



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Carmeuse Lime Inc. Grand River Operations, Grand River, Ohio

FROM: Patrick Miller, Environmental Engineer
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Carmeuse Lime Inc. Grand River Operations

Facility Location: 15 Williams Street, Grand River, Ohio 44045

Date of Inspection: 2/7/2024

EPA Inspector(s):

1. Patrick Miller
2. Matthew Walters

Other Attendees:

1. Steve Pounds, Plant Production Supervisor
2. Justin Bowers, Area Environmental Manager via phone
3. Mark Zagrocki, Production Associate
4. Adam Woodruff, Process Engineer

Contact Email Address: justin.bowers@carmeuse.com

Purpose of Inspection: Determine compliance with opacity limits on visible emissions from kilns, sulfur content of fuel, and operation of Kiln #5 electrostatic precipitator.

Facility Type: Lime kiln

Facility Name: Carmeuse Lime Inc. Grand River Operations
Facility Location: 15 Williams Street, Grand River, OH 44045
Date of Inspection: February 7, 2024

Regulations Central to Inspection: 40 CFR Part 63, Subpart AAAAA Table 6 Opacity Limit: 15% as a 6-minute average, Title V Permits P0118764 (Effective 08/23/2017) and P0131727 (Effective 2/14/24) Conditions C.2(d)(2)(a), C.2(d)(4)-(6), C.3.(c)(4), C.3(d)(2)(a), and C.3(d)(4)-(6).

Arrival Time: 8:45 AM

Departure Time: 11:05 AM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a Small Business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Carmeuse personnel unless otherwise noted.

Process Description:

Carmeuse Lime Inc. Grand River Operations (Carmeuse) operates two lime kilns (#4 and #5) at its Grand River, Ohio facility. Each kiln is capable of burning natural gas, coal, and an engineered fuel. While the facility is permitted to use recycled product oil as fuel, there is currently no infrastructure or equipment in place to allow the kilns to burn it. The ratio of fuel being burned depends on the type of stone in the kiln and fuel availability. Solid fuel samples are taken regularly, and a composite of each fuel type is analyzed monthly. Information is provided by the supplier for the natural gas analysis.

Kiln #4 is controlled by a baghouse. Differential pressure is recorded hourly as an instantaneous reading. Differential pressure of the entire baghouse and across the four modules is monitored in the control room and set points alarmed. Operators maintain the differential pressure with dampers and can change the speed of the induced draft fans.

Kiln #5 is controlled by an electrostatic precipitator (ESP). The ESP is monitored from the electrical maintenance shop. Operators cannot monitor or control the ESP from the control room. Carbon monoxide (CO) is monitored within the exhaust gas stream from Kiln #5 upstream of the ESP. If the CO concentration gets too high and poses an explosion hazard in the ESP, the fuel is automatically shutoff at the kiln.

Kiln #4 baghouse and Kiln #5 ESP exhaust to a common stack. The opacity of visible emissions from the common stack are monitored with a continuous opacity monitoring system (COMS). The opacity is monitored in the control room. There is an alarm when the opacity reaches 15% as a 6-minute average.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

During the inspection EPA observed the operator control room. Opacity monitored by the COMS in the common stack was 3.46% as a 6-minute average.

EPA also observed the ESP control system. Primary and secondary voltage (kV) and amperage (mA) of the four ESP fields is monitored in the electrical maintenance office. If opacity as measured by the COMS increases, electrical maintenance personnel check if ESP fields are tripped or if rappers are not operating and reset them. Annual maintenance is performed on the ESP by a contractor (Neundorfer).

Operators indicated that opacity is monitored closely and drives inspections and maintenance of both the baghouse and ESP. If opacity increases, the baghouse compartment differential pressures and ESP fields are checked. Opacity values are noted in daily operator and maintenance logs.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- COMS data records for percent opacity on an instantaneous (one-minute) and 6-minute block average for the stack serving Lime Kilns #4 and #5 from August 1, 2023 to February 7, 2024 (Title V Permit Conditions C.2(d)(2)(a) and C.3(d)(2)(a));
- Monthly composite coal and engineered fuel analyses for sulfur content and heat content for the past 6 months (Title V Permit Conditions C.2(d)(4)-(5) and C.3(d)(4)-(5));
- All quarterly deviation reports and excess emissions reports submitted to OEPA for operations since Q1 2022;
- Most recent stack test reports for Lime Kiln #4 and Lime Kiln #5;
- Operation and maintenance plan for ESP;
- Most recent Neundorfer ESP inspection and maintenance report; and
- Neundorfer ESP report from March 2021 maintenance activity.

Concerns: EPA discussed concerns that the opacity alarm set point is 15% as a 6-minute average which is the opacity limit in the permit. By the time there is an alarm, there is a possible violation of the opacity limit.

Facility Name: Carmeuse Lime Inc. Grand River Operations
Facility Location: 15 Williams Street, Grand River, OH 44045
Date of Inspection: February 7, 2024

DIGITAL SIGNATURES

Report Author: **PATRICK MILLER**  Digitally signed by PATRICK MILLER
Date: 2024.04.02 12:23:43 -05'00'

Section Supervisor: **BRIAN DICKENS**  Digitally signed by BRIAN DICKENS
Date: 2024.04.02 15:34:56 -05'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

Facility Name: Carmeuse Lime Inc. Grand River Operations
Facility Location: 15 Williams Street, Grand River, OH 44045
Date of Inspection: February 7, 2024

APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Patrick Miller **Archival Record Location:**
"https://usepa.sharepoint.com/:f:/r/sites/R5_Work/r5erc/ecad/AECAB%20Library/Enf_Carmeuse%20Grand%20River_OH_24/Inspection%202024.02.07/Photos?csf=1&web=1&e=1GHqzT"

Image Number	File Name	Date and Time (EST)	Latitude and Longitude	Description of Image
1	PM_2024.02.07 (1).JPG	2/7/2024 10:07 AM		Alternative Fuel Storage
2	PM_2024.02.07 (2).JPG	2/7/2024 10:14 AM		Kiln #5 Coal Mill
3	PM_2024.02.07 (3).JPG	2/7/2024 10:41 AM		ESP Control Screen
4	PM_2024.02.07 (4).JPG	2/7/2024 10:41 AM		ESP Control Screen + TR5-1N screen
5	PM_2024.02.07 (5).JPG	2/7/2024 10:41 AM		COMS opacity digital display