

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

P117261234

<b>FACILITY:</b> Ellsworth Cutting Tools		<b>SRN / ID:</b> P1172
<b>LOCATION:</b> 25190 Terra Industrial Drive, NEW BALTIMORE		<b>DISTRICT:</b> Warren
<b>CITY:</b> NEW BALTIMORE		<b>COUNTY:</b> MACOMB
<b>CONTACT:</b> Ellsworth Miller , President and CEO		<b>ACTIVITY DATE:</b> 12/15/2021
<b>STAFF:</b> Adam Bognar	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On Wednesday, December 15, 2021, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar, conducted a scheduled inspection of Ellsworth Cutting Tools (the "facility"), located at 25190 Terra Industrial Drive, New Baltimore, MI 48051. The purpose of this inspection was to determine the facility's compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules.

I arrived at Ellsworth Cutting Tools at around 10 am. I met with Mr. Ellsworth Miller, President and CEO. I identified myself and stated the purpose of the inspection. We discussed the installation of their new dust collection system and took a tour of the facility.

Ellsworth Cutting Tools manufacturers metal cutting tools using CNC (Computer Numerical Control) machines and other tooling. Tooling manufactured at this facility includes drill bits, reamers, and bushings manufactured for industries including aerospace, automotive, food production, and mining. Materials used include cubic boron, aluminum oxide, carbide, and high-speed steel. This plant operates from Monday through Friday from 8 am to 5 pm by 20 employees.

There are approximately 50-100 cutting stations at this facility. Many of these stations are simple drill press type machines that appear seldom used. The CNC machines utilize an oil for cooling and lubrication during cutting. Some of this oil becomes aerosolized during machining operations. This evaporative loss is a source of potential air emissions. Another air emission source is the metal particulate generated from machining operations that becomes entrained in the exhaust gases and oil mist.

Most of the machines are exhausted to the general in-plant environment. In-plant air is cleaned and recirculated by approximately 12 Smog Hogs located throughout the facility.

Smog Hogs are a three-part filtration process. Mist laden air from the CNC machines enters the Smog Hog and flows through a metal mesh filter, followed by an ionization area, and finally another metal mesh filter before being exhausted back into the plant. The ionization area causes the oil and particulate to become negatively charged. The negatively charged particles are collected on positively charged plates located in the ionization area. The positively charged plates are cleaned off periodically.

During the summer months, 3 of the CNC machines are ventilated outdoors through a Ebbco media filtration system that captures oil and particulate. This is done to remove heat from the facility generated from the hot cutting oil. In the winter months, emissions from these CNC machines are still run through the media filter but exhausted into the general in-plant environment to provide extra heat. During this inspection the filter outlet pressure was 42 Bar.

The Ebbco media filter is located inside the building. Mr. Miller stated that there previously was a dust collector located outside of the building to control these machines. The outdoor dust collector was replaced with the indoor oil/particulate filter. These machines appear to be exempt from Rule 201 requirements pursuant to Rule 285(2)(l)(vi).

There are ten metal grinding machines ventilated through a dust collector and into the general in-plant environment. During my last inspection on December 22, 2020, these 10 grinding stations were exhausted to cyclone style dust collectors and vented outdoors through a stack. These grinding processes were/are operated without a permit to install. This equipment did not qualify for a Permit to Install exemption (Rule 285(2)(l)(vi)) since there was no fabric filter and emissions were exhausted outdoors.

A violation notice was sent to Ellsworth Cutting Tools on March 2, 2021 seeking compliance with Rule 201. Rather than obtain a permit to install, Ellsworth Cutting Tools decided to operate the ten grinding processes pursuant to AQD exemption Rule 285(2)(l)(vi). On December 10, 2021, Mr. Miller informed me that he has finished installing his new dust collection system. I verified that a new dust collection system was installed during this inspection. New ductwork between the dust collector and each of the grinding stations was also installed.

Currently, the dust collector is located inside the plant and exhausts to the general in-plant environment. Mr. Miller is unsure if he will try and duct it outdoors in the future. The pressure drop during the inspection was around 0.1" of water. The manufacturer advises that new filters should be ordered when the pressure drop hits 5" of water and replaced when it hits 7" of water. The 10 grinding stations and associated dust collector appear to be exempt from Rule 201 requirements pursuant to Rule 285(2)(l)(vi)(B) since it is ventilated to the general in-plant environment.

The violation notice dated March 3, 2021 will be resolved as a result of this inspection

I left the facility at around 10:30 am.

#### **Compliance Determination**

At the time of this inspection, Ellsworth Cutting Tools appears to be operating in compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); and Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules.

NAME Adam Bogros

DATE 1/4/2022

SUPERVISOR K. Kelly