DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B236249668

FACILITY: Drummond Dolomite, Inc.d/b/a Carmeuse Lime & Stone		**SRN / ID:** B2362
LOCATION: HC 53 PO BOX 529, DRUMMOND IS		**DISTRICT:** Upper Peninsula
CITY: DRUMMOND IS		**COUNTY:** CHIPPEWA
CONTACT: Patrick Lamb , Site Operations Manager		**ACTIVITY DATE:** 07/02/2019
STAFF: Michael Conklin	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Targeted inspection for FY 19		
RESOLVED COMPLAINTS:		

Facility: Drummond Dolomite (SRN: B2362)
Location: 23311 E. Haul Road, Drummond Island, MI 49726
Contact: Patrick Lamb, Site Operations Manager, 906-493-5211

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

Drummond Dolomite is a dolomite lime quarry located on Drummond Island, MI, directly south of the Drummond Island Ferry Dock. The quarry 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. Dolomite limestone is different from calcitic limestone in that it contains a high magnesium content.

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 should be 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 not a major source for regulated air pollutants and was previously not subject to any federal New Source Performance Standards (NSPS), and thus did not have to report its annual emissions to MAERS. With the replacement of belt conveyors beginning in 2016, Drummond Dolomite now contains equipment that is subject to NSPS Subpart OOO and will be required to report its annual emissions in MAERS.

Compliance History

The facility has not received any violation notices in the past five years. The facility was last inspected in 2015 and was found to be in compliance with all applicable air quality rules and regulations at that time.

Regulatory Analysis

Drummond Dolomite is currently not subject to any Permit To Installs (PTI). All crushers and screens were constructed and installed prior to August 15, 1967 and were never modified or reconstructed. The facility was also previously not subject to the New Source Performance Standards for Nonmetallic Mineral Processing Plants, 40 CFR Part 60 Subpart OOO, since all equipment defined in 60.670(a)(1) at the plant commenced construction prior to August 31, 1983. However, beginning in 2016, belt conveyors at the plant began being replaced with new, identical functioning units. The new equipment at the plant is now subject to NSPS Subpart OOO and the source is required to comply with the requirements in 40 CFR 60.676(a)(3).

Inspection

On July 2, 2019, I conducted an unannounced inspection at Drummond Dolomite on Drummond Island, MI. I arrived at the facility and met with Site Operations Manager, Patrick Lamb. I explained to Mr. Lamb that the purpose of the inspection was to ensure compliance with Michigan Air Pollution Control Rules and federal regulations.

We began the inspection by discussing changes to the plant since the last inspection and upcoming plans. Mr. lamb stated that the plant had begun replacing the belt conveyors in 2016 and that plans for replacing the screens would occur next year for 2020 operations. Drummond Dolomite typically operates from mid-April to the end of October for a given year. Mr. Lamb stated that the screens are from the 1950s and have not been modified or reconstructed. The primary, secondary, and tertiary crushers are from the 1930s and also have not been modified or reconstructed. Mr. Lamb stated that there are no plans to replace the crushers anytime soon. A PTI application will be submitted to the AQD for the replacement of the screens and belt conveyors.

Next, we toured the plant by first driving to the quarry on the haul road. The haul road between the quarry and mill is unpaved and roughly 5 miles. The road can accommodate large haul trucks that are capable of transporting 70-75 tons of dolomite. Drummond Dolomite normally blasts between 250-280,000 tons per month in the quarry. During the drive to and from the quarry, significant dust emissions were observed. There was also evidence of dust emissions from haul traffic along the sides of the road with most of the vegetation covered in dust. The road at certain points closely parallels M-134, where dust emissions from the haul road could potentially reach the public roadway. Mr. Lamb stated that the road is watered several times a day. While entering the plant, I observed a 10,000-gallon water truck being filled. Weather conditions on the day of the inspection were sunny and warm, with very little rain the previous days. A fugitive dust plan will be requested to keep fugitive emissions from the transportation of dolomite on the unpaved road to a minimum, especially for days that warrant a more effective schedule of control. The use of water or dust suppressants on the haul road will require more frequent reapplication to maintain control of fugitive dust.

After touring the quarry, we proceeded back to the mill to observe crushing and screening operations. Drummond Dolomite utilizes a primary, secondary, and tertiary crusher to produce desirable product sizes ranging from 1.5 – 2.5" in diameter. All three crushers are gyratory crushers that were constructed in the 1930s. After crushing occurs, material is transported through various screens before being conveyed into storage piles. Emissions from the screening and conveying of material is minimal due to spray bars installed at each screen that saturates the material. No visible emissions were observed during screening, bulk conveying, and drop points.

Compliance

Drummond Dolomite will be requested to submit a fugitive dust plan to maintain control of fugitive dust on the haul road from truck traffic. Also, a PTI application will need to be submitted for the replacement of screens and belt conveyors in the crushed limestone processing mill. Following the submittal of a fugitive dust plan, Drummond Dolomite will be in compliance with state air quality rules and federal regulations.

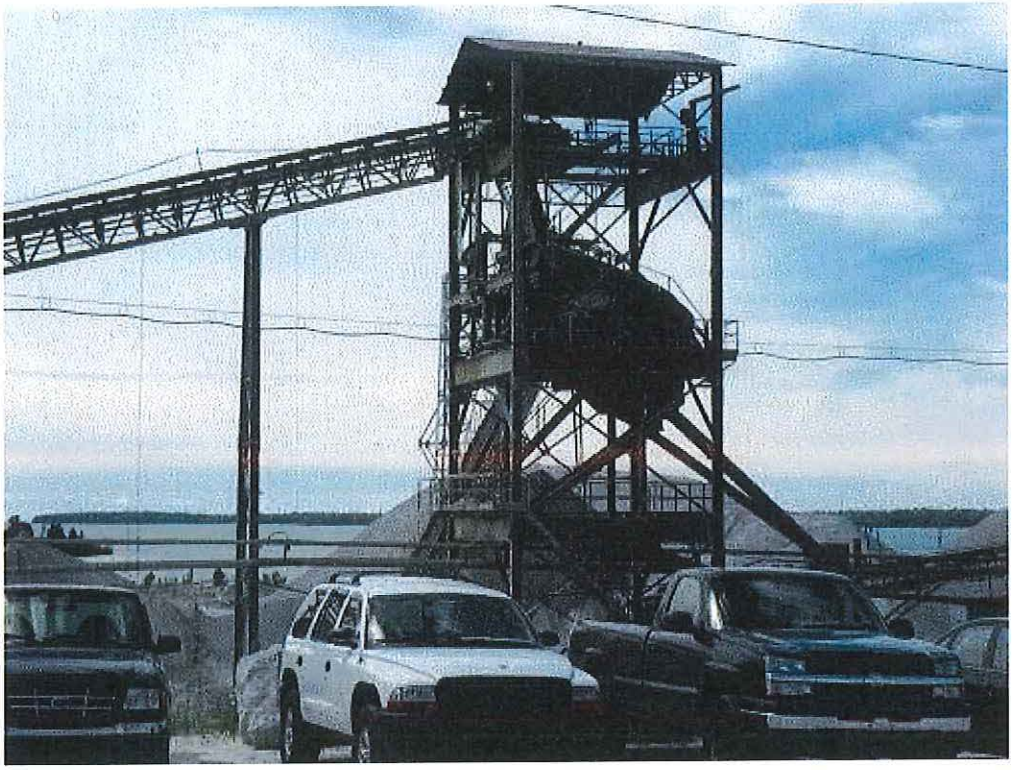

Image 1(Screen) : Conveying and screening operations

Image 2(Storage Piles) : Drop points for different product sizes.

Image 3(Belt Conveyor) : New belt conveyor

NAME Michael Miller DATE 7/29/2019 SUPERVISOR EL