

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

P127563731

FACILITY: CARMEUSE LIME AND STONE		SRN / ID: P1275
LOCATION: SECTION 32, DUPLAIN		DISTRICT: Lansing
CITY: DUPLAIN		COUNTY: CLINTON
CONTACT: Raymond Rummel , Environmental Specialist		ACTIVITY DATE: 07/19/2022
STAFF: Michelle Luplow	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Onsite inspection to determine compliance with General PTI 59-22		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Ray Rummel, Environmental Specialist (raymond.rummel@carmeuse.com)

Ryan Acre, Plant Foreman

Purpose

Conduct an announced, scheduled, onsite compliance inspection to determine compliance with Carmeuse Lime & Stone (Carmeuse) General Permit to Install (PTI) No. 59-22 for a non-metallic minerals crushing facility, which was issued 5/24/22. This will be the first time Carmeuse is being inspected under the General PTI.

This site visit was also planned as part of NSPS Subpart OOO Visible Emission testing on all NSPS-subject equipment; however, due to opacity exceedances, as discussed in this report, the remainder of the testing was postponed until a time by which the equipment visible emissions would pass the NSPS opacity limits.

Facility Background/Regulatory Overview

Carmeuse processes (crushes and screens) sand and gravel which is mined onsite. A wash plant is located adjacent to the crushing equipment, which handles pre-crushed sand and gravel. Wash plants are typically exempt from a Permit to Install through Rule 285(2)(t). The wash plant was not inspected during this visit.

This facility was purchased by Carmeuse on January 10, 2022 from Carl Schlegel.

All equipment is operated via hookup to the electrical grid (no engines are used to power these operations).

The crushing equipment is subject NSPS Subpart OOO for non-metallic mineral crushers. NSPS Subpart OOO conditions are incorporated into the PTI. Carmeuse is required to report to MAERS.

R. Rummel said this equipment was all installed pre-issuance of PTI No. 59-22; when Carmeuse took ownership of the site, they noted the need for a General PTI, thus the issuance of 59-22 on 5/24/22.

Inspection

At approximately 9:30 a.m. I arrived at the 3715 N. Chandler Rd site, located in St. Johns and met with Ray Rummel, Carmeuse's Environmental Specialist, to conduct the onsite inspection. The weather was sunny with highs in the 90's. Upon my arrival I noted significant amounts of dust being generated from the truck traffic onsite. All equipment listed in Table 1 was operating during the inspection.

FGCRUSHING

FGCRUSHING includes the crushers, associated process equipment, screening operations, belt conveyors, loading operations, and any other material handling equipment operated at the site.

During the inspection, 34R pea stone was being crushed to produce 29A modified, 24R manufactured sand (man sand) and mason sand.

Emission Limits

Particulate Matter (PM) emissions from baghouse dust collectors on FGCRUSHING are limited to 0.04 lb/1000 lb exhaust gases. Carmeuse currently does not use baghouse dust collectors to control PM from FGCRUSHING processes. Water spray is used for dust control.

Visible Emission (VE) Limits

VE's are limited to the opacities specified in Table 1 per each type of equipment. While onsite, the following was noted:

All equipment appeared to be meeting the opacity limits, as specified in Table 1, except for the transfer point between the crusher (CR016) and the C169 conveyor. This transfer point is limited to 7% opacity. A 6-minute Method 9 reading was taken to confirm that the visible emissions from this emission point were in exceedance of the 7% standard, based on a 6-minute average of 61% (see attached Method 9 form). For the 3 hours I was onsite, this transfer point was consistently above 7% opacity, based on my experience and knowledge of Method 9. Water sprays were being used at this transfer point; however, the velocity of the material leaving the crusher appears to have been high enough that water spray is insufficient for addressing the dust. The Carmeuse-Schlegel staff have trouble-shooted this issue in the past and believe it may be a vacuum-related issue: air is pulled through the top of the crusher, and leaves the bottom of the crusher – because the unit is under positive pressure, this causes some of the lighter crushed product to shoot out at the transfer point rather than drop down to the conveyor. R. Acre said that this only happens when they crush the pea stone, which is their largest material they process through the crusher.

A violation notice will be issued to address this opacity exceedance and to address and resolve the

Table 1. Permitted Equipment and Associated Opacity Limits

Equipment	Description
Conveyors (7% Opacity Limit):	<ul style="list-style-type: none"> • Feeder Conveyor (Device ID F006) - Dry • VSI Feed Conveyor (Device ID C299) - Dry • Under VSI Conveyor (Device ID C169) - Dry • Deister Feed Conveyor (Device ID C298) - Dry • Under Deister Conveyor (Device ID C 147) - Dry • 7 x 7 Feed Conveyor (Device ID C297) - Dry • 29 A Cross Conveyor (Device ID C 132) - Dry • Course Material Feed Conveyor (Device ID C296) - Dry • 34 R man sand/ 8 x 30 Transfer (Device ID C295) - Wet • 34 R man sand/ 8 x 30 Stacker (Device ID C294) - Wet • 29 A Transfer (Device ID C 166) - Wet • 29 A Stacker (Device ID C165) - Wet • Mason Sand Stacker (Device ID C167) - Wet
Crusher (12% Opacity Limit):	VSI Crusher – Trio TV95b (Device ID CR016) - Dry
Screen (7% Opacity Limit):	<ul style="list-style-type: none"> • Deister Screen Deck (Device ID SCR014) - Dry • Superior Screen Deck (Device ID SCR 015) - Wet • Linatex Screen Deck (Device ID SCR 018) - Wet
Wash screens and all subsequent equipment downstream up to the next crusher or storage bin (No Visible Emissions)	<ul style="list-style-type: none"> • CMW005 is a material washer. C165 and C166 are downstream of CMW005 and therefore are required to meet “No Visible Emissions” • CFS010 is a water-filled tank to clean sand. SCR015, C295, C294, SCR018 and C167 are downstream of this wet process and therefore are required to meet “No Visible Emissions”
Wheel loaders & truck traffic (5% Opacity Limit)	<ul style="list-style-type: none"> • Loaders and truck traffic are both present onsite
Material Storage Piles (5% Opacity Limit)	<ul style="list-style-type: none"> • Storage piles are present onsite

Material Usage Limits & Monitoring

FGCRUSHING is limited to 2,000,000 tons of non-metallic mineral processed per calendar year per site. This limit does not include materials processed at sites with site-specific permits. Carmeuse is required to keep daily and annual records of the tons processed.

I requested production records from date of permit issuance (5/24/22) through the date of inspection. R. Rummel provided a table of production in tons per day. Records indicate that a total of 15,340 tons was crushed between May 24 and July 13, 2022, which indicates compliance, thus far in the year, with the annual limit of 2,000,000 tons.

Carmeuse is required to ensure that no asbestos tailings or asbestos-containing waste materials are crushed. Carmeuse only processes mined gravel and shale and therefore is in compliance with this requirement.

Process/Operational Limits

FGCRUSHING shall not operate unless the Fugitive Dust Control Program specified in Appendix A is implemented

The following is an evaluation of compliance with Appendix A:

Plant

The drop distance at each transfer point throughout the plant should be reduced to the minimum the equipment can achieve. During the inspection I observed that all transfer points appear to maintain a minimum free-fall height and therefore Carmeuse is meeting this requirement.

Truck Traffic

Vehicles being loaded onsite should prevent contents from dropping, leaking, blowing or escaping by loading the vehicles no higher than 6" below the top of any sideboard, side panel, or tailgate, otherwise the truck shall be tarped. I did not observe any loading of materials during the inspection.

Site Roadways and the Plant Yard

The dust on the site roadways and plant yard are required to be controlled by applications of water, calcium chloride, or other approved fugitive dust control compounds and shall be done as often as needed to ensure the 5% opacity limit is met.

The site roadways and plant yard at this facility are all unpaved. During the inspection I noted indications where some of the plant roadways had been watered: some sections still retained moisture from watering earlier in the day (southernmost part of plant yard). R. Acre said that they aim to water these areas to mitigate any fugitive dust activity that would impact the neighbors to the southeast of the facility.

The majority of the site was extremely dry and truck traffic caused opacity which AQD believes was in excess of the 5% standard. I made note of this to R. Rummel. R. Acre, upon this notification, used Carmeuse's onsite water truck to apply water to the plant yard during the inspection. Truck traffic on the post-watered roads resulted in little to no opacity being generated; therefore, it appears water is sufficient for controlling dust from these areas. The issue I brought to R. Rummel's attention is that opacity from truck traffic must be kept to minimum at all times and acknowledged that while this may be difficult to do with dry, hot weather, Carmeuse should take steps necessary to control the dust. This may include more frequent waterings with the water truck or applying calcium chloride a few times per season. R. Acre stated that Carmeuse was looking into another calcium chloride application. The last time calcium chloride was applied was last year.

I recommended they continue to seek out alternatives to water for those times when the weather is hot and dry. R. Rummel acknowledged this recommendation. Records of applications of dust suppressants are required, but Carmeuse has not kept these. I mentioned to R. Rummel and R. Acre that documentation of these applications should be kept and to start with the water application that I observed during the inspection.

Storage Piles

Stockpiling is required to be performed to minimize drop distance and stockpiles shall be watered on an as needed basis to meet the opacity limit of 5%. All transfer points and drop distances have been maintained to minimize the drop distance of materials. I observed no opacity from the stock piles.

Testing

NSPS Subpart OOO Visible Emissions testing is required to be conducted no later than 180 days after initial startup of FGCRUSHING. The PTI was issued May 24, 2022, which I am considering initial startup for the purposes of compliance. Carmeuse has until November 2022 to complete this testing.

Permit Dates

R. Acre and I went through all equipment onsite to verify that the equipment listed in the permit application is the equipment that is present onsite. All equipment was accounted for, however there were some inconsistencies between the ID's listed in the application and 2 of the pieces of equipment onsite:

PTI Application	Onsite
Diester Feed Conveyor (SCR014)	Diester Feed Conveyor (C298)
Diester Screen Deck (PF2)	Diester Screen Deck (SCR014)

R. Rummel submitted a modification to the PTI within 1 day of the inspection to ensure that the Device ID's onsite match what is contained within the application.

Compliance Statement

Carmeuse Lime & Stone is in non-compliance with General PTI 59-22 at this time. A violation notice will be sent to address the post-crusher opacity exceedance.

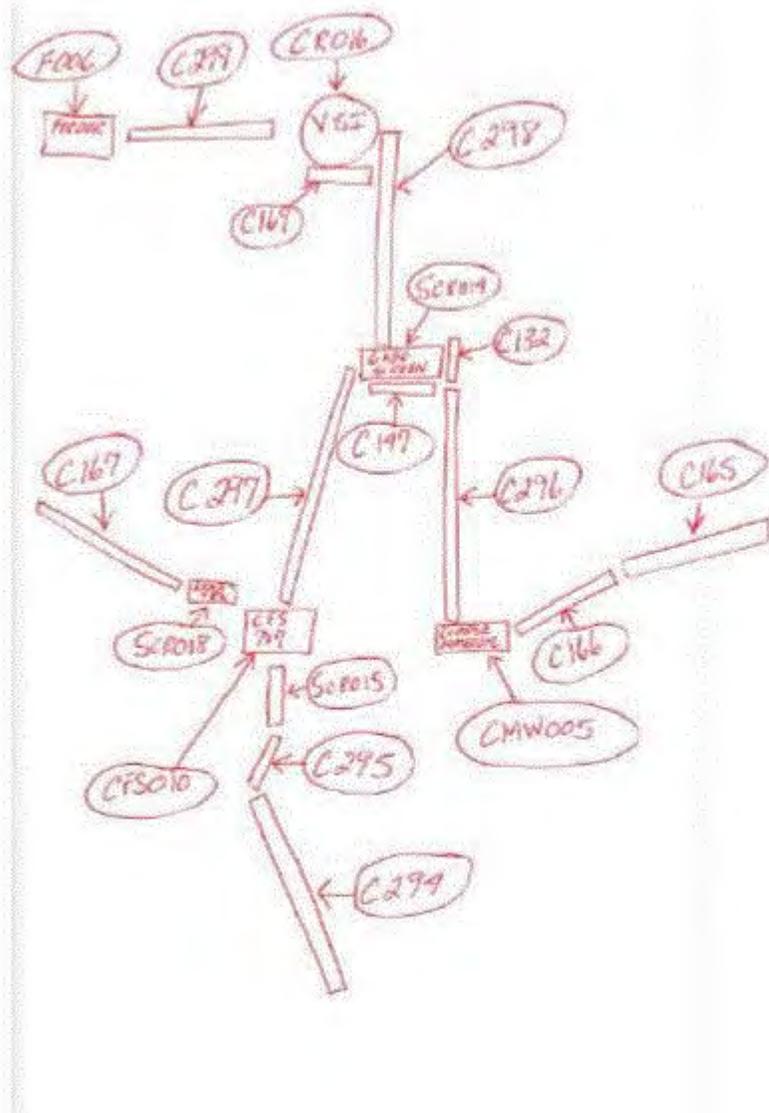


Image 1(Plant Set up) : equipment, as set up onsite 7/19/22

NAME Michelle Luplow

DATE 7/28/22

SUPERVISOR RB

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Form Number 01 Page 1 of 1
 Continued on VEO Form Number NA

Company Name Carmeuse Lime + Stone
 Facility Name Carmeuse Lime + Stone
 Street Address 3715 N. Chandler
 City St. Johns State MI Zip 48879

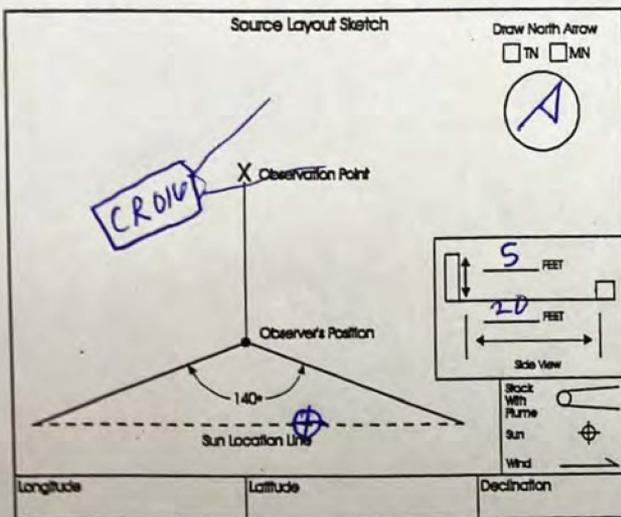
Process Transfer Point Unit # _____ Operating Mode Pea Stone
 Control Equipment Water Spray Operating Mode _____

Describe Emission Point
Transfer Point from Crusher
CROU to Conveyor C169
 Height of Emiss. Pt. Start 5' End 5' Height of Emiss. Pt. Rel. to Observer Start 3' End 3'
 Distance to Emiss. Pt. Start 20' End 20' Direction to Emiss. Pt. (Degrees) Start NW End NW

Vertical Angle to Obs. Pt. Start _____ End _____ Direction to Obs. Pt. (Degrees) Start _____ End _____
 Distance and Direction to Observation Point from Emission Point Start _____ End _____

Describe Emissions
 Start Fugitive Dust End Fugitive Dust
 Emission Color Start Brown End Brown Water Droplet Plume Attached Detached None

Describe Plume Background
 Start Trees w/ leaves End Trees w/ leaves
 Background Color Start Green End Green Sky Conditions Start P. Cloudy End P. Cloudy
 Wind Speed Start 13mpm End 13mpm Wind Direction Start WSW End WSW
 Ambient Temp. Start 90°F End 80°F Wet Bulb Temp. _____ RH Percent _____



Sec Min	Time Zone				Start Time	End Time	Comments
	0	15	30	45			
1	60	75	65	65			
2	60	70	70	70			
3	60	65	70	60			
4	60	65	60	55			
5	55	50	50	35			
6	60	60	60	60			
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Observer's Name (Print) Michelle Luplow
 Observer's Signature Michelle Luplow Date 7/19/22
 Organization EGLE A&D
 Certified By ETA Date 3/30/22

Additional Information

