

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B236267690

FACILITY: Carmeuse Lime & Stone Drummond Island		SRN / ID: B2362
LOCATION: PO BOX 529, DRUMMOND IS		DISTRICT: Marquette
CITY: DRUMMOND IS		COUNTY: CHIPPEWA
CONTACT: Roger Nash , Site Operations Manager		ACTIVITY DATE: 05/23/2023
STAFF: Lauren Luce	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Targeted Inspection FY23		
RESOLVED COMPLAINTS:		

Facility: Carmeuse Lime & Stone (SRN: B2362)

Location: 23311 East Haul Road, Drummond Island, MI 49726

Contact: Roger Nash, Site Operations Manager, 906-493-5211 Ext.12

Chris Martin, Senior Environmental Manager, 519-535-0530

Regulatory Authority

Under the Authority of Section 5526 of Part 55 of NREPA, the Department of Environment, Great Lakes, and Energy may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

Facility Description

Carmeuse Lime & Stone is a dolomite lime quarry and mill located on Drummond Island, MI. The facility produces and ships out roughly 1.5 million tons of crushed dolomite limestone each year. The limestone aggregate is used in steel making, glass making, paper making, and other industries throughout the Great Lakes region.

Drummond Dolomite Incorporated began producing in the early 1940s, and by 1949 was shipping out 2.3 million tons of dolomite a year. The quarry was incorporated by Bethlehem Steel Corporation in 1968 and then by Osborne Materials Company in 1988. The quarry is now currently owned and operated by Carmeuse.

Drummond Dolomite is a 3,000-acre property composing of a quarry, mill, and haul road. Operations at the source include drilling, blasting, hauling, crushing, screening, and conveying of limestone aggregate. All crushed aggregate produced is shipped off-site by freighters.

Emissions

Stone quarrying and processing operations can cause point and fugitive emissions of PM, PM10, and PM2.5. Emissions from process operations are considered fugitive unless the source of emissions is vented through an air pollution control device or contained and emitted through a force-air vent or stack. Fugitive sources of emissions are generated from machine movement and wind erosion. Emission sources can include hauling, crushing, screening, and transferring of material. The primary factors affecting PM emissions are wind and the moisture content of the

material. Moisture on the surface of the material can cause fine particles to adhere resulting in a dust suppression effect.

Emissions Reporting

The facility is subject to the federal New Source Performance Standards (NSPS) Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants and is required to report its annual emissions to Michigan Air Emissions Reporting System (MAERS). The following table lists the source total emissions for the reporting year 2022.

Pollutant	Emissions (PPY)	Emission (TPY)
PM 10 FLTRBL	17,986	8.99

Compliance History

The facility was last inspected in June 2021 and received a violation notice at that time for fugitive dust. Visible emissions exceeded allowable limits on the haul road and fugitive dust was affecting nearby properties. The facility believed the cause of the dust was from storage piles of material from a recent dredging project. An updated fugitive dust compliance plan was provided by the facility and the violation was resolved in July 2021.

Regulatory Analysis

Carmeuse - Drummond Island is subject to General Permit to Install (PTI) No. 15-20 for a portable non-metallic crushing plant. The facility is subject to NSPS Subpart OOO for having a crushing plant with a crushing capacity of greater than 150 tons/hr and equipment that has been constructed after August 31, 1983.

Inspection

On May 23, 2023, AQD Staff conducted a targeted inspection of the Carmeuse Lime & Stone facility on Drummond Island. The facility is located on the west side of Drummond Island near the ferry entrance to the island. AQD Staff arrived at the facility and met with Roger Nash, Site Operations Manager. It was explained the purpose of the inspection was to ensure compliance with PTI No. 15-20, and all other state air pollution control rules and federal regulations. The inspection began by completing on-site safety training and then discussing operations and on-site equipment. Facility records were then discussed, and a walkthrough of the process and equipment was provided.

The facility was not operating at the time of inspection. The facility is currently under construction while it undergoes part of a multi-phased upgrade project. The first phase of the project began in 2019 with the issuance of PTI No. 15-20 which upgraded towers and conveyors. The facility is now upgrading more of the towers and conveyors to streamline the mill operations. The primary, secondary, and tertiary crushers are from the 1930s and have not been modified or reconstructed.

The facility utilizes a primary, secondary, and tertiary crusher to produce different product sizes. The primary crusher is a gyratory crusher and the secondary and tertiary are cone crushers. After crushing occurs, material is transported through various screens before being conveyed into storage piles. The facility has four "towers" that include screens and conveyors that route material into the next tower or into final product storage piles.

The walkthrough began by touring the mill operations and then continuing back on the haul road to the quarry. The facility typically operates from mid-April to the end of October for a given year. The haul road between the quarry and mill is unpaved and roughly 7 miles. The road can accommodate large haul trucks that are capable of transporting 70-75 tons of dolomite. The quarry is located east of the mill with the surrounding area forested and no residential dwellings in the immediate surrounding. Carmeuse owns much of the land surrounding the quarry. Operations in the quarry include blasting, rock drilling, and loading of aggregate into haul trucks. As the facility was under construction at the time of inspection, no visible emissions were present from the equipment or quarry. The plant roadways were well saturated. While the haul road was dry, excessive dust was not present. The facility has purchased an upgraded water truck with sprayers and the road had been watered regularly. The facility was scheduled to apply brine to the roads during the week of June 5, 2023

Method 9 visible emissions (VE) testing for compliance with NSPS Subpart OOO was completed on subject equipment in October 2021. All equipment passed the testing and records were provided. It was relayed to the Site Operations Manager and Senior Environmental Engineer that the facility must test the new equipment within 60 days after achieving maximum production rate, but no later than 180 days after initial startup. Labels were observed on the control panels of the equipment. It was discussed with the Site Operations Manager that labels on the actual equipment itself should be more easily identifiable. The Site Operations Manager indicated that labels would be made and placed on the equipment. The assembled and labeled equipment on site was listed in the current EQP5756 form. The facility is in the process of submitting a new EQP5756 (Process Information) form indicating the new equipment that is currently being constructed and removing equipment that is no longer in use. The form must be submitted within 15 days after startup of any new or additional equipment. The facility is estimating the startup of this equipment as June 30, 2023 and is aware of the requirement for a new EQP5756 form.

Following the inspection, records of the amount of material processed for 2022 and 2023 to-date were provided. The total for 2022 was 1,490,597 tons processed at the mill. For 2023, there was 3,482 tons processed in May and 1,154 tons processed in June. Based on these records, the facility is in compliance with the 2,000,000 ton per year per site limit. Watering records were also provided that note the hours of operation the water truck was used on a daily, monthly, and annual basis. For 2022, the water truck was used for 492 hours.

Compliance

Based on this inspection, Carmeuse Lime & Stone appears to be in compliance with PTI No. 15-20 and all applicable Michigan Air Pollution Control Rules and federal regulations.



Image 1: Equipment under construction



Image 2: Equipment under construction



Image 3: Equipment labels

NAME *Sam Sam*

DATE 6/30/2023

SUPERVISOR *Michael Kaplan*