

# 2016 Lafarge Bath Emissions Monthly Report

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Report last updated on: January 23, 2017

## Introduction

The intent of this report is to provide the public with information about the Bath plant's emissions and work underway to reduce them. This report has been generated due to a request which came from the Kingston Faith and Justice Coalition for further details on the Lafarge Bath plant emissions. The data is obtained from a Continuous Emissions Monitoring system (CEMS) at the Lafarge Bath facility. The report will be posted monthly on the Bath website <http://www.bathcementplant.com/>

## Continuous Emissions Monitoring System

The CEMS system monitors kiln emissions for Nitrogen oxides (NOx) (Table 1) and Sulphur dioxide (SO<sub>2</sub>) (Table 2). The current CEMS have two identical analyzers and two identical flow meters, one installed on each ID fan exit duct. There are two opacity meters on the same ducts that the CEMS analyzers are on.

The CEMS system is calibrated weekly, has quarterly gas verifications using certified gas cylinders, has an annual Relative Accuracy Test Audit (RATA), has quarterly flow audits, and an annual third party quality assurance audit on the entire reporting system. The opacity meter is calibrated at least weekly.

Opacity (Table 3) is defined as "the degree to which a visible emission (ie., cement kiln dust) obstructs the passage of light." An "opacity exceedance" is an opacity value greater than 20% for any two 6 minute periods within a 30 minute period OR anytime the average opacity exceeds 40% for a single six minute period.

CO<sub>2</sub> emissions - Information regarding low carbon fuels life cycle assessment can be found on the Cement2020.org website:

<http://www.cement2020.org/publication/all/219>

**Table 1: Monthly summary of Nitrogen Oxides (NOx) emissions (2016)**

Month	NOx Average (ppm)	NOx Typical Range (ppm)	In Compliance Yes/No
January	750.3	600-800	Yes
February	772.4	600-800	Yes
March	637.1	600-800	Yes
April	703.4	600-800	Yes
May	704.1	600-800	Yes
June	686.0	600-800	Yes
July	665.7	600-800	Yes
August	654.8	600-800	Yes
September	707.9	600-800	Yes
October	632.1	600-800	Yes
November	615.2	600-800	Yes
December	651.1	600-800	Yes

**Table 2: Monthly summary of Sulphur Dioxide (SO2) emissions (2016)**

	SO2 Average (ppm)	SO2 Typical Range (ppm)	In Compliance Yes/No
January	64.5	30-70	Yes
February	71.4	30-70	Yes
March	82.1	30-70	Yes
April	65.6	30-70	Yes
May	49.0	30-70	Yes
June	52.7	30-70	Yes
July	45.1	30-70	Yes
August	39.6	30-70	Yes
September	35.7	30-70	Yes
October	35.3	30-70	Yes
November	51.1	30-70	Yes
December	53.6	30-70	Yes

**Table 3: Monthly summary of Opacity emissions (2016)**

	Opacity Average (%)	Opacity Typical Range (%)	In Compliance Yes/No
January	11.4	8-12	Yes
February	9.2	8-12	Yes
March	7.2	8-12	Yes
April	9.7	8-12	Yes
May	11.1	8-12	Yes
June	7.6	8-12	Yes
July	8.2	8-12	Yes
August	8.8	8-12	Yes
September	10.3	8-12	Yes
October	11.5	8-12	Yes
November	11.6	8-12	Yes
December	11.7	8-12	Yes

\*Opacity MOE limit = 20 % maximum

## Work Activities to Reduce Emissions

Work which has been previously done to reduce emissions includes the following:

- Use of Low Carbon fuels

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