

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: **102017-012** Project Number: 2017-03-022
Installation Number: 031-0021

Parent Company: Buzzi Unicem USA, Inc.

Parent Company Address: 100 Brodhead Road, Suite 230, Bethlehem, PA 18017-8989

Installation Name: Lone Star Industries, Inc. dba Buzzi Unicem USA – Cape Girardeau Plant

Installation Address: 2524 South Sprigg Street, Cape Girardeau, MO 63701

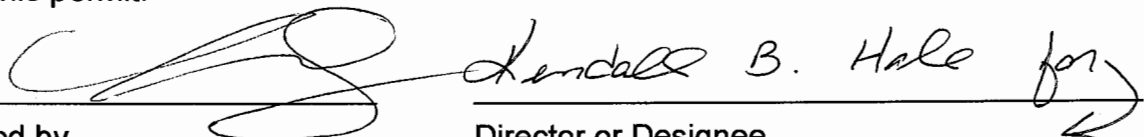
Location Information: Cape Girardeau County, S18, T30N, R14E

Application for Authority to Construct was made for:

The inclusion of requirements and limits of the Consent Decree, Civil Action Number 16-206, 9 into a construction permit. The consent decree requires the installation of a Selective Non-Catalytic Reduction (SNCR) and Lime Injection Control technologies for the cement kiln, as well as SO₂ and NO_x emission limits. 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

OCT 23 2017

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years/18 months 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/18 months 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."

Buzzi Unicem USA, Inc.
Cape Girardeau County, S18, T30N, R14E

The following conditions are required based on consent decree, Civil Action Number 16-206. Terms associated with the special conditions are defined in Appendix A.

1. Control and Monitoring of NO_x Emissions
 - A. Beginning no later than February 28, 2017, Buzzi Unicem USA – Cape Girardeau Plant shall install and commence continuous operations of the Selective Non-Catalytic Reduction (SNCR) technology to control NO_x emissions from the Cape Girardeau Kiln (KP-2).
 - B. Beginning no later than February 28, 2017, Buzzi Unicem USA - Cape Girardeau Plant shall continuously operate the SNCR technology to control NO_x emissions from the Cape Girardeau Kiln (KP-2)
 - C. Beginning on the Kiln Operating Day which is the 120th Kiln Operating Day after February 28, 2017, Buzzi Unicem USA – Cape Girardeau Plant shall demonstrate and thereafter maintain compliance with the following 30-day rolling average emission limits for NO_x.
 - 1) For all Waste On Days: 1.5 lb/ton of clinker
 - 2) For all Waste Off Days: 2.9 lb/ton of clinker

In each instance, the demonstration of compliance shall be subject to the calculations of the 30-day Rolling Average Emission Rate as defined in Appendix A of this permit based upon 30 Kiln Operating Days for the respective condition (i.e Waste On Days and Waste Off Days)
 - D. Beginning no later than March 14, 2017, which is 180 days after the effective date (September 15, 2017) of the Consent Decree, Civil Action Number D16-206, Buzzi Unicem USA – Cape Girardeau Plant shall install and make operational a NO_x CEMS at each stack which collects emissions from the Cape Girardeau Kiln (KP-2).
 - E. Beginning on or before the date that a NO_x CEMS is required pursuant to Special Condition 1.D., Buzzi Unicem USA – Cape Girardeau Plant shall determine and record the daily clinker production rates for the Cape Girardeau Kiln (KP-2) in accordance with 40 CFR §60.63(b).

SPECIAL CONDITIONS:

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

- F. Except during CEMS breakdowns, repair, calibration checks, zero span adjustment, and maintenance that require CEMS shutdown, the CEMS required pursuant to Special Condition 1.D. shall be operated at all times during Cape Girardeau Kiln (KP-2) Operation. Each such CEMS shall be used at the installation to demonstrate compliance with the NO_x Emission Limits established in Special Condition 1.C.
 - G. Each NO_x CEMS required shall monitor and record the applicable NO_x emission rate from the Cape Girardeau Kiln stack (KP-2) in units of pounds (lb) of NO_x per Ton of clinker produced at the Kiln and shall be installed, certified, calibrated, maintained, and operated in accordance with the requirements of 40 CFR Part 60.
 - H. For the purpose of this permit (as well as the consent decree), all emissions of NO_x from the Kiln shall be measured by CEMS. During any time when CEMS are inoperable and otherwise not measuring emissions of NO_x from the kiln, Buzzi Unicem USA – Cape Girardeau Plant shall apply the missing data substitution procedure in 40 CFR Part 75, Subpart C.
 - I. Buzzi Unicem USA – Cape Girardeau Plant shall maintain an operating and maintenance log for the SNCR which shall include, at a minimum, 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.
2. Control and Monitoring of SO₂ emissions
- A. Beginning no later than February 28, 2017, Buzzi Unicem USA – Cape Girardeau Plant shall continuously operate a Lime Injection System to control SO₂ emissions from the Cape Girardeau Kiln (KP-2).
 - B. Beginning on the Kiln Operating Day which is the 120th Kiln Operating Day after February 28, 2017, Buzzi Unicem USA – Cape Girardeau Plant shall demonstrate compliance and thereafter maintain compliance with the 30-Day Rolling Average Emission Limit of SO₂ as given below.
 - 1) For all Waste On Days: 1.95 lb/ton of clinker
 - 2) For all Waste Off Days: 3.75 lb/ton of clinker

In each instance, the demonstration of compliance shall be subject to the calculation of the 30-Day Rolling Average Emission Rate as defined in

SPECIAL CONDITIONS:

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

Appendix A of this permit based upon 30 Kiln Operating Days for the respective condition (i.e. Waste On Days and Waste Off Days)

- C. For purposes of SO₂ compliance, continuous operation of the Lime Injection System shall not be required during periods in which the installation is preparing for and conducting an HCl compliance demonstration pursuant to 40 CFR 63, Subpart EEE, *National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors*, provided, however, that the limits in Special Condition 2.B. shall continue to apply during such time periods.
- D. Beginning no later than March 14, 2017, which is 180 days after the Effective Date (September 15, 2017), Buzzi Unicem USA – Cape Girardeau Plant shall install and make operational an SO₂ CEMS at each stack which collects emissions from the Cape Girardeau Kiln (KP-2).
- E. Except during CEMS breakdowns, repairs, calibration checks, and zero span adjustment, and maintenance requiring CEMS shutdown, the CEMS required pursuant to Special Condition 2.C. shall be operated at all times during Cape Girardeau Kiln (KP-2) operation. Each such CEMS shall be used at the Kiln to demonstrate compliance with the SO₂ emission limits established in Special Condition 2.B.
- F. Each SO₂ CEMS required in Special Condition 2.D. shall monitor and record the applicable SO₂ emission rate from the Cape Girardeau Kiln (KP-2) in units of lbs of SO₂ per Ton of clinker produced and shall be installed, certified, calibrated, maintained, and operated in accordance with the requirements of 40 CFR Part 60.
- G. For the purpose of this permit (as well as the consent decree), all emissions of SO₂ from the Cape Girardeau Kiln (KP-2) shall be measured by CEMS. During any time when CEMS are inoperable and otherwise not measuring emissions of SO₂ from the Kiln, Buzzi Unicem USA – Cape Girardeau Plant shall apply the missing data substitution procedures in 40 CFR Part 75, Subpart D.
- H. Buzzi Unicem USA – Cape Girardeau Plant shall maintain an operating and maintenance log for the lime injection system which shall include, at a minimum, 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.

SPECIAL CONDITIONS:

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

3. **Prohibition on Netting Credits and Offsets from Required Controls**
 - A. NO_x and SO₂ emissions reductions resulting from compliance with the limits of this permit shall not be considered as a creditable contemporaneous emissions decrease for the purpose of obtaining a netting credit under the Clean Air Act's (CAA's) PSD and Non-attainment NSR programs.
 - B. The limitations on the generation and use of netting credits or offset set forth in Special Condition 3.A., do not apply to emission reductions achieved by Buzzi Unicem USA – Cape Girardeau Plant that are surplus to those required under this permit (surplus emission reduction). For the purpose of this permit (as is in the consent decree), surplus emission reductions are the reductions over and above those required by the limits in this permit that results from Buzzi Unicem USA – Cape Girardeau Plant's compliance with the federally enforceable emission limits that are more stringent than the limits in Special Condition 1 and 2 or from compliance with emission limits otherwise required under applicable provisions of the Clean Air Act, or with an applicable SIP that contains more stringent limits than those imposed in this permit.
 - C. Nothing in the permit is intended to preclude the emission reductions generated under this permit from being considered by the EPA or the State of Missouri as creditable contemporaneous emission decreases for the purpose of attainment demonstrations submitted pursuant to Section 110 of the CAA, 42 U.S.C. §7410, or in determining impacts on NAAQS, PSD increments, or air quality-related values, including visibility in a Class I Area.
 - D. Notwithstanding Special Condition 3, nothing in this permit prohibits Buzzi Unicem USA – Cape Girardeau Plant from relying upon the emission reductions for purpose of determining whether there is a net emissions increase or significant net emissions increase of any pollutant where the construction approval relying on that netting analysis was issued prior to the Date of Lodging of the Consent Decree.

The following conditions are not required as a part of the consent decree.

4. **Haul Road Control – Maintenance and Repair**

Buzzi Unicem USA – Cape Girardeau Plant shall conduct maintenance and repair of the paved surface for the Lime Haul Road (KP-27) and the Ammonia Haul Road (KP-28) as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these haul roads.

SPECIAL CONDITIONS:

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

5. Record Keeping and Reporting Requirements

A. Buzzi Unicem USA – Cape Girardeau 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.

B. Buzzi Unicem USA – Cape Girardeau Plant shall report to the Air Pollution Control Program's Compliance/Enforcement Section by mail at P.O. Box 176, Jefferson City, MO 65102 or by email at aircompliancereporting@dnr.mo.gov 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: 2017-03-022
Installation ID Number: 031-0021
Permit Number: 102017-012

Installation Address:

Buzzi Unicem USA – Cape Girardeau
Plant
2524 South Sprigg Street
Cape Girardeau, MO 63701

Parent Company:

Buzzi Unicem USA, Inc.
100 Brodhead Road, Suite 230
Bethlehem, PA 18017-8989

Cape Girardeau County, S18, T30N, R14E

REVIEW SUMMARY

- Buzzi Unicem, USA – Cape Girardeau Plant has applied for authority to include the requirements and limitations in Paragraphs 11 a, b, d, e, l, j, k, o, p, q, s-x, bb and dd-1, 16-29, and 38-41 of Consent Decree, Civil Action Number 16-206, into a construction permit. The consent decree requires the installation of a Selective Non-Catalytic Reduction (SNCR) and Lime Injection Control technologies for the cement kiln, as well as SO₂ and NO_x emission limits. There will be extra hauling activities for the ammonia and lime.
- The application was deemed complete on March 6, 2017.
- HAP emissions are not expected from the proposed equipment.
- None of the NSPS apply to the proposed equipment, but there are NSPS that applies to other equipment at the installation.
- None of the NESHAPs apply to this installation.
- The MACT standard, 40 CFR Part 63, EEE, *National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors*, applies to the cement kiln.
- 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 Cape Girardeau 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, Category 3. 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 below de minimis levels.
- Emissions testing is not required as part of this permit.
- A modification request for the Part 70 Operating application is required for this installation within 1 year of permit issuance.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Lonestar Industries, dba Buzzi Unicem USA (BUU) manufacturers Portland cement. The installation is a major source for construction permits and a Part 70 source for operating permits. The facility currently has a Part 70 Operating Permit Renewal Application undergoing review by the Missouri Air Pollution Control Program (Project Number 2014-09-042). The following New Source Review permits have been issued to Buzzi Unicem USA – Cape Girardeau Plant from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0278-EPA	Reconstruction of a cement plant.
0483-009	Construction of clinker loading system.
0691-010	Installation of system to burn tires as fuel.
0392-001	Allow burning of hazardous waste derived liquid fuel and non-hazardous waste oil in the existing kiln.
0693-009	Construction of a filter cleaning table
0496-007	Construction of new clinker silos and conveyor system.
0697-004	Replacement of a crusher.
1197-012	Installation of spray tower and raw mill reparatory, replacement of the raw mill fan, belt R-3700 motor, raw material elevator KB-1600, and collector bags with higher efficiency bags.
1197-012A	Revising permit conditions and testing procedures to reflect current kiln operation.
102000-016	Construction of a new stationary quarry operation.
042002-002	Installation of a synthetic gypsum process.
0496-007A	Wording changes to special condition in Permit 0496-007.
102000-016A	Extending two year time period to begin construction activities.
072003-007	Modification to the existing blended synthetic gypsum process.
092004-007	Temporary permit to evaluate usage of petroleum coke to replace portion of the coal being combusted in the cement kiln.
062005-005	Temporary permit to evaluate the introduction of chipped tire-derived fuel (?TDF) into the calciner as fuel.
092004-007A	Extension of Temporary Permit 092004-007.

092005-014	Temporary permit for a combustion improvement project.
102005-018	Installation of a hopper, belt conveyor, and storage bin with a loadout spout to offload raw materials from barges to haul trucks.
042006-002	Installation of a feeder system.
092005-014A	Extension of Temporary Permit 092005-014
112006-012	Increase in kiln operating rate due to oxygen injection into the kiln and calciner.
0691-010A	Use of expired seed corn and soybeans as alternate fuels in the cement kiln.
042010-013	Use of on-spec used oil as fuel in the cement kiln.
0392-001A	Increase in the annual amount of liquid hazardous waste that can be fed to the kiln.
082010-002	Temporary permit to burn liquid fuel in the precalciner.
072011-008	Construction of a temporary rock-crushing plant.
022012-004	Temporary study on the use of liquid hazardous waste fuel in the calciner.
022012-004A	Allow the use of nonhazardous liquid fuel in the study from Permit No. 022012-004.
0496-007B	Modify the dust collection system for the clinker handling process.
072017-014	Increasing production.

PROJECT DESCRIPTION

On September 15, 2016, BUU signed a consent decree with the EPA. Per Condition 43 of the Consent Decree, BUU must apply to the Missouri Department of Natural Resources to include the requirements and limitations in Conditions 11 a, b, d, e, i, j, k, o, p, q, s- x, bb, and dd-II, 16-29, and 38-41 in a construction permit.

Conditions 11 a, b, d, e, i, j, k, o, p, q, s- x, bb, and dd-II of the Consent Decree contains definitions which are incorporated into this permit as Appendix A. Conditions 16-23 of the Consent Decree contain emission limits and control and monitoring requirements for NO_x. This is incorporated in the permit as Special Condition 1 in this permit. Conditions 24-29 contain emission limits and control and monitoring requirements for SO_x, which are incorporated into this permit in Special Condition 2. The control device required for NO_x is SNCR Technology while the control device required for SO_x is lime injection. Conditions 38-41 of the Consent Decree prohibits netting credits and offsets from required controls and they are included in this permit through Special Condition 3.

For the SNCR system, a new 24,650 gallon ammonia tank, along with associated piping will be installed to inject the aqueous ammonia solution, as needed, into the kiln for the control of NO_x emissions. The aqueous ammonia will be delivered onsite via trucks to the new storage tank.

The lime injection system will utilize existing equipment already part of the kiln system (KP-2). This equipment consists of a tank, pump, and injectors. The lime will be trucked onsite as slurry and transferred from trucks to the tank, where it will then be pumped to the injectors, for injection into the kiln system.

According to Special Condition 2.C. of this permit, the installation is required to operate the lime injection system except during the period in which the installation is preparing

for and conducting HCl compliance demonstration pursuant to 40 CFR 63, Subpart EEE. In Section X, Paragraph 56.g. of the consent decree, the facility is required to track the time that is spent on HCl compliance demonstration. The consent decree does not include this as a condition that is required to be written into the construction permit. Therefore, the installation asked to not include this condition in the construction permit since it is already in the consent decree.

For the Lime Haul Road (KP-27) and the Ammonia Haul Road (KP-28), the haul roads are already paved. Therefore, Special Condition 4 only requires the maintenance and repair of the paved surfaces rather than paving of the surfaces.

EMISSIONS/CONTROLS EVALUATION

In order to install and operate the SNCR and lime injection system, the facility has to haul ammonia for the SNCR and lime for the lime injection. There will be particulate emissions from the haul roads used for this purpose. The ammonia storage tank, along with associated piping, is not expected to emit any regulated pollutants since ammonia is not a regulated pollutant. The lime is trucked onsite as wet slurry so there should not be particulate emissions associated with storage or handling.

The roads are paved and emissions were calculated using the equations found in the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.1, *Paved Roads*, (1/11). In the application, the facility proposed to use 6.0 g/m² of silt content. This is taking the silt loading of 12 g/m² for concrete batching from Table 13.2.1-3 and lowering it by 50% to account for sweeping of paved roads. However, the Missouri Air Pollution Control Program usually requires silt content testing if the numbers used are different than those in the table. Using 12 g/m² does not have any effect on the type of permit that should be issued to the installation, so 12 g/m² is used in the calculations instead and the facility is not required to perform testing for silt content.

The following table provides an emissions summary for this project. The existing potential emissions of all pollutants are greater than the major source levels. Existing actual emissions were taken from the installation's 2016 EIQ. Potential emissions of the project are from the haul roads, the only emission sources from this project.

Table 2: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2016 EIQ)	Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	Major	N/D	0.12	N/A
PM ₁₀	15.0	Major	469.21	0.025	N/A
PM _{2.5}	10.0	Major	271.86	0.006	N/A
SOx	40.0	Major	612.84	N/A	N/A

NOx	40.0	Major	986.94	N/A	N/A
VOC	40.0	Major	268.66	N/A	N/A
CO	100.0	Major	7,983.76	N/A	N/A
GHG (CO ₂ e)	N/A	N/D	N/D	N/A	N/A
GHG (mass)	N/A	N/D	N/D	N/A	N/A
HAPs	10.0/25.0	Major	16.23	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 pollutant are below de minimis levels.

APPLICABLE REQUIREMENTS

Buzzi Unicem USA – Cape Girardeau 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.

GENERAL REQUIREMENTS

- *Operating Permits*, 10 CSR 10-6.065
- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050
- *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.
- *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

- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261
- *Control of NO_x Emissions from Portland Cement Kilns*, 10 CSR 10-6.380

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 conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 2, 2017, received March 6, 2017, designating Buzzi Unicem USA, Inc. as the owner and operator of the installation.
- Consent Decree, Civil Action Number 16-206, signed by Buzzi Unicem USA and the USEPA.

Appendix A

Whenever the terms set forth below are used in this permit, the following definitions shall apply.

Definitions

1. **30-Day Rolling Average Emission Limit** – With respect to the Cape Girardeau Kiln, the maximum allowable rate of emission of a specified air pollutant from the Cape Girardeau Kiln and shall be expressed as pounds of such air pollutant emitted per Ton of clinker produced. Compliance with the 30-day Rolling Average Emission Limit shall be demonstrated in accordance with the definition of 30-day Rolling Average Emission Rate. In calculating each compliance determination of the 30-Day Rolling Average Emission limit for NO_x or SO₂ at the Cape Girardeau Kiln, the total pounds of such air pollutant emitted from the Cape Girardeau Kiln, the total pounds of such air pollutant emitted from the Cape Girardeau Kiln during a specified Period (Operating Day or 30-Day Period) shall include all emissions from that pollutant from the Cape Girardeau Kiln that occur during the specified period, including emissions during each Startup, Shutdown, or Malfunction.
2. **30-Day Rolling Average Emission Rate** – With respect to the Cape Girardeau Kiln, the rate of emission of a specified air pollutant from the Cape Girardeau Kiln, expressed as pounds of NO_x or SO₂ emitted per Ton of clinker produced, and calculated following this procedure.
 - a. First, sum the total pounds of air pollutant in question emitted from the Cape Girardeau Kiln during the Kiln Operating Day and the previous twenty-nine (29) Kiln Operating Days as measured by the NO_x and SO₂ CEMS, as applicable;
 - b. Second, sum the total Tons of clinker produced by the Cape Girardeau Kiln during the same Kiln Operating Day and previous 29 Kiln Operating Days; and
 - c. Third, divide the total number of pounds of the air pollutant emitted from the Cape Girardeau Kiln during the thirty (30) Kiln Operating Days by the total Tons of clinker produced by such Cape Girardeau Kiln during the same 30 Kiln Operating Days. A new compliance determination of the 30-Day Rolling Average Emission Rate shall be calculated for each new Kiln Operating Day in accordance with the provisions of this permit.
3. **Cape Girardeau Kiln** – the Portland cement kiln located at Buzzi Unicem USA, Inc.'s Portland cement manufacturing facility located at 2524 S. Sprigg St. in Cape Girardeau, MO, about 118 miles from St. Louis, MO. The Cape Girardeau Kiln includes any associated preheater or precalciner devices, inline raw mills, inline coal mills or alkali bypasses that produces clinker by heating limestone and other materials for subsequent production of Portland cement.
4. **CEMS or Continuous Emission Monitoring System** – For obligations involving NO_x and SO₂ emissions under this permit, the total equipment required for the determination of a gas concentration or emission rate. The sample interface, pollutant analyzer, and data recorder are the major subsystems of the CEMS.
5. **Continuously Operate or Continuous Operation** – when a Control Technology is used at the Cape Girardeau Kiln, it shall be operated at all times of Kiln Operation, excluding Malfunction of the Control Technology, consistent with the technological limitations,

Appendix A

manufacturer's specifications, and good engineering and maintenance practices for such Control Technology and the Cape Girardeau Kiln. For example, the requirement to continuously operate SNCR does not require that the SNCR be operated under conditions where the Cape Girardeau Kiln has not reached or is no longer maintaining the minimum temperature for reagent injection.

6. Control Technology – Selective Non-Catalytic Reduction with respect to control of NOX emissions and Lime Injection System with respect to control of SO₂ emissions.
7. Day – a Calendar Day
8. Date of Lodging of the Consent Decree or Date of Lodging – The date the Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Eastern District of Missouri.
9. Effective Date – The date upon which the Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first as reflected on the Court's docket.
10. Emission Limit – Maximum allowable Emission Rate of a specified air pollutant from the Cape Girardeau Kiln under this permit and shall be expressed a pounds of such air pollutant emitted per Ton of clinker produced.
11. Emission Rate – For a specified air pollutant from the Cape Girardeau Kiln, the number of pounds of such air pollutant emitted per Ton of clinker measured in accordance with this permit.
12. EPA – the United States Environmental Protection Agency and any of its successor departments or agencies.
13. Kiln Operation – Any period when any raw materials are fed into the Cape Girardeau Kiln or any combustion is occurring the Cape Girardeau Kiln.
14. Kiln Operating Day – Any Day on which Kiln Operation has occurred.
15. Lime Injection System – A pollution control system that injects lime or another reagent that has been demonstrated as effective in reducing SO₂ emissions, into the gas stream for the purpose of reducing SO₂ emissions.
16. Malfunction – As used in this permit, has the same meaning as defined at 40 C.F.R § 60.2.
17. NO_x – Oxides of nitrogen, measured in accordance with the provisions of this permit.
18. Non-Attainment NSR – the non-attainment area New Source Review (NSR) program within

Appendix A

the meaning of Part D of Subchapter I of the CAA, 42 U.S.C. §§7501-7515, 40 C.F.R. Part 51, and any applicable State Implementation Plan.

19. PSD – Prevention of Significant Deterioration program within the meaning of Part C of Subchapter I of the CAA, 42 U.S.C §§ 7470-7492, 40 C.F.R. Part 52, and any applicable State Implementation Plan.
20. Selective Non-Catalytic Reduction or SNCR – Pollution control system that injects an ammonia-based reagent into the gas stream without the use of a catalyst for the purpose of reducing NO_x emissions.
21. SO₂ – The pollutant sulfur dioxide, measured in accordance with the provisions of this permit.
22. State of Missouri – The State of Missouri, acting on behalf of the Missouri Department of Natural Resources.
23. Subject Kiln Modification – the following two projects consisting of physical and operational changes performed at the Cape Girardeau Kiln. a) the 100,000 ton clinker expansion project commencing in November 1997 and concluding in March of 1998; and b) the Vortex Finder Project commencing in July of 2002, and concluding in February of 2003.
24. Title V Permit – A permit required by and issued in accordance with the requirements of 42 U.S.C. §§ 7661-7661f.
25. Ton or Tons – short ton or short tons.
26. Waste On Day – A Kiln Operating Day when liquid waste fuel is being fired in the main kiln burner of the Cape Girardeau Kiln at 66 lb/min or more when averaged across the entire day.
27. Waste Off Day – A Kiln Operating Day when liquid waste fuel is being fired in the main kiln burner of the Cape Girardeau Kiln at less than 66 lb/min when averaged across the entire day.

APPENDIX B

Abbreviations and Acronyms

%percent	Mgal1,000 gallons
°Fdegrees Fahrenheit	MWmegawatt
acfmactual cubic feet per minute	MHDRmaximum hourly design rate
BACTBest Available Control Technology	MMBtuMillion British thermal units
BMPsBest Management Practices	MMCFmillion cubic feet
BtuBritish thermal unit	MSDSMaterial Safety Data Sheet
CAMCompliance Assurance Monitoring	NAAQSNational Ambient Air Quality Standards
CASChemical Abstracts Service	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CEMSContinuous Emission Monitor System	NO_xnitrogen oxides
CFRCode of Federal Regulations	NSPSNew Source Performance Standards
COcarbon monoxide	NSRNew Source Review
CO₂carbon dioxide	PMparticulate matter
CO_{2e}carbon dioxide equivalent	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
COMSContinuous Opacity Monitoring System	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CSRCode of State Regulations	ppmparts per million
dscfdry standard cubic feet	PSDPrevention of Significant Deterioration
EIQEmission Inventory Questionnaire	PTEpotential to emit
EPEmission Point	RACTReasonable Available Control Technology
EPAEnvironmental Protection Agency	RALRisk Assessment Level
EUEmission Unit	SCCSource Classification Code
fpsfeet per second	scfmstandard cubic feet per minute
ftfeet	SDSSafety Data Sheet
GACTGenerally Available Control Technology	SICStandard Industrial Classification
GHGGreenhouse Gas	SIPState Implementation Plan
gpmgallons per minute	SMALScreening Model Action Levels
grgrains	SO_xsulfur oxides
GWPGlobal Warming Potential	SO₂sulfur dioxide
HAPHazardous Air Pollutant	tphtons per hour
hrhour	tpytons per year
hphorsepower	VMTvehicle miles traveled
lbpound	VOCVolatile Organic Compound
lbs/hrpounds per hour	
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	

Air Pollution Control Program Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM	Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CHLOROPRENE	126-99-8	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y
ACETOPHENONE	98-86-2	1		Y	N	CHROMIUM COMPOUNDS		5	L	N	Y
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CHRYSENE	218-01-9	0.01	V	Y	N
ACROLEIN	107-02-8	0.04		Y	N	COBALT COMPOUNDS		0.1	M	N	Y
ACRYLAMIDE	79-06-1	0.02		Y	N	COKE OVEN EMISSIONS	8007-45-2	0.03	N	Y	N
ACRYLIC ACID	79-10-7	0.6		Y	N	CRESOL, [META-]	108-39-4	1	B	Y	N
ACRYLONITRILE	107-13-1	0.3		Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N
AMINOBIHENYL, [4-]	92-67-1	1	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N
ANILINE	62-53-3	1		Y	N	CUMENE	98-82-8	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y
ANTIMONY COMPOUNDS		5	H	N	Y	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	DIAZOMETHANE	334-88-3	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	DIOXINS/FURANS		6E-07	D,V	Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	DIBENZOFURAN	132-64-9	5	V	Y	N
ASBESTOS	1332-21-4	0	A	N	Y	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N
BENZENE	71-43-2	2		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y
BENZIDINE	92-87-5	0.0003	V	Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DICHLOROMETHANE	75-09-2	10		N	N
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y
BERYLLIUM SALTS		2E-05	J	N	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DICHLOROVOS	62-73-7	0.2		Y	N
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
BROMOFORM	75-25-2	10		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
CAPROLACTAM (Delisted)	105-60-2					DIMETHYL PHTHALATE	131-11-3	10		Y	N
CAPTAN	133-06-2	10		Y	Y	DIMETHYL SULFATE	77-78-1	0.1		Y	N
CARBARYL	63-25-2	10	V	Y	Y	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
CARBON DISULFIDE	75-15-0	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
CARBON TETRACHLORIDE	56-23-5	1		Y	N	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
CARBONYL SULFIDE	463-58-1	5		Y	N	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
CATECHOL	120-80-9	5		Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
CHLORAMBEN	133-90-4	1		Y	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
CHLORDANE	57-74-9	0.01		Y	Y	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
CHLORINE	7782-50-5	0.1		N	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
CHLOROACETIC ACID	79-11-8	0.1		Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
CHLOROBENZENE	108-90-7	10		Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	ETHYL ACRYLATE	140-88-5	1		Y	N

Air Pollution Control Program

Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM	Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
CHLOROFORM	67-66-3	0.9		Y	N	ETHYL BENZENE	100-41-4	10		Y	N
ETHYL CHLORIDE	75-00-3	10		Y	N	NITROBENZENE	98-95-3	1		Y	N
ETHYLENE GLYCOL	107-21-1	10		Y	N	NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N
ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2					NITROPHENOL, [4-]	100-02-7	5		Y	N
ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N	NITROPROPANE, [2-]	79-46-9	1		Y	N
ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N	NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N
ETHYLENE OXIDE	75-21-8	0.1		Y	N	NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N
ETHYLENE THIOUREA	96-45-7	0.6		Y	Y	NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N
FORMALDEHYDE	50-00-0	2		Y	N	OCTACHLORONAPHTHALENE	2234-13-1	0.01	V	Y	N
GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N	PARATHION	56-38-2	0.1		Y	Y
GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N	PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y
HEPTACHLOR	76-44-8	0.02		Y	N	PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N
HEXACHLORO BENZENE	118-74-1	0.01		Y	N	PENTACHLOROPHENOL	87-86-5	0.7		Y	N
HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N	PHENOL	108-95-2	0.1		Y	N
HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N	PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N
HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N	PHOSGENE	75-44-5	0.1		Y	N
HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N	PHOSPHINE	7803-51-2	5		N	N
HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N	PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N	PHTHALIC ANHYDRIDE	85-44-9	5		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N	POLYCYLIC ORGANIC MATTER		0.01	V	Y	N
HEXAMETHYLENE, -1,6-DIISOCYANATE	822-06-0	0.02		Y	N	PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N	PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N
HEXANE, [N-]	110-54-3	10		Y	N	PROPIONALDEHYDE	123-38-6	5		Y	N
HYDRAZINE	302-01-2	0.004		N	N	PROPOXUR [BAYGON]	114-26-1	10		Y	Y
HYDROGEN CHLORIDE	7647-01-0	10		N	N	PROPYLENE OXIDE	75-56-9	5		Y	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N	PROPYLENEIMINE, [1,2-]	75-55-8	0.003		Y	N
HYDROQUINONE	123-31-9	1		Y	N	QUINOLINE	91-22-5	0.006		Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N	QUINONE	106-51-4	5		Y	N
ISOPHORONE	78-59-1	10		Y	N	RADIONUCLIDES		Note 1	Y	N	Y
LEAD COMPOUNDS		0.01	Q	N	Y	SELENIUM COMPOUNDS		0.1	W	N	Y
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N	STYRENE	100-42-5	1		Y	N
MALEIC ANHYDRIDE	108-31-6	1		Y	N	STYRENE OXIDE	96-09-3	1		Y	N
MANGANESE COMPOUNDS		0.8	R	N	Y	TETRACHLORODIBENZO-P-DIOXIN, [2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y
MERCURY COMPOUNDS		0.01	S	N	N	TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N
METHANOL	67-56-1	10		Y	N	TETRACHLOROETHYLENE	127-18-4	10		N	N
METHOXYCHLOR	72-43-5	10	V	Y	Y	TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N	TOLUENE	108-88-3	10		Y	N
METHYL CHLORIDE	74-87-3	10		Y	N	TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N
METHYL ETHYL KETONE (Delisted)	78-93-3					TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N
METHYL HYDRAZINE	60-34-4	0.06		Y	N	TOXAPHENE	8001-35-2	0.01		Y	N
METHYL IODIDE	74-88-4	1		Y	N	TRICHLORO BENZENE, [1,2,4-]	120-82-1	10		Y	N
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N	TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N
METHYL ISOCYANATE	624-83-9	0.1		Y	N	TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N
METHYL METHACRYLATE	80-62-6	10		Y	N	TRICHLOROETHYLENE	79-01-6	10		Y	N
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N	TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N
METHYLCYCLOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y	TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y	TRIETHYLAMINE	121-44-8	10		Y	N
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N	TRIFLURALIN	1582-09-8	9		Y	Y
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N	TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
MINERAL FIBERS		0	T	N	Y	URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
NAPHTHALENE	91-20-3	10	V	Y	N	VINYL ACETATE	108-05-4	1		Y	N
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N	VINYL BROMIDE	593-60-2	0.6		Y	N
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N	VINYL CHLORIDE	75-01-4	0.2		Y	N
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y	XYLENE, [META-]	108-38-3	10	G	Y	N
NICKEL COMPOUNDS		1	U	N	Y	XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N

Air Pollution Control Program Table of Hazardous Air Pollutants and Screening Model Action Levels

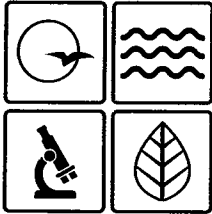
Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM	Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
NICKEL REFINERY DUST		0.08	U	N	Y						
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y						

Legend

Group ID	
A	Asbestos
B	Cresols/Cresylic Acid (isomers and mixtures)
C	2,4 - D, Salts and Esters
D	Dibenzofurans, Dibenzodioxins
E	4, 6 Dinitro-o-cresol, and Salts
F	Lindane (all isomers)
G	Xylenes (all isomers and mixtures)
H	Antimony Compounds
I	Arsenic Compounds
J	Beryllium Compounds
K	Cadmium Compounds
L	Chromium Compounds
M	Cobalt Compounds
N	Coke Oven Emissions
O	Cyanide Compounds
P	Glycol Ethers
Q	Lead Compounds (except elemental Lead)
R	Manganese Compounds
S	Mercury Compounds
T	Fine Mineral Fibers
U	Nickel Compounds
V	Polycyclic Organic Matter
W	Selenium Compounds
X	Polychlorinated Biphenyls (Aroclors)
Y	Radionuclides

Notes

The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

OCT 23 2017

Mr. Donald Backfisch
Environmental Engineer
Buzzi Unicem USA
2524 South Sprigg Street
Cape Girardeau, MO 63701

RE: New Source Review Permit - Project Number: 2017-03-022

Dear Mr. Backfisch:

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 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.



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Mr. Donald Backfisch
Page Two

If you have any questions regarding this permit, please do not hesitate to contact Young, Chia-Wei, 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:cj

Enclosures

c: Regional Office
PAMS File: 2017-03-022

Permit Number: 102017-012