

PERMIT BOOK

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:

052012-012

Project Number: 2011-11-017

Installation Number: 099-0002

Parent Company: Buzzi Unicem USA

Parent Company Address: 100 Brodhead Road, Bethlehem, PA 18017

Installation Name: River Cement Company dba Buzzi Unicem USA

Installation Address: 1000 River Cement Road, Festus, MO 63028

Location Information: Jefferson County, S23, T40N, R6E

Application for Authority to Construct was made for:

The modification of an existing raw material crushing system and an existing clinker handling system. 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.

MAY 21 2012

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

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 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 Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' 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 sources(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 at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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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."

River Cement Company (dba Buzzi Unicem USA)
Jefferson County, S23, T40N, R6E

1. **Superseding Conditions**
Special Condition No. 6 of this permit supersedes Special Condition No. 13 of the previous issued permit no. 122005-005A.
2. **Haul Road Watering**
 - A. River Cement Company (dba Buzzi Unicem USA) shall water the unpaved haul road from the clinker storage pile to the primary crusher (5-L-31A) whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
 - B. Watering may be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
3. **Control Device Requirement-Baghouse**
 - A. River Cement Company (dba Buzzi Unicem USA) shall control emissions from the equipment listed in Table 1 below using baghouses as specified in the permit application.

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SPECIAL CONDITIONS:

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

Table 1: Equipment Using Baghouse Control

Clinker Handling Equipment	
Emission Point No.	Description
5-L-20	Transfer onto pan conveyor 330377
5-L-21	Transfer onto pivoting pan conveyor 0330387
5-L-22	Transfer from 330409 to 330429 or 330433
5-L-23	Transfer from 330433 to elevator 330439
5-L-24	Belt conveyor 330040 discharge
5-L-25	Transfer from elevator 330439 to 330448
5-L-26	Transfer onto pan conveyor 330448
5-L-27	Transfer from 330448 to 330456
5-L-28	Silo 2 and 3 vents
5-L-29	Silo 8 and 9 vents
Clinker Crushing Equipment	
Emission Point No.	Description
2-R-01K	Primary surge bin discharge
2-R-02K	Belts 201040.5 and 202070 into surge bin
2-R-03AK	Surge bin feeder
2-R-03BK	Secondary crusher
2-R-03CK	Secondary crusher discharge onto belt

- B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.
- C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- D. River Cement Company (dba Buzzi Unicem USA) shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

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SPECIAL CONDITIONS:

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

- E. River Cement Company (dba Buzzi Unicem USA) shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

- 4. Capture Device Requirements
 - A. River Cement Company (dba Buzzi Unicem USA) shall use hoods to capture emissions from the emission units listed in Table 2. A hood is a shaped inlet to a pollution control system that does not totally surround emissions from an emission unit.

Table 2: Equipment with Hood Capture

Clinker Crushing Equipment	
Emission Point No.	Description
2-R-01K	Primary surge bin discharge
2-R-02K	Belts 201040.5 and 202070 into surge bin
2-R-03AK	Surge bin feeder
2-R-03BK	Secondary crusher
2-R-03CK	Secondary crusher discharge onto belt

- B. The maximum distance between the hood inlet and the emission source shall not exceed 1.5 times the diameter of the exhaust duct in accordance with "The American Conference of Governmental Industrial Hygienists (ACGIH). Industrial Ventilation – A Manual of Recommended Practice, 23rd Edition."

- C. River Cement Company (dba Buzzi Unicem USA) shall use total enclosures to capture emissions from the emission units listed in Table 3. A total enclosure is an enclosure that, with the exception of openings for material entry and exit, completely surrounds the emissions from an emission unit.

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SPECIAL CONDITIONS:

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

Table 3: Equipment with Total Enclosure

Clinker Handling Equipment	
Emission Point No.	Description
5-L-20	Transfer onto pan conveyor 330377
5-L-21	Transfer onto pivoting pan conveyor 0330387
5-L-22	Transfer from 330409 to 330429 or 330433
5-L-23	Transfer from 330433 to elevator 330439
5-L-24	Belt conveyor 330040 discharge
5-L-25	Transfer from elevator 330439 to 330448
5-L-26	Transfer onto pan conveyor 330448
5-L-27	Transfer from 330448 to 330456
5-L-28	Silo 2 and 3 vents
5-L-29	Silo 8 and 9 vents

5. Emissions Limits and Stack Testing Requirements
 - A. River Cement Company (dba Buzzi Unicem USA) shall not emit more than 0.01 grains per actual cubic foot each of particulate matter less than two-and-a-half microns in diameter ($PM_{2.5}$), particulate matter less than ten microns in diameter (PM_{10}) and particulate matter (PM), from the baghouses listed in Table 3 in Special Condition 4.C.
 - B. River Cement Company (dba Buzzi Unicem USA) shall conduct performance testing on at least two of the ten baghouses listed in Table 3 in Special Condition 4.C. to ensure that the limit in Special Condition 5.A. is not exceeded.
 - C. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program at least 30 days prior to the proposed test date of any such performance tests so 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.
 - D. Within 60 days of achieving the maximum production rate of the listed equipment, and in any case, no later than 180 days after initial start-up of the listed equipment, the owner/operator shall have conducted the required performance tests.

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SPECIAL CONDITIONS:

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

- E. Any required performance tests shall be conducted during periods of representative conditions at the maximum process/production rates or within ten percent (10%) of this rated capacity, not including periods of start-up, shutdown, or malfunction. If a new performance test is conducted at a production rate 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. Two (2) copies of a written report of the performance test results must be submitted to the Director within 90 days of completion of the performance tests. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required EPA method for at least one (1) sample run for each air pollutant tested.
- G. The above timeframes associated with the performance tests may be extended upon request of River Cement Company (dba Buzzi Unicem USA) and approval by the Director.
- H. If the performance tests required by Special Condition 5.B. indicates that the PM emission rates listed in Special Condition 5.A. are being exceeded, River Cement Company (dba Buzzi Unicem USA) shall
 - 1) Correct any malfunction discovered and retest the unit(s) within 60 days of the initial test.
 - 2) For each baghouse that exceed the limits outlined in Special Condition 5.A., performance testing on an additional baghouse subject to the emission limits in Special Conditions 5.A. will be required.
 - 3) The performance tests shall be conducted in accordance with the procedures outlined in Special Conditions 5.C, 5.E., 5.F., and 5.G.
 - 4) These performance tests shall be conducted within 60 days of the submission of the initial test results to the Director.
 - 5) In lieu of further testing, River Cement Company (dba Buzzi Unicem USA) may evaluate what effects these higher emission rates would have had on the review requirement of this project. River Cement Company (dba Buzzi Unicem USA) shall use the largest grain loading determined during testing and apply that rate to each of the untested baghouses associated with the equipment listed in Table 3 in Special Condition 4.C. River Cement Company

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SPECIAL CONDITIONS:

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

(dba Buzzi Unicem USA) shall submit the results of any such evaluation in a timely manner for Air Pollution Control Program review and approval.

6. Restriction on Type and Amount of Material Processed
 - A. River Cement Company (dba Buzzi Unicem USA) shall not process any material other than limestone and clinkers in the primary crusher (1-Q-010) and the secondary crusher (2-R-03B) except during emergency periods when the additives crusher (1-Q-15) is rendered inoperable.
 - B. During emergency periods defined above in Special Condition 6.A., Buzzi Unicem shall not process more than 35,000 tons each of sand and clay/correctives on a 12-month rolling total through the existing primary crusher (1-Q-010) and secondary crusher (2-R-03B).
 - C. River Cement Company (dba Buzzi Unicem USA) shall not process more than 200,000 tons of clinker on a 12-month rolling total through the existing primary crusher (1-Q-010) and secondary crusher (2-R-03B).
 - D. River Cement Company (dba Buzzi Unicem USA) shall maintain an accurate record of the quantity of sand, clay/correctives and clinkers processed in accordance with Special Conditions 6.B and 6.C. The installation shall record the monthly and 12-month rolling total of the sand, clay/correctives, and clinkers. Attachment A, or equivalent forms, including electronic forms, shall be used for this purpose.
 - E. River Cement Company (dba Buzzi Unicem USA) shall maintain an operating and maintenance log for the additives crusher (1-Q-15) which shall include the following;
 - 1) Incidents of malfunction(s) including the date(s), time and duration of the event, the probable cause, any corrective actions taken and the impact on emissions due to the malfunction, and
 - 2) Any maintenance activities conducted on the units, such as parts replacement, replacement of equipment, etc.
7. Record Keeping and Reporting Requirements
 - A. River Cement Company (dba Buzzi Unicem USA) shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used.

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SPECIAL CONDITIONS:

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

- B. River Cement Company (dba Buzzi Unicem USA) shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten 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: 2011-11-017
Installation ID Number: 099-0002
Permit Number:

River Cement Company (dba Buzzi Unicem USA) Complete: November 9, 2011
100 Brodhead Road
Bethlehem, PA 18017

Parent Company:
River Cement Company (dba Buzzi Unicem USA)
1000 River Cement road
Festus, MO 63028

Jefferson County, S23, T40N, R6E

REVIEW SUMMARY

- River Cement Company (dba Buzzi Unicem USA) has applied for authority to modify an existing clinker handling system and an existing raw material crushing system.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- CFR 60, Subpart F, "Standards of Performance for Portland Cement Plants," of the New Source Performance Standards (NSPS) applies to the equipment of this permit. CFR 60, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants," of the NSPS applies to the crushing equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation.
- None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the equipment included in this project. However, 40 CFR Part 63, Subpart LLL, *National emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*, applies to other equipment at the installation.
- Baghouses are being used to control the particulates emissions from the equipment in this permit.
- 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 below *de minimis* levels.

- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and the PM_{2.5} standard and an attainment area for all other criteria pollutants. Part of Jefferson County is a nonattainment area for lead. The installation is not located in the Jefferson County lead nonattainment area.
- 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 (tpy) and fugitive emissions are counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below *de minimis* levels.
- Emissions testing is required for the equipment.
- A modification to the installation's Part 70 Operating Permit is required within one year of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

River Cement Company (dba Buzzi Unicem USA) currently operates a Portland cement manufacturing installation in Festus, Missouri. The facility is considered a major source of air pollutants for construction permits and a Part 70 source for operating permits. The following construction permits and amendments have been issued to the installation.

Table 4: New Source Review Permits and Amendments

Permit Number	Description
012010-011A	Extension of temporary permit.
012010-011	Temporary heater.
012010-010	Installation of new fly ash system.
022010-005	Use of alternative fuel for the cement kiln.
122005-005A	Amendment of permit 122005-005 to account for different installation design than permitted.
122005-005	Replacement of kiln system.
122003-008	A Section (5) permit issued for the replacement of the direct-fired solid fuel systems used on the existing cement kilns with an indirect-fired solid fuel mill/feed system.
052002-013	A Section (5) permit issued for the replacement of four (4) existing air separators at Finish Mill Number 1 and Finish Mill Number 2 with two (2) air separators of a slightly larger capacity.
1299-018	A temporary permit issued to conduct a test program of oxygen enrichment to the combustion zone of the cement kiln.
0693-008	A Section (5) permit issued for the modifications of fuel storage permit 0687-13A and fuel utilization permit 1288-004A. This permit was issued in order to allow for a change in the total number and volume of tanks, for an increase in the annual fuel storage and utilization quantity, for the addition of a vacuum operated truck, railcar, and on site container cleaning facility and for the addition of another burner system to each kiln for the direct burning of a high viscosity liquid (HVL) waste fuel.
0293-006	A Section (5) permit issued to increase the cement storage capacity by one (1) silo with the addition of a reclaim conveyor and five (5) dust collectors.
0687-013B	An amendment to Permit No. 0687-013A issued for the modification of a waste fuel storage permit.
1288-004A	An amendment issued to modify the hazardous waste combustion Permit No. 1288-004.
0687-013A	An amendment issued to modify Permit No. 0687-013 to allow the installation and operation of three (3) 22,000 gallon and six (6) 39,000 gallon storage tanks in place of the ten (10) 30,000 gallon storage tanks originally permitted.
1288-004	A Section (5) permit issued on December 9, 1988, to allow River Cement Company to burn hazardous waste fuel D001 [ignitable, nonlisted hazardous waste]. This submittal covers the physical burning of the fuel. (Ref. J.Pintor, RC, letter to M.Stansfield, MDNR, 1/29/87) "Peripherals necessary to allow a cement kiln to burn hazardous waste fuel. These include a fuel supply system and an oxygen monitor in the kiln stack."
0687-013	A Section (5) permit issued on June 29, 1987 for construction of storage tanks associated with the burning of hazardous waste fuel D001 [ignitable, nonlisted hazardous waste], (Ref. J.Pintor, RC, letter to M.Stansfield, MDNR, 1/22/87). Construction of ten (10) 30,000 gallon tanks for storage of hazardous waste fuel.

PROJECT DESCRIPTION

River Cement Company (dba Buzzi Unicem USA) proposes to modify an existing clinker handling system and an existing raw material crushing system. For the clinker handling system, various conveyors and storage bins will be added, eliminated or rearranged.

The purpose of this project is to reduce emissions, save labor costs and lower maintenance costs. The project will reduce emissions by removing unnecessary transfer points, removing unnecessary equipment and improving control efficiency. Labor hours will be reduced by eliminating spillage with improved transfer design and reducing the number of transfer points where spillage can occur. Maintenance costs will be reduced by eliminating high wear areas and reducing the amount of mechanical equipment to be maintained. The facility currently is limited to 2,220,000 tons per year (tpy) of clinker production per Permit No. 122005-005A. According to the facility, the current clinker handling system can accommodate all of the aggregates associated with 2,220,000 tpy of clinker production and this project will not debottleneck the kiln or any other processes at the plant. The clinker handling equipment installed or modified is given below in Table 5. Emissions from all of the clinker handling equipment will be captured by total enclosure and controlled by baghouses.

Table 5: New and Modified Equipment for the Clinker Handling System

Emission Point No.	Description
5-L-20	Transfer onto pan conveyor 330377
5-L-21	Transfer onto pivoting pan conveyor 0330387
5-L-22	Transfer from 330409 to 330429 or 330433
5-L-23	Transfer from 330433 to elevator 330439
5-L-24	Belt conveyor 330040 discharge
5-L-25	Transfer from elevator 330439 to 330448
5-L-26	Transfer onto pan conveyor 330448
5-L-27	Transfer from 330448 to 330456
5-L-28	Silo 2 and 3 vents
5-L-29	Silo 8 and 9 vents

Before this project, the primary crusher (1-Q-10), secondary crusher (2-R-03B) and associated bins and conveyors were only permitted to process limestone, sand and clay/correctives (sand and clay/correctives are only permitted in emergency situations when the additives crusher (1-Q-15) is rendered inoperable). The facility proposes to process clinkers through the same equipment. The facility will transport clinkers stored in an outdoor storage pile to be processed by the crushers. From the secondary crusher, the clinkers will be transferred, using the currently permitted clinker transfer belt, to the clinker silos 1, 2, and 3. The clinkers will be processed through the equipment/activities listed in Table 6. The facility is limited in this permit to crushing 200,000 tpy of clinker. The crushers are also permitted to process 35,000 tons per year each of sand and clay/correctives in emergency situations. These limits were taken from Permit 122005-005A and restated in this permit.

Table 6: Clinker Crushing Equipment

Emission Point No.	Description
5-L-30	Clinker Loading from Storage Pile
5-L-31	Clinker Hauling from Storage Pile to Crusher (Paved)
5-L-31A	Clinker Hauling from Storage Pile to Crusher (Unpaved)
1-Q-09K	Unloading at Primary Crusher
1-Q-010K	Primary Crusher
2-R-01K	Primary Surge Bin Discharge
2-R-02K	Belts 201040.5 and 202070 into Surge Bin
2-R-03AK	Surge Bin Feeder
2-R-03BK	Secondary Crusher
2-R-03CK	Secondary Crusher Discharge Onto Belt

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition or from manufacturer's guaranteed grain loading.

The emissions increase from crushing the clinkers in the primary and secondary crushers were calculated using the difference between the projected actual emissions (PAE) and the baseline actual emissions (BAE). The BAE is generally taken from the average of a consecutive two-year period within the last ten (10) years. In the calculations for the PAE, 40 CFR Part 52.22(b)(41)(ii)(c) allows for the subtraction of any emissions that the equipment could have accommodated during the baseline period, including demand growth. Because the facility could have accommodated all of the aggregates associated with 2,220,000 tpy of clinker production, the PAE minus the BAE becomes the potential emissions increase of crushing the clinkers. The 2,220,000 tpy clinker limit is not based on the maximum design rate of the plant but on a limit in permit 122005-005A.

Currently, there are no emission factors for the crushing and processing of clinkers through the primary and secondary crushers. There are baghouse-controlled emission factors for the grinding and processing of clinkers in the finish mill. However, emissions from clinker crushing in the primary and secondary crushers should be less than that of emissions from clinker grinding in the finish mill because the finish mill grinds the clinkers into much smaller sizes. Therefore, the emission factors from AP-42, Chapter 11.19.2, *Crushed Stone Processing and Pulverized Mineral Processing (8/04)*, for the crushing and processing of aggregates were used to estimate emissions from the crushing and processing of the clinkers. A 60% capture efficiency was used for the capture hoods; a 100% capture efficiency was used for total enclosures; and a 99% device control efficiency was used for the baghouses.

For the new clinker handling equipment, the emission increase from the project is just the potential emissions of the new equipment. PM emissions were calculated using the manufacturer's guarantee of 0.01 grains per actual cubic foot. For conservative estimates, all of the PM were also considered PM_{2.5} and PM₁₀. The facility is required to

perform stack tests on two of the ten baghouses used to control emissions from the new clinker handling equipment.

For the paved haul roads, particulate emissions were calculated using the equation found in AP-42, Chapter 13.2.2, *Paved Roads*, (01/11). For the unpaved haul roads, particulate emissions were calculated using the equation found in AP-42, Chapter 13.2.2, *Unpaved Roads*, (11/06). A 50% control efficiency was used for watering of the unpaved haul road.

The following table provides an emissions summary for this project.

Table 7: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	Major	N/D	23.68	N/A
PM ₁₀	15.0	Major	279.2	12.62	N/A
PM _{2.5}	10.0	Major	153.3	8.75	N/A
SO _x	40.0	Major	282.6	N/A	N/A
NO _x	40.0	Major	2018.9	N/A	N/A
VOC	40.0	Major	151.6	N/A	N/A
CO	100.0	Major	702.4	N/A	N/A
HAPs	10.0/25.0	Major	70.12	N/A	N/A

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

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 below *de minimis* levels.

APPLICABLE REQUIREMENTS

River Cement Company (dba Buzzi Unicem USA) 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
- *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

- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Portland Cement Plants*, 40 CFR Part 60, Subpart F
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plants*, 40 CFR Part 60, Subpart OOO

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*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 7, 2011, received November 9, 2011, designating Buzzi Unicem USA as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

**Attachment A: Monthly Material Processed Tracking Record
Through the Primary (1-Q-10) and Secondary (2-R-03B) Crushers
River Cement Company dba Buzzi Unicem USA**

Project Number: 2011-11-017
 County, CSTR: Jefferson County, S23, T40N, R6E

This sheet covers the period from _____ to _____ (Month, Day, Year)
(Copy this sheet as needed.)

Month	¹ Monthly Sand Processed (tons)	² 12-Month Rolling Total of Sand (tons)	¹ Monthly Clay/Correctives Processed (tons)	² 12-Month Rolling Total of Clay/Correctives (tons)	¹ Monthly Clinkers Processed (tons)	² 12-Month Rolling Total of Clinkers (tons)

Note 1: Enter the monthly amount of Sand, Clay/Correctives and Clinkers processed in tons.
 Note 2: The 12-month rolling total calculated by adding this month's amount processed and the amount processed for the previous eleven (11) months. A 12-month rolling total of **35,000 tons per year each of sand and clay/correctives and 200,000 tons per year for clinkers indicate compliance.**

Ms. Kathryn Jost
Environmental Engineer
River Cement Company dba Buzzi Unicem USA
1000 River Cement Road
Festus, MO 63028

RE: New Source Review Permit - Project Number: 2011-11-017

Dear Ms. Jost:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions 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.

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 by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:cyl

Enclosures

c: St. Louis Regional Office
PAMS File: 2011-11-017

Permit Number