

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N511149497

FACILITY: SUPERIOR CEDAR PRODUCTS		SRN / ID: N5111
LOCATION: 101 FENCE FACTORY RD, CARNEY		DISTRICT: Upper Peninsula
CITY: CARNEY		COUNTY: MENOMINEE
CONTACT: DWAIN MELLEEN , GENERAL MANAGER		ACTIVITY DATE: 06/12/2019
STAFF: Michael Conklin	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection to determine compliance with Michigan Air Pollution Control Rules.		
RESOLVED COMPLAINTS:		

Facility: Superior Cedar Products (SRN: N5111)
Location: 101 Fence Factory Rd, Carney, MI
Contact: Dwaine Mellen, General Manager, 906-639-2104

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

Superior Cedar Products is a wood product manufacturer that produces lawn and garden products. The company processes cedar logs to produce chips, mulch, and fence posts. The facility consists of two buildings that contain machines for debarking, sawing, ripping, planing, and surfacing. Each of the two buildings contains a pneumatic transfer system that collects and routes wood waste from processing operations through a fabric filter collector (baghouse) to semi-trailers, where it is sold as product to paper mills or for animal bedding. The facility also contains a water-based, low VOC coating line as part of the fence posts production. The table below summarizes the emission units at this source.

Emission Unit ID	Description
EUPNEUMATICLINE1	A pneumatic transfer system that transports wood waste collected from process operations to truck trailers. Emissions are controlled by a fabric filter collector.
EUPNEUMATICLINE2	A pneumatic transfer system that transports wood waste collected from process operations to truck trailers. Emissions are controlled by a fabric filter collector.
EUPAINT	A surface coating line containing a dip container of low-VOC paint and a drying carousel with air fans. Emissions are released to the general in-plant environment.

Emissions

Wood product manufacturing involves the generation of sawdust, planer shavings, or sander dust which contribute to levels of atmospheric PM and PM10. Cyclones or baghouses act as capture/collection systems for air pollution control and product recovery systems by separating wood residue from the airstream of pneumatic handling systems.

Emissions Reporting

The facility is neither a major source for regulated air pollutants nor subject to any federal New Source Performance Standards (NSPS), and thus is not required to report its annual emissions to Michigan Air Emissions Reporting System.

Compliance History

The facility has not received any violation notices in the past five years. The facility was last inspected in 2012 and was found to be in compliance with all applicable air quality rules and regulations at that time.

Inspection

On June 12, 2019, I (Michael Conklin) of the Air Quality Division conducted an unannounced inspection at Superior Cedar Products in Carney, MI. I arrived at the facility and met with general manager, Dwaine Mellen. I explained to Mr. Mellen that the purpose of the inspection was to ensure compliance with Michigan's Air Pollution Control Rules.

We began the inspection by touring the facility and observing the different wood processing operations. I was able to observe the duct work for the wood waste collection system. There appeared to be no leaks inside the facility and all points of saw dust generation had a collection point. We next went outside the plant to observe the baghouse for the pneumatic line and the truck trailers for the wood waste collection. The inspection ended with letting Mr. Mellen know that a follow-up email will be sent to request additional information regarding mill capacity and coating usage.

Regulatory Analysis

Superior Cedar Products currently does not hold any Permit sTo Install (PTIs). According to the last inspection report, the facility is using the Rule 290 exemption for EUPAINT. The facility is considered an area source for hazardous air pollutants (HAP) because the potential to emit of any single HAP is less than 10 tpy and aggregate HAP emissions are less than 25 tpy. The facility is also considered a true minor source for all regulated air pollutants because the facility's potential-to-emit is less than 100 tpy for each regulated air pollutant. The facility does not contain any equipment or processes that are subject to federal New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAP).

EUPNEUMATICLINE

The pneumatic line removes wood waste from each production operation point and transfers it to truck trailers. The airstream through the pneumatic line is routed through a baghouse that acts as a material collection device and an air pollution control device. Particles that funnel to the bin of the baghouse are then routed to truck trailers to be shipped off-site as product. A pressure gauge on the baghouse is used to monitor the performance. No visible emissions were observed from baghouse. The collection system appeared to be operating properly, and there were no fugitive dust emissions observed coming from the trailers. The trailers were fully sealed, not allowing any dust to escape. Mr. Mellen stated that during winter months the baghouse exhaust is routed inside the facility for additional heating.

The pneumatic line systems and associated baghouses are not permitted under any PTI(s). Rule 285(2)(l)(vi)(C) exempts equipment for woodworking operations if the equipment has externally vented emissions controlled by a fabric filter collector. The use of this exemption is limited if the actual emissions of the project are greater than significance levels as defined in R 336.119, per Rule 278. Mr. Mellen stated in a follow-up email that the facility processed 2,370 cords of Cedar, which is roughly equivalent to 3,733 tons based on a cordwood conversion factor of 1.575 cords per ton for Cedar (Timber Sale Handbook 2461, State of Wisconsin Department of Natural Resources). Particulate emissions can be estimated using the following equation below.

$$\text{Throughput ((tons of wood)/year)} \times \text{Controlled EF ((lb (PM,PM10,PM2.5))/(ton of wood))} = \text{((lb (PM,PM10,PM2.5))/year)}$$

A particulate emission factor of 0.001 lb/ton, for sawing operations controlled with a baghouse, was used in the calculation. This emission factor is from the Oregon Department of Environmental Quality (ODEQ) "Wood Products Emission Factors", AQ-EF02 Revised 08/01/11. A conservative approach is taken to assume all PM is PM10 and PM2.5. The following equation estimates actual particulate emissions from EUPNEUMATICLINE.

$$3,733 \text{ ((tons of wood)/year)} \times 0.001 \text{ ((lb (PM,PM10,PM2.5))/(ton of wood))} = 3.73 \text{ ((lb (PM,PM10,PM2.5))/year)}$$

Based on the actual emissions being well below the significance levels as defined in R 336.119, this emission unit appears to be exempt per R 336.1285(2)(l)(vi)(C).

EUPAINT

As part of the fence posts production, the posts are dipped in a white paint and hung on a rack to dry. The drying rack is a carousel that goes through several fans blowing room temperature air. The paint is a water based, low-VOC coating that is contained in an open dip tank. Emissions from the dip tank and the drying rack are emitted to the general in-plant environment. In a follow-up email, Mr. Mellen provided the SDS sheet for the coating used and stated that the facility used 7,288 gallons in 2018.

It was noted from the previous inspection report that the facility is using the Rule 290 exemption for the coating line. Mr. Mellen stated that the facility has not been keeping the necessary records to demonstrate compliance with this exemption. A violation notice will be issued requesting a PTI application for this emission unit.

The following table lists equipment that is considered to be exempt at the source.

Emission Unit	Description	PTI Exemption
EUPNEUMATICLINE1	Wood waste collected from cutting, sawing, and planing is routed through a pneumatic line with emissions controlled by a fabric filter collector.	R 336.1285(2)(l)(vi)(C)
EUPNEUMATICLINE2	Wood waste collected from cutting, sawing, and planing is routed through a pneumatic line with emissions controlled by a fabric filter collector.	R 336.1285(2)(l)(vi)(C)

Compliance

Superior Cedar Products has not been maintaining necessary records to show compliance with the Rule 290 exemption for EUPAINT. Based on this, the facility is not in compliance with all state air quality rules and federal regulations. A violation notice will be issued requesting Superior Cedar Products to send in a PTI application to bring the facility back into compliance.



Image 1(Baghouse 1) : Baghouse for EUPNEUMATICLINE1.



Image 2(Baghouse 2) : Baghouse for EUPNEUMATICLINE2.



Image 3(Dip Container) : A surface coating line for fence posts containing an open dip tank of low-VOC paint.



Image 4(Drying Carousel) : A drying carousel with fans blowing room temperature air. Emissions are exhausted to the general in-plant environment.

NAME Michael Larkin

DATE 7/12/19

SUPERVISOR EDJ