

## STATEMENT OF BASIS

### PROPOSED FINAL REMEDY AND RELEASE FROM CORRECTIVE ACTION OBLIGATIONS

**RIVER CEMENT COMPANY  
D/B/A BUZZI UNICEM USA  
1000 RIVER CEMENT ROAD  
P.O. BOX 1003  
FESTUS, MISSOURI  
EPA ID# MOD050232560**

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**Facility Type:** Portland Cement Manufacturing  
**Contaminants:** Benzo(a)anthracene and Benzo(a)pyrene  
**Media:** Sediment and soil  
**Proposed Final Remedy:** No Further Action with Institutional Controls

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## INTRODUCTION

This Statement of Basis describes the proposed corrective measures (proposed final remedy) for the River Cement Company (RCC), doing business as Buzzi Unicem USA, facility in the City of Festus, Missouri. Reasons for recommending the proposed remedy are also presented. The Missouri Department of Natural Resources (Department) prepared this Statement of Basis as part of the requirements of Code of Federal Regulations 40 CFR 124.7, incorporated by reference in Code of State Regulations 10 CSR 25-8.124(7).

This document highlights the information that is presented in more detail in the facility Administrative Record. Among other documents, the Administrative Record includes the approved Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) Report, dated February 15, 1991, the RCRA Facility Investigation (RFI) Report, dated July 11, 2005, and the approved RFI Addendum Report, dated May 2009. The Department invites the public to review the Administrative Record for a more complete understanding of the historical environmental issues and corrective action activities that have been conducted at the RCC facility. The Administrative Record locations are provided at the end of this document.

The Department invites the public to review and offer written comments on the proposed final remedy from August 24, 2013 to September 23, 2013. A public hearing has not been scheduled; however, anyone can request a public hearing about the proposed final remedy and regulatory release during the 30-day public comment period. The Department will approve a final remedy for the facility only after the public comment period has ended and all public comments have been reviewed and addressed in writing by the Department. The facility will be

released from its corrective action obligations only after the approved final remedy has been implemented. Public participation information is provided in detail at the end of this document.

## **FACILITY DESCRIPTION**

The RCC facility is located at 1000 River Cement Road, about three miles south of Festus, Missouri. The RCC facility property consists of approximately 2,167 acres and lies within the East 1/2 of Section 22, Township 40 North, Range 6 East, in Jefferson County. The geographic coordinates for the site are 38°10'29'' North latitude and 90°20'51'' West longitude. A site location map is included as Figure 1, and a facility map is included as Figure 2.

The property is bordered by heavily wooded agricultural land and scattered residences to the north, west, and south, and by the Mississippi River to the east.

## **FACILITY HISTORY**

RCC is a Portland cement manufacturing facility built by the Mississippi River Corporation (MRC) in 1963. River Cement Company, a subsidiary of MRC, began operating the plant and limestone quarry in 1965. In 1979 R.C. Cement Company, Incorporated purchased the facility. At that time R.C. Cement was 80 percent owned by IFI International S.A. (Luxembourg) and 20 percent by Unicem S.p.A. (Italy). R.C. Cement later became wholly owned by Unicem S.p.A. In 2000 Unicem merged with Buzzi Cementi to form Buzzi Unicem S.p.A (Italy). In 2003 Buzzi Unicem S.p.A. gained controlling interest in Dyckerhoff AG, which owned, among other companies, Lone Star Industries, Incorporated, another cement manufacturing company. In 2004 RC Lonestar Incorporated, owned by Buzzi Unicem S.p.A. and Dyckerhoff AG, became the US parent company of RCC. RCC remains a wholly-owned subsidiary of RC Lonestar, Incorporated, today. RCC is licensed to do business in Missouri, and several other states, under the trade name "Buzzi Unicem USA."

RCC produces Portland cement clinker in a rotary kiln with pre-heater/pre-calciner. The property consists of buildings, a laboratory, storage silos, a limestone quarry, a 430-foot high pre-heater tower with calciner and 212-foot rotary kiln, three finish mills, one raw mill, railroad spur tracks used for cement transport and formerly used to receive tank cars loaded with liquid waste fuels, a barge loading facility for transporting cement, receiving raw materials and solid fuel, and sheds used to store cement-related products. The remainder of the manufacturing facility is primarily open fields which are dissected by various paved roadways and railroad spur tracks.

RCC uses mainly coke and natural gas to heat their kiln system. From January 1989 to 1997, RCC used liquid hazardous wastes fuels to supplement its fuel needs. The hazardous waste came from off-site hazardous waste generators and third party hazardous waste blenders. An environmental management firm operated the hazardous waste fuel facility at the site. The hazardous waste fuel facility received the hazardous waste in bulk tanker trucks and railcars.

The liquid hazardous wastes were blended with other hazardous waste to achieve the desired characteristics, such as British Thermal Unit (BTU) value and chlorine content. The resulting wastes were stored in tanks until used as liquid fuel.

### **REGULATORY HISTORY**

RCC previously operated a hazardous waste fuel facility and two cement kilns under the interim status portions of the federal and state hazardous waste laws, 40 CFR Part 265 and 10 CSR 25-7.265. When Congress passed the federal law governing hazardous waste management in 1980, all existing facilities that treated, stored or disposed of hazardous waste in a manner that would require a hazardous waste in a manner that would necessitate a hazardous waste permit were required to get such a permit. Because of the large number of existing facilities, Congress set up requirements which allowed these facilities to operate temporarily under “interim status” until they received their permit. RCC submitted their Resource Conservation and Recovery Act (RCRA) Part A Permit Application on November 24, 1986, and RCRA Part B Permit Application in October 1988, with revisions submitted in December 1996. Thereafter, RCC decided to not pursue a hazardous waste permit and to close the units that would otherwise be subject to permitting.

In December 8, 1998, the Department accepted the facility’s closure certification for its hazardous waste fuel facility, two cement kilns, and hazardous waste fuel feed system. RCC is subject to corrective action by virtue of having completed closure of its interim status hazardous waste management units after the effective date of the 1984 Hazardous and Solid Waste Amendments to RCRA. RCC is not subject to the permitting requirements of the Missouri Hazardous Waste Management Law or RCRA for post-closure care by virtue of having “clean closed” its interim status hazardous waste management units. The following is a timeline of important dates in RCC’s regulatory history:

- November 24, 1986 – RCC submitted a RCRA Part A Permit Application.
- October 1988 – RCC submitted a RCRA Part B Permit Application.
- May 1989 – RCC submitted a Solid Waste Management Units (SWMUs) Review Report to be inserted in the Part B Permit Application dated October 1988. The Report identified 19 SWMUs.
- February 15, 1991 – Metcalf & Eddy, Inc., a contractor for the U.S. Environmental Protection Agency (EPA), conducted a RCRA Facility Assessment (RFA) for EPA at the facility.
- January 10, 1994 – RCC submitted revised RCRA Part A and Part B Permit Applications to the Department.

- December 27, 1996 – RCC submitted a revised RCRA Part A Permit Application to the Department and EPA.
- May 8, 1997 – RCC notified the Department by letter that it intended to initiate final closure of the hazardous waste operations at the facility.
- May 28, 1997 – The Department sent a letter notifying the facility that review of the Part B Permit Application had ceased because of the facility's May 8, 1997, notification of its intent to initiate closure.
- June 13, 1997 – RCC submitted a revised Closure Plan for its RCRA hazardous waste fuel facility, two cement kilns, and hazardous waste fuel feed system.
- June 27, 1997 – The Department commented on the revised Closure Plan submitted by the facility.
- August 8, 1997 – RCC submitted a revised Closure Plan, incorporating the comments provided by the Department.
- November 25, 1997 – The Department approved the revised Closure Plan.
- September 1, 1998 – RCC submitted a closure certification for the hazardous waste fuel facility, two cement kilns, and hazardous waste fuel feed system.
- October 7, 1998 – The Department conducted a focused hazardous waste compliance evaluation inspection at the facility. The scope of the inspection was confined to the closure requirements of the interim status hazardous waste management units. The inspection found that all the areas were closed in accordance with the approved closure plan.
- December 8, 1998 – The Department accepted the facility's closure certification.
- June 30, 1999 – The Department visited the facility to visually inspect all SWMUs identified in the RFA and Part B Permit Application. The Department determined that 11 SWMUs required corrective action.
- March 28, 2003 – The Department and the facility entered into an expedited corrective action Letter of Agreement.
- August 27, 2003 – RCC submitted a draft RCRA Facility Investigation (RFI) Work Plan to the Department.
- August 18, 2004 – The Department sent comments to the facility on the RFI Work Plan.

- October 4, 2004 – RCC submitted a revised RFI Work Plan and response to the Department’s comments.
- December 17, 2004 – The Department approved the revised RFI Work Plan.
- July 11, 2005 – RCC submitted the Expedited Corrective Action Program (ECAP) RFI Report to the Department and recommended additional Phase II investigation.
- October 18, 2005 – The Department completed and transmitted to RCC the RCRA Corrective Action Environmental Indicator (EI) Evaluations (CA750-Migration of Contaminated Groundwater Under Control and CA725-Current Human Exposures Under Control). Both evaluations were coded as “Yes”, affirming that migration of contaminated groundwater (no known releases to groundwater) and current human exposures were under control.
- March 21, 2006 – RCC received Department comments on the RFI Report.
- May 2009 – RCC submitted an ECAP RFI Addendum Report. The report recommended that the facility to execute an enforceable Environmental Covenant to address remaining environmental issues at the facility.
- October 15, 2010 – The Department sent comments to the facility on the ECAP RFI Addendum Report.
- November 4, 2010 – RCC submitted response to the Department’s comments on the ECAP RFI Addendum Report.
- February 15, 2011 – The Department approved the facility’s ECAP RFI Addendum Report.

In February 1991, Metcalf & Eddy, Incorporated, conducted an RFA, on behalf of EPA, to identify and gather information on actual and potential releases of hazardous waste and hazardous constituents from SWMUs and Areas of Concern (AOCs) at RCC. The final RFA Report identified 19 SWMUs and one AOC. A comprehensive listing of all SWMUs and AOC are as follows:

1. SWMU 1 – Truck Unloading Pad No. 1.
2. SWMU 2 – Truck Unloading Pad No. 2.
3. SWMU 3 – Pump Pad.
4. SWMU 4 – Sludge Emulsifying Unit.
5. SWMU 5 – Vapor Recovery System.

6. SWMU 6 – Drum Pad.
  7. SWMU 7 – Waste Oil Tank.
  8. SWMU 8 – Rail Pad.
  9. SWMU 9 – Tank Pad.
  10. SWMU 10 – Waste Fuel Storage Tank No. 1.
  11. SWMU 11 – Waste Fuel Storage Tank No. 2.
  12. SWMU 12 – Waste Fuel Storage Tank No. 3.
  13. SWMU 13 – Old Oil Pump House.
  14. SWMU 14 – Waste Fuel Laboratory.
  15. SWMU 15 – Pipe Bridge.
  16. SWMU 16 – Recirculating Parts Washer.
  17. SWMU 17 – Kiln Dust Disposal Area.
  18. SWMU 18 – Satellite Accumulation Containers & Absorbent Pads.
  19. SWMU 19 – Old Dust Disposal Area.
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1. AOC 1 – Diesel Fuel Storage Tank.

Whereas, the revised Part B Permit Application, dated January 1994, identified 21 SWMUs and are listed as follows:

1. SWMU 1 – Old Landfill Area.
2. SWMU 2 – Industrial Landfill.
3. SWMU 3 – Kiln Dust Landfill.
4. SWMU 4 – Original Hazardous Waste Facility.
5. SWMU 5 – Old Used Oil Storage Area.
6. SWMU 6 – Machine Shop Waste Oil Storage Area.
7. SWMU 7 – Oil Storage Facility.
8. SWMU 8 – Treatment, Storage, and Disposal Facility.
9. SWMU 9 – Gasoline Tank.
10. SWMU 10 – Fuel Oil Storage Tank.
11. SWMU 11 – Quarry Diesel Tank.

12. SWMU 12 – Diesel Fuel Storage Tank.
13. SWMU 13 – No. 1 Diesel Fuel Tank.
14. SWMU 14 – No. 2 Diesel Fuel Tank.
15. SWMU 15 – South Quarry Diesel Tanks.
16. SWMU 16 – Fire Pump Fuel Tank.
17. SWMU 17 – Gasoline Storage Tank.
18. SWMU 18 – Fuel Oil (Bunker C) Storage Tank.
19. SWMU 19 – Used Grease Mixer/Liquefier.
20. SWMU 20– Waste Oil Tank and Used Grease Drums.
21. SWMU 21 – Wastewater Treatment System.

Identification of the SWMUs referenced in the RFA does not correlate with those referenced in the Part B Permit Application. The SWMUs have been reclassified below due to inconsistencies in the identification of the SWMUs and AOC listed in the RFA and Part B Permit Application. A comprehensive listing of all SWMUs is reclassified as follows:

1. SWMU 1 – Old Landfill Area.
2. SWMU 2 – Industrial Landfill.
3. SWMU 3 – Kiln Dust Landfill.
4. SWMU 4 – Original Hazardous Waste Facility.
5. SWMU 5 – Waste Oil Storage Area.
6. SWMU 6 – Lube House.
7. SWMU 7 – Waste Oil Tank.
8. SWMU 8 – Gasoline Tank.
9. SWMU 9 – Fuel Oil Storage Tank.
10. SWMU 10 – Quarry Diesel Tank.
11. SWMU 11 – Diesel Fuel Storage Tank.
12. SWMU 12 – No. 1 Diesel Fuel Tank.
13. SWMU 13 – No. 2 Diesel Fuel Tank.
14. SWMU 14 – South Quarry Diesel Tank.
15. SWMU 15 – Fire Pump Fuel Tank.
16. SWMU 16 – Bullgear Grease Mixer.

17. SWMU 17 – Used Grease Drum.
18. SWMU 18 – Wastewater Treatment System.
19. SWMU 19 – Old Oil Pump House.
20. SWMU 20 a, b, c – Recirculating Parts Washers.
21. SWMU 21 – Rainwater Disposal Areas.

On June 30, 1999, the Department visited the facility to visually inspect all the SWMUs and AOC identified in the RFA and revised Part B Permit Application which potentially required further corrective action. Based upon the visual site inspection verifying the existing/current locations and the physical integrity of the SWMUs, the Department determined the following SWMUs required further corrective action:

1. SWMU 1 – Old Landfill Area.
2. SWMU 2 – Industrial Landfill.
3. SWMU 3 – Kiln Dust Landfill.
4. SWMU 4 – Original Hazardous Waste Facility.
5. SWMU 7 – Waste Oil Tank.
6. SWMU 9 – Fuel Oil Storage Tank.
7. SWMU 10 – Quarry Diesel Tank.
8. SWMU 11 – Diesel Fuel Storage Tank.
9. SWMU 16 – Bullgear Grease Mixer.
10. SWMU 17 – Used Grease Drum.
11. SWMU 19 – Old Oil Pump House.

Detailed information on each of these SWMUs is provided in the revised ECAP RFI Addendum Report, dated May 2009. As detailed in the RFI Work Plan, the facility collected and analyzed two discrete surface water samples; four grab sediment samples, 28 surficial soil samples, 25 subsurface soil samples, and 11 groundwater samples to determine the potential release of contaminants. The analytical results revealed the presence of contaminants at levels above the screening criteria in some of the soil/sediment samples collected from SWMU 1 - Old Landfill Area and SWMU 2/3 - Industrial Landfill and Kiln Dust Landfill. Groundwater samples did not show contamination above acceptable standards for the analyzed constituents.

A total of 14 samples, including sediment, subsurface soil, and surface water samples, were collected at and near SWMU 1 - Old Landfill Area. Arsenic was detected above the EPA Region 7 Regional Screening Levels (RSLs) for residential use and industrial use and the

Missouri Risk-Based Corrective Action (MRBCA) Table B-1 Lowest Default Target Levels (LDTLs) in the sediment samples. In addition, arsenic was detected above the EPA RSLs for residential use and industrial use, but below the MRBCA Table B-1 LDTLs in the soil sample. However, the arsenic concentrations were below background concentrations in Jefferson County. The background concentrations of arsenic were obtained from a data published in the USGS Mineral Resources On-Line Spatial Data, located online at <http://mrdata.usgs.gov/geochem/county.php?place=f29099&el=As&rf=central>. The risk analysis concluded that benzo(a)anthracene concentration exceeded the EPA RSL for Residential Soil use; however, the concentration was below the EPA RSL for Industrial Soil use and MRBCA Table B-1 LDTLs. One sediment sample detected benzo(a)pyrene above the EPA RSL for residential use and Industrial Soil use, but below the MRBCA Table B-1 LDTLs. The RFI Report proposed implementation of an Environmental Covenant with certain property activity and use limitations to address the presence of contaminants above unrestricted use levels.

Analytical results for SWMU 2/3 - Industrial Landfill and Kiln Dust Landfill were below analytical detection limits for semi-volatile organic compounds. Arsenic was detected in surficial soil and subsurface soil samples at SWMU 2/3 at concentrations above the EPA RSLs for residential use and industrial use and the MRBCA Table B-1 LDTLs. However, the concentrations were below the background concentrations of arsenic in Jefferson County. The background concentrations of arsenic were obtained from a data published in the USGS Mineral Resources On-Line Spatial Data, located online at <http://mrdata.usgs.gov/geochem/county.php?place=f29099&el=As&rf=central>. Based on the analytical results and data screening, no further action is required for SWMU 2/3 - the Industrial Landfill and Kiln Dust Landfill.

### **SUMMARY OF FACILITY RISKS**

The current land use for those portions of the property under evaluation is non-residential and land use is expected to remain non-residential for the foreseeable future. However, future residential land use is possible. Based on residential and non-residential land use scenarios, potential on-property receptors are current and future (business) workers, construction workers, and future residents. The Department's conclusions from the investigations performed to date at the facility and the discussion contained in the preceding paragraphs are:

1. There are no significant releases from the SWMUs to the soil, sediment, or groundwater at the facility.
2. SWMU 1- Old Landfill Area is capped with approximately four feet of rock and the facility's quarry haul road currently crosses this area.
3. Due to the uncertainties inherent in environmental investigations, estimates and risk management, the Department and the facility propose to execute an Environmental Covenant, which will be recorded in the chain of title for the property, as an additional protective measure. The covenant will meet the requirements of the Missouri

Environmental Covenants Act and restrict the land use at the SWMU 1- Old Landfill Area to non-residential. This will reduce the potential for future exposure to residual contaminants that could pose human health risks at SWMU1 – Old Landfill Area.

### **PROPOSED FINAL REMEDY**

With the exception of SWMU 1- Old Landfill Area, the Department is proposing that no further corrective action is needed at the RCC facility. An enforceable Environmental Covenant with specific use limitations for SWMU 1 - Old Landfill Area is proposed as the final remedy for that area at the facility.

A draft Environmental Covenant has been prepared and will be executed by the Department and RCC upon approval of the final remedy. The Environmental Covenant will be recorded in the chain of title for the property. The covenant will restrict the property to non-residential use, prohibit soil disturbance without written permission from the Department, and require notice to construction workers performing work in this area.

### **REGULATORY MECHANISM**

Once the enforceable Environmental Covenant containing use limitations for SWMU 1 - Old Landfill Area is in place, the Department proposes to release RCC from further regulation as a former interim status hazardous waste treatment, storage, and disposal facility subject to the corrective action requirements of the Missouri Hazardous Waste Management Law and regulations.

### **PUBLIC PARTICIPATION**

The Department invites the public to review and offer written comments on the proposed final remedy and regulatory release from August 24, 2013 to September 23, 2013. During the 30-day public comment period, anyone can request a public hearing about the proposed final remedy and regulatory release. To request a public hearing, please submit a written request to Sushmita Sharma, P.E., at the address below. The hearing request must state what issues are to be brought up during the hearing.

Comments on the proposed final remedy and regulatory release are more effective if they point out legal or technical issues or provide information that is not in the record. Please send written comments to Sushmita Sharma, Missouri Department of Natural Resources, 500 NE Colbern Road, Lee's Summit, MO 64086, or by e-mail to [sushmita.sharma@dnr.mo.gov](mailto:sushmita.sharma@dnr.mo.gov).

At the end of the public comment period, the Department will review all written comments and any comments given at the public hearing, if one was held. The Department will prepare a written summary and response to all comments and explain how each was addressed. The Summary and Response will be entered into the Administrative Record for the RCC facility. The Department will approve a final remedy only after the public comment period has ended, all

comments have been reviewed, and written responses have been prepared to address the comments. The Department may modify the proposed final remedy or select another remedy based on new information or technical or legal issues brought up by the comments received during the public comment period. The facility will be released from its corrective action obligations only after the approved final remedy has been implemented.

### **MORE INFORMATION**

The public can review and copy the Administrative Record, which includes all correspondence and reports relevant to the remedy selection, at the following locations:

Festus Public Library\*  
400 West Main Street  
Festus, Missouri  
Phone: 636-937-2017  
\*During normal business hours.

Missouri Department of Natural Resources\*  
1730 E. Elm St. (lower level)  
Jefferson City, Missouri  
Phone: (573) 751-3043  
\*File reviews must be made through a  
sunshine request. Please visit  
[www.dnr.mo.gov/sunshinerequests.htm](http://www.dnr.mo.gov/sunshinerequests.htm).

For more information about the proposed final remedy and regulatory release, please contact Ms. Sharma by telephone at (816) 251-0703 or 1-800-361-4827. Hearing- and speech-impaired individuals may reach Ms. Sharma through Relay Missouri at 1-800-735-2966.