

Executive Summary

St. Marys Cement U.S. LLC (SMC) operates a Portland cement manufacturing facility (SRN B1559) located at 16000 Bells Bay Road, Charlevoix, Michigan (see Figure 1). Processes at the facility consist of quarry operations, primary and secondary crushing systems, raw material feed receiving and storage areas, raw mill grinding and drying, coal and petroleum coke (pet coke) receiving/storage/crushing areas; a calciner (where calcining begins and raw feed preheating occurs), a rotating kiln (where cement clinker is produced), clinker cooler, clinker storage systems, finish mill systems, and a cement storage and shipping facility. This plant is currently operating under ROP MI-ROP-B1559-2014 and PTI 140-15B. NSPS 40 CFR Part 60, Subpart Y and Special Condition V.8 of the PTI require the stack associated with the solid fuel processing mill (EUSOLIDFUELSYSTEM) to be observed to demonstrate compliance with a visible emission (or VE) limit. NESHAP 40 CFR Part 63, Subpart LLL and Special Condition V.1 of the ROP require Method 9 observations for the four finish mills (FGFINISHMILLS) to demonstrate their compliance with the permitted opacity limit.

Fishbeck was retained by SMC to conduct a USEPA Method 9 VE Determination (opacity) for the applicable equipment. The testing took place on September 22, 2021.

This VE Report includes a Site Location Map (Figure 1), Site Plan (Figure 2), a regulatory requirement review, the VE results (Appendix 1), and a VE determination summary table (Table 1).

At the time of the observations, the production rates of materials for Finish Mills 1, 2, 3, and 4, and the solid fuel processing mill were approximately 56 tph, 75 tph, 46 tph, 96 tph, and 21 tph, respectively. These production rates are considered the *routine operating rates* for this equipment. Results of the Method 9 VE observations indicate the sources tested are in compliance with ROP MI-ROP-B1559-2014 and PTI 140-15B.

Regulations

SMC operates a Portland cement manufacturing facility. NESHAP Subpart LLL sets hazardous air pollutant standards for the Portland cement manufacturing industry. NESHAP Subpart LLL and the ROP require that Method 9 VE observations be conducted on the finish mills every 12 months. The duration of the Method 9 VE observation may be reduced from 3 hours to 1 hour if there are no individual readings greater than 10% opacity and if there are no more than 3 readings of 10% opacity in the first 1-hour period.

NSPS Subpart Y sets standards of performance for coal preparation and processing plants – EUSOLIDFUELSYSTEM is subject to this subpart. NSPS Subpart Y and the PTI require that a performance test be performed on EUSOLIDFUELSYSTEM. Method 9 must be used to determine compliance with the opacity standard; the duration of the test shall be 1 hour.

The distance between the observer and emission source is indicated on the VE Observation Forms, which are provided in Appendix 1.

Figure 2 illustrates the locations of the points observed at the facility.

VE Test Results

Figure 2 illustrates the facility layout and tested stack locations at SMC. The Visible Emissions Evaluator was most recently certified by Eastern Technical Associates in April 2021. Certification is provided in Appendix 2.

On the day prior to the VE evaluation, the temperature was in the upper 50s (°F), with no rainfall. During the VE observations, the sky was partly cloudy, with the wind blowing from the north. There was no measurable rainfall during the VE determination. Each point was read for an hour period and concurrently, in accordance with the regulations.

Table 1 summarizes the results; Appendix 1 contains the VE Observation Forms used during the Method 9 VE determination. Results indicate the affected source at the facility is in compliance with NSPS 40 CFR Part 60, Subpart Y; NESHAP 40 CFR Part 63, Subpart LLL; ROP MI-ROP-B1559-2014; and PTI 140-15B.

Table 1 – Method 9 Visible Emission Test Results

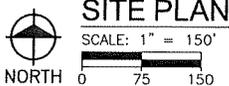
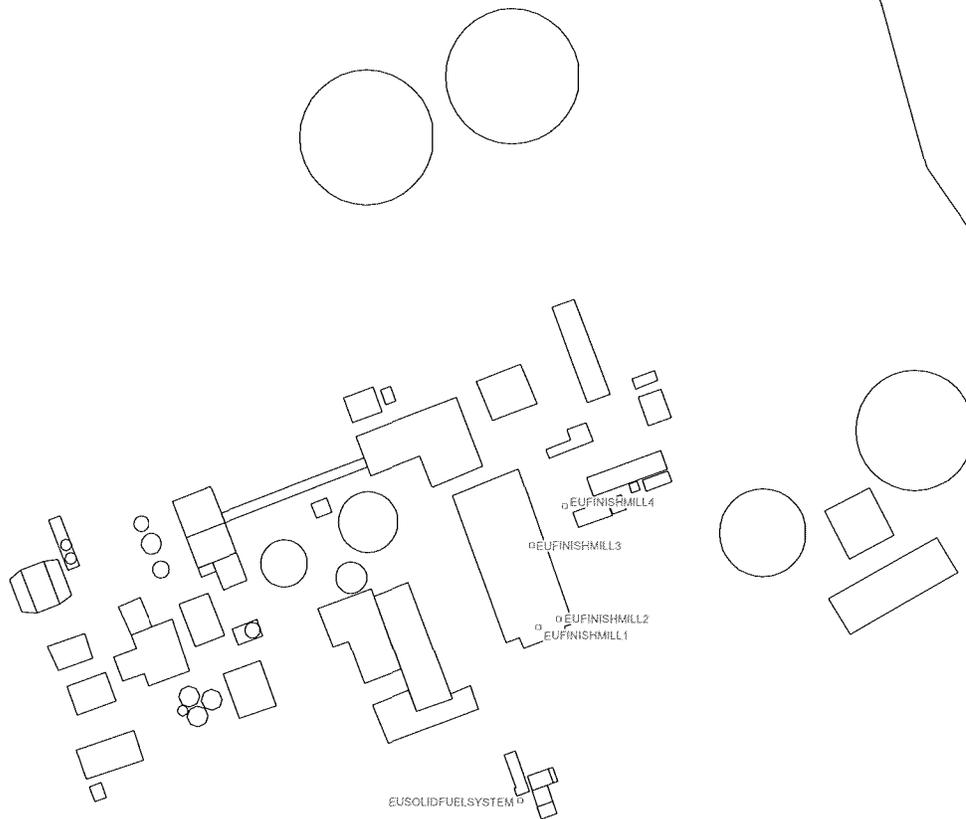
St. Marys Cement U.S. LLC (SRN B1559)
 16000 Bells Bay Road, Charlevoix, Michigan

| Process Equipment | Device ID | Average Opacity of 6-Minute Averages |
|----------------------------|-------------------|--------------------------------------|
| Finish Mill 1 | EUFINISHMILL1 | 0% |
| Finish Mill 2 | EUFINISHMILL2 | 0% |
| Finish Mill 3 | EUFINISHMILL3 | 0% |
| Finish Mill 4 | EUFINISHMILL4 | 0% |
| Solid Fuel Processing Mill | EUSOLIDFUELSYSTEM | 0% |

Testing took place on September 22, 2021

Figures

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PROJECT NO.
210166
FIGURE NO.

St. Marys Cement
16000 Bells Bay Road, Charlevoix, Michigan

Method 9 Test

Hard copy is
11/16/21
printed. Slightly
different than
graphic quality may
not be accurate for
use in field.

