



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

OCT 31 2016

Ms. Kyra L. Moore, Director
Air Pollution Control Program
Missouri Department of Natural Resources
PO Box 176
Jefferson City, Missouri 65102

RE: Draft New Source Review Prevention of Significant Deterioration Permit
Buzzi-Unicem USA –River Cement Company (ID # 099-0002)
Project No. 2015-03-005

Dear Ms. Moore:

A draft of the New Source Review Permit, for Buzzi Unicem USA—River Cement Company in Festus (Buzzi-River Cement), was placed on public notice September 23, 2016 by the Missouri Department of Natural Resources; Air Pollution Control Program (MDNR). The permit requests an increase in clinker production rate from 2,220,000 to 2,500,000 tons per year. The United States Environmental Protection Agency, Region 7 (EPA) has reviewed this draft construction permit and provides the following comments.

First, in the process of making application for the modification of a major stationary source, the permittee shall determine if the modification will result in a significant increase in emissions of a regulated pollutant(s) (Step 1) and if the modification results in a significant net emissions increase of that / those pollutants from the major stationary source (Step 2). The application for Permit to Construct, submitted by Buzzi-River Cement Plant in February 2015 and supplemented in a submittal of July 2015, provides an analyses which indicates this project will result in a significant increase in carbon monoxide (CO) and greenhouse gasses (CO₂e) and a significant net emissions increase in both CO and CO₂e. However, the significant increase analysis (Step 1) and the significant net increase analysis (Step 2) as presented in the emissions / controls evaluation portion of the draft Permit to Construct, proposed by MDNR, does include enough of the specific details of the Step 1 and Step 2 analyses for an adequate public review.

Additionally, the description of the permittees baseline actual emission inventory methodology, detailed in their February 2015 application, is significantly flawed, and the potential issues appear to have been corrected during the preparation of this draft Permit to Construct which is on public notice. However, MDNR does not describe the transitioning of the baseline actual emissions (BAE) between the Buzzi-River Cement application of February 2015 and the draft Permit to Construct. Therefore, EPA recommends MDNR include, in the draft permit fact sheet, an enhanced detail discussion of the NSR applicability analysis and the change(s) in the emission inventory methodology between the application and permit.



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Second, Section 4.3: *Contemporaneous Emission Inventory* in the Buzzi-River Cement Permit to Construct application of February 2015, indicates the permittee is / has upgraded the baghouses for four (4) existing sources in order to increase the control efficiency. Buzzi-River Cement has utilized this control efficiency improvement in their determination of net significant emissions increase of PM, PM10 and PM2.5, by taking credit for this efficiency improvement as a contemporaneous emission decrease. MDNR's draft Permit to Construct includes acceptance of the baghouse efficiency upgrades, however, neither the Buzzi-River Cement application for Permit to Construct nor the MDNR draft Permit to Construct provide any specific details regarding the upgrades to the four (4) baghouses. MDNR should ensure that the public record for the final permit provides specific information on the efficiency improvements for each of the four (4) baghouses. Without specific review of the efficiency increase details, the ability to include as a contemporaneous decrease in emissions may be questionable.

Third, Permit to Construct Application for a Major Modification to the Festus Plant, submitted by Buzzi-River Cement in February 2015, includes a Best Available Control Technology (BACT) analysis for both carbon monoxide (CO) and greenhouse gasses as CO₂e (GHG). BACT analysis is a 5-step top down review procedure to identify the optimum cost effective control technology to be adopted for each of the specific pollutants. Buzzi-River Cement determined that GHG BACT analysis were necessary for their preheater / precalciner kiln system; an 815 horsepower diesel-fired emergency generator; and the Finish Mill #3 Furnace. Buzzi-River Cement application presents a detailed 5-step CO₂e and CO BACT analysis for the preheater / precalciner kiln system, however, Buzzi-River Cement cuts short the CO₂e and CO BACT 5-step process for the emergency generator and the Finish Mill #3 Furnace and presents their CO₂e and CO BACT solution without executing the 5-step BACT analysis. MDNR should ensure that the public record for the final permit describes the full 5-step CO₂e and CO BACT analysis for the emergency generator and Finish Mill #3 Furnace.

Fourth, the GHG BACT analysis for the preheater / precalciner kiln system, included in the draft Permit to Construct, has a discussion of carbon capture and sequestration (CCS) as a technology for reducing / controlling GHG emissions MDNR concludes that "in the limited amount of BACT analyses performed for Portland Cement Plants, CCS that have been considered technically feasible has always been considered infeasible due to environmental, energy or economic reasons." EPA notes that cost issues related to CCS implementation may in fact be a valid reason to eliminate CCS from BACT consideration, but a full cost analysis should be conducted under step 4 of the top-down BACT analysis to support the decision.

Fifth, Special Condition 4. C.; D.; and E. provide GHG-CO₂e BACT limits on the preheater / precalciner kiln system of 0.95 tons CO₂e/ton of clinker based on a 12-month rolling average; 18,057.0 tons CO₂e/year from the Finish Mill #3 Furnace based on 12-month rolling total; and 241 tons CO₂e/year from the emergency generator based on a 12-month rolling total, respectively. However, these special conditions are unclear as to the frequency of the CO₂e determination and how often the 12-month totals are rolled. EPA recommends MDNR provide additional clarity as to the permittee's frequency of CO₂e emission determination and how often the data is rolled.

Sixth, Special Condition 10. C. requires the permittee to maintain baghouse pressure drop within the values required for proper bag house operation. It appears that MDNR did not include the method for the permittee to use to determine this pressure drop range and there are no required actions to be undertaken by the permittee when the pressure drop is outside the proper range. EPA recommends MDNR provide the pressure drop determination methodology and corrective actions to be taken by the permittee when pressure drop range is violated.

Seventh, Special Condition 12. C. requires the permittee to “periodically water, wash or otherwise clean all of the paved portions of haul roads as necessary.” Special Condition 12 doesn’t include the action(s) that would trigger the need for the permittee to periodically water, wash or otherwise clean the haul roads. EPA recommends MDNR specify the conditions whereby the permittee will have to water, wash or otherwise clean the hauls roads.

Finally, Table 18: *Ranking of Control Effectiveness* is included within Step 3 of the CO BACT analysis and provides a ranking of the control technologies considered CO BACT by control effectiveness. Additionally, Table 20: *Ranking of Control Effectiveness* is included within Step 3 of the GHG BACT analysis and provides a ranking of the control technologies considered GHG BACT by control effectiveness. However, there does not appear to be any references provided, with either Table 18 or Table 20, to support the data included within the tables. EPA recommends MDNR specify the source of the data used to rank the control technologies by control effectiveness.

We appreciate the opportunity to provide what we hope you will find to be a constructive comments. If you have any questions, please contact Bob Cheever by phone at (913) 551-7980 or email at cheever.robert@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Smith', is positioned above the typed name.

Mark A Smith, Chief
Air Permitting and Compliance Branch
EPA Region 7