

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

U42210005756755

FACILITY: Neuvokas Corporation		SRN / ID: U422100057
LOCATION: 3206 Number 6 Rd, Ahmeek		DISTRICT: Marquette
CITY: Ahmeek		COUNTY: KEWEENAW
CONTACT:		ACTIVITY DATE: 01/11/2021
STAFF: Michael Conklin	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Odor compliant investigation and source inspection for compliance with state Air Pollution Control Rules and federal regulations.		
RESOLVED COMPLAINTS:		

Facility: Neuvokas Corporation

Location: 3206 Number 6 Rd, PO Box 220, Ahmeek, MI 49901

Contact: Erik Kiilunen, CEO, 906-934-2661

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.

Source Description

Neuvokas Corporation (Neuvokas) is a manufacturing company located in Ahmeek, MI. The company was founded in 2013 and produces "GatorBar", which consists of basalt fiber-reinforced polymer (FRP) rebar. The FRP rebar produced by Neuvokas is a lighter, stronger, and non-corrosive alternative to steel rebar.

Emissions

Emissions from FRP manufacturing can consist of fugitive vapors from volatile organic compounds (VOCs) that are emitted during the curing of laminating resin. Some of the pollutants emitted can be volatile organic hazardous air pollutants (HAPs). The cross-linking agent (monomer) contained in the resin evaporates during the molding and curing process. Fugitive emissions are forced ventilated to the atmosphere through hood ducts and out through stacks on the roof.

Emissions Reporting

Neuvokas currently does not hold any air permits and is not required to report its annual emissions to MAERS.

Compliance History

No prior air inspections have been performed at this source. Neuvokas is considered a new source.

Regulatory Analysis

Neuvokas does not hold any air permits and is not subject to any federal regulations at this time.

Inspection

The AQD received a complaint message from EPA Region V regarding foul odors on 01/05/2021. The complainant stated the odors are extremely distinct in the surrounding vicinity and the facility is adjacent to a residential neighborhood. The odors can occur daily with a south wind and more noticeable in the summer. The incident location is north of the facility. The complainant stated the odors are non-threatening and no residual health effects. The complainant stated the odors are not normal and detectable, but not overpowering, and have a chemical scent. The complainant also stated there are two stacks observed on the facility. Complainant was encouraged to call if odors were noticed again or continuous to get worse. A follow-up investigation was performed on 01/11/2021 to conduct an odor survey and inspect Neuvokas Corporation for compliance with State Air pollution Control Rules and federal regulations.

The odor survey was conducted on Number 6 Road, about 0.2 mile northeast of the facility. Weather conditions were 30 degrees Fahrenheit with winds at 10 mph out of the SW. The odor survey was conducted from 12:30 PM to 12:47 PM. During this time period, odors from the facility were non-detectable.

An inspection at Neuvokas Corporation followed after the odor survey. My contact at the facility was Matt Kero, Vice President of Engineering. Mr. Kero provided a tour of the facility and an explanation on their manufacturing process.

The facility contains two production lines for the manufacturing of FRP rebar. Production consists of a closed molding operation with fiber, catalysts, and resin. The fibers are fed through a reaction injection molding (RIM) process where they are impregnated with resin. The impregnated fibers continue down the line through natural gas-fired drying ovens to finish the curing process. The finished product is about 80% fiber and 20% polymer resin.

Each production line has ducts with induction fans that provide force ventilation out two stacks on the roof. The first set of ducts and stack vent the resin impregnation process, and the other set of ducts and stack vent the curing process. Following the inspection, I requested information from Neuvokas on whether the facility is using a Permit to Install (PTI) exemption for the RIM production lines or will need to submit a PTI application.

Neuvokas submitted a finalized PTI exemption emissions analysis on 01/20/2021. The company states they are using a reaction injection molding process utilizing a closed mold. The PTI exemption they are electing to use for both production lines is R 336.1286(e), "*Reaction injection molding (open or closed mold) and slabstock/casting equipment*". A potential to emit (PTE) emissions analysis was submitted to check emissions against the significance level, outlined in Rule 119, and for demonstrating compliance with Rule 278.

Neuvokas uses low VOC and HAP containing resin and catalysts. The reaction injection molding process uses closed material storage tanks and has minimal fugitive emissions. The supplier for the DCPD resin and catalysts, Materia, states "*the expected VOC emissions for sites using the RIM process, following recommended molding practices and good housekeeping can expect 0.01% VOC emissions based on the weight of the material process.*" The maximum amount of resin Neuvokas can use in both production lines is based on the doff length. For production line #3, the maximum amount of FRP rebar that can be produced in a 24-hour period is 268,475 ft. For production line #4, the maximum amount is 127,636 ft/24 hours.

The facility uses Toluene as a cleaning solvent. A measured quantity per cleaning cycle is used and multiplied by the maximum number of cycles to provide the maximum Toluene usage. This came out to 2.523 tpy of Toluene. Toluene is the only HAP compound Neuvokas uses. Since the facility's maximum toluene usage is under 10 tpy, the facility is considered an area source for HAPs. Based on the maximum resin and catalyst usage on both production lines, the supplier VOC emission factor, and maximum cleanup solvent usage, the maximum potential VOC emissions are 2.73 tpy. This is less than the significance levels for VOCs (40 tpy) as outlined in Rule 119. Neuvokas does not appear to meet any of the criteria listed in Rule 278.

Compliance

Based on this inspection, it appears Neuvokas Corporation is in compliance with all State Air Pollution Control Rules and federal regulations.

NAME 

DATE 1/26/2021

SUPERVISOR 