

RICK SNYDER

GOVERNOR

STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY GAYLORD FIELD OFFICE



DAN WYANT DIRECTOR

July 14, 2014

Mr. Bob Budnik Area Environment and Public Affairs Manager Lafarge Midwest, Inc. 1435 Ford Avenue Alpena, MI 49707

SRN: B1477, Alpena County

Dear Mr. Budnik:

SUBJECT: Sampling Plan for Mass Balance Calculations for Mercury Emissions

The Department of Environmental Quality (DEQ), Air Quality Division (AQD), reviewed the Sampling Plan for Mass Balance Calculations for Mercury Emissions (plan) for the Lafarge Midwest, Inc. facility located in Alpena, Alpena County, Michigan. The plan was received by the AQD on June 9, 2014. This letter provides the AQD District Supervisor's approval of the subject plan which replaces any previous plan.

If you have any questions on this issue, please contact Gloria Torello, Environmental Quality Analyst, AQD at 989-705-3410.

Sincerely,

Gloria Inello for

Janis Ransom Cadillac District Supervisor Air Quality Division 231-499-9235

cc/via email: Mr. Joshua Strapec cc: Ms. Gloria Torello, DEQ



B1477 Rec'é 4-9-14

CODA

June 9, 2014

Ms. Gloria Torello Michigan DEQ, AQD 2100 W. M-32 Gaylord, MI 49735

RE: Sampling Plan for Mass Balance Calculations for Hg Emissions for PTI # 195-10B

Dear Ms. Torello:

Submitted for your review and approval, the Lafarge Alpena Plant is submitting this sampling plan in anticipation of commencing material sampling on July 9, 2014 for the purposes of determining emissions by mass balance per PTI # 195-10B. Lafarge will determine mercury emissions for FG Mercury on a monthly and 12-month rolling time period, as determined at the end of each calendar month, for the purpose of determining compliance with the mercury emission limit as listed in Section I (1) and approval of the sampling plan identified in Section V (2) in PTI # 195-10B. The following sampling procedure will be used:

1. Every two weeks samples of the kiln raw feed used, fuels used, wasted cement kiln dust (CKD), clinker, and synthetic gypsum will be collected during normal operating conditions.

2. Samples of each material will be composited and analyzed to determine the total monthly mercury concentration of the materials being processed.

3. All sampling and methods used to determine mercury concentrations will be in accordance with U.S. EPA sampling and analysis protocols.

4. The mass balance equation below will be used to calculate monthly mercury emissions based on the mercury concentrations determined from analysis of the samples collected as described above:

MCMI - MCMO = MCME

Where:



MCMI = The Monthly Calculated Mercury Input (pounds per month) – The mercury entering the process will be determined by the sum of the product of the mercury concentration of the kiln raw feed used and the mass of the kiln raw feed used and the product of the mercury concentration of each fuel used and the mass of each fuel used during the month and sampled every two weeks and composited monthly.

MCMO = The Monthly Calculated Mercury Output (pounds per month) – The mercury leaving the process will be the sum of the products of the mercury concentration of the clinker, permanently removed CKD, and synthetic gypsum for the month, and the respective mass of each material produced for the month and sampled every two weeks and composited monthly.

MCME = The Monthly Calculated Mercury Emissions (pounds per month) - The mass of mercury emitted from FG Mercury will be the Monthly Calculated Mercury Input minus the Monthly Calculated Mercury Output. The consecutive 12-month mercury emission rate will be the sum of the individual monthly records for the current month and the preceding eleven months (pounds of mercury per 12-month rolling time period) after 12 months of initial data has been collected commencing on July 9, 2014.

Production, sampling and testing records, including calculations and data, will be completed and maintained by the permittee for 5 years and shall be made available to the Department upon request.

Please find attached an example spreadsheet for the mass balance emission calculation as determined from material sampling.

If you have any questions or require further information please contact me at 989-358-3321.

Sincerely,

Lafarge Midwest Inc.

Bob Birlin

Bob Budnik Area Environment and Public Affairs Manager

ALPENA PLANT 1435 Ford Avenue, Alpena, MI 49707 OFFICE: (989) 354-4171 FAX: (989) 354-2223



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Alpena Plant Calculated Mercury Emissions

(COPY/PASTE VALUES INTO REPORT) enter values in these cells

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