

## **Appendix R**

**Holcim-Clarksville BART Draft Consent Agreement**

**August 18, 2008**



Matt Blunt, Governor • Doyle Childers, Director

## DEPARTMENT OF NATURAL RESOURCES

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

AUG 18 2008

Mr. Alan Greer  
Plant Manager  
Holcim – Clarksville  
14738 Highway 79  
Clarksville, MO 63336

Re: Best Available Retrofit Technology (BART) finding and Consent Agreement for Clarksville's kiln system

Dear Mr. Greer:

The following is a summary of the Department of Natural Resources finding for BART on the Clarksville kiln system. With respect to oxides of nitrogen (NO<sub>x</sub>), the department has received a portion of this study from CINAR Company detailing the emission reductions achieved by mid-kiln firing of tire-derived fuel (TDF). The department is requesting the full study to complete the necessary technical review. Based on confirmation of the results from this study, the department will likely find that mid-kiln firing of TDF will result in a cost-effective control on NO<sub>x</sub> that will satisfy BART for Holcim-Clarksville. This finding is supported by the following:

- (1) the kiln system already utilizes low-NO<sub>x</sub> burners in the kiln;
- (2) the kiln system already utilizes cement kiln dust insufflation for NO<sub>x</sub> control;
- (3) the department concurs with the finding of technical infeasibility for flue gas recirculation and selective catalytic reduction due to lack of commercial application for these technologies on the type of kiln system operated at Clarksville (long, wet);
- (4) the department concurs that selective non-catalytic reduction (SNCR) and mid-kiln firing of tires are technically feasible (with some caveats regarding SNCR performance in a long, wet kiln system); and
- (5) the cost effectiveness of the mid-kiln firing NO<sub>x</sub> control and the increased certainty of emission reduction supports its choice over SNCR in this specific case.

The evaluation for control of sulfur dioxide (SO<sub>2</sub>) for the Clarksville kiln system included fuel substitution, raw material substitution, dry scrubbing, and wet scrubbing. The department concurs with your finding that fuel substitution and dry/wet scrubbing are technically feasible for SO<sub>2</sub> control. The department has some reservations with the scrubbing technology cost analysis used in your proposal. However, the department's analyses demonstrate the cost of scrubbing technology would significantly impact the Clarksville kiln's ability to compete in the cement production market (e.g. nearly \$20/ton clinker produced). Therefore, the department has found



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that switching to a lower sulfur fuel with the use of TDF will satisfy the SO<sub>2</sub> BART requirements for the Clarksville kiln system.

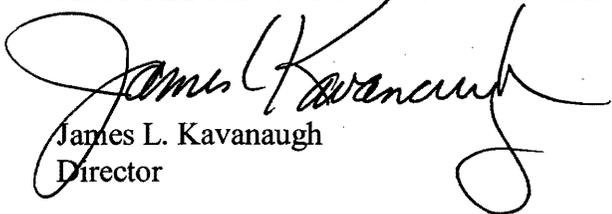
The enclosed draft consent agreement documents the department's findings for BART. The department has determined the emission limits in the agreement should be expressed as 30-day rolling averages to allow for operational variability in the kiln system and to remain consistent with the averaging time utilized by the Environmental Protection Agency's (EPA) presumptive BART findings for electric generating units. This draft agreement has not been shared with EPA Region VII staff and will undergo their review before signature to ensure it is "approvable" for inclusion in the regional haze State Implementation Plan.

There are two specific issues in the agreement for your technical review: (1) missing continuous emission monitor data substitution and (2) calibration/quality assurance of the emission monitoring system. These two provisions have been designed to encourage a discussion between Holcim and the department regarding these important monitoring issues.

Overall, Holcim's willingness to provide the necessary information to address the federal regional haze requirements has been encouraging. At this point, we look forward to finalizing the agreement and incorporating it into the regional haze State Implementation Plan. If you have questions about the emission limits or other technical details, please contact Jeffrey D. Bennett with the department's Air Pollution Control Program at P.O. Box 176, Jefferson City, Missouri 65102 or by telephone at (573) 751-8406. If you have questions regarding the legal requirements of the agreement, please contact Sarah Callier with the department's Division of Environmental Quality at (573) 522-9911.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



James L. Kavanaugh  
Director

JLK:jbt

Enclosure

c: Ms. Sarah Callier, Division of Environmental Quality, Legal Counsel