical Abstracts Service	<b>NAAQS</b> ...	National Ambient Air Quality Standards
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NESHAPs</b>	National Emissions Standards for Hazardous Air Pollutants
<b>CFR</b> .....	Code of Federal Regulations	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO</b> .....	carbon monoxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSR</b> .....	New Source Review
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>PM</b> .....	particulate matter
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>ppm</b> .....	parts per million
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EP</b> .....	Emission Point	<b>PTE</b> .....	potential to emit
<b>EPA</b> .....	Environmental Protection Agency	<b>RACT</b> .....	Reasonable Available Control Technology
<b>EU</b> .....	Emission Unit	<b>RAL</b> .....	Risk Assessment Level
<b>fps</b> .....	feet per second	<b>SCC</b> .....	Source Classification Code
<b>ft</b> .....	feet	<b>scfm</b> .....	standard cubic feet per minute
<b>GACT</b> .....	Generally Available Control Technology	<b>SDS</b> .....	Safety Data Sheet
<b>GHG</b> .....	Greenhouse Gas	<b>SIC</b> .....	Standard Industrial Classification
<b>gpm</b> .....	gallons per minute	<b>SIP</b> .....	State Implementation Plan
<b>gr</b> .....	grains	<b>SMAL</b> .....	Screening Model Action Levels
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

SEP 13 2016

Mr. Marcus Genova  
Environmental Manager  
Holcim (US) Inc. - Ste. Genevieve Plant  
2942 US Highway 61  
Bloomsdale, MO 63627

RE: New Source Review Permit - Project Number: 2015-11-033

Dear Mr. Genova:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).

Mr. Marcus Genova  
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If you have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Susan Heckenkamp  
New Source Review Unit Chief

SH:cyj

Enclosures

c: Southeast Regional Office  
PAMS File: 2015-11-033

Permit Number: **092016-009**