

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

B565447290

FACILITY: KEO CUTTERS		SRN / ID: B5654
LOCATION: 25040 EASY ST, WARREN		DISTRICT: Southeast Michigan
CITY: WARREN		COUNTY: MACOMB
CONTACT: Dale Duchene , CIP Manager		ACTIVITY DATE: 12/06/2018
STAFF: Adam Bogнар	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-Initiated Inspection		
RESOLVED COMPLAINTS:		

On Thursday, December 6, 2018, Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) staff, I, Adam Bogнар, conducted an unannounced self-initiated inspection of Keo Cutters (Plant 1 and Plant 2), located at 25125 and 25040 Easy Street, Warren, MI 48089. 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; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) rules; and Permit to Install Nos. 177-94 and 178-94.

I arrived at the facility at around 9 am. I met with Mr. Dale Duchene, CIP Manager. I identified myself, provided credentials, and stated the purpose of the inspection. We reviewed their air permits, discussed current operations, and went on a tour of the facility.

Keo Cutters manufacturers cutting tools using CNC machines. Tooling manufactured at Keo Cutters includes drill bits, countersinks, center reamers, counterbores, and many others. The two plants employ approximately 39 people and operate Monday through Friday from 8 am to 5 pm. These two plants are directly across the street from each other.

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.

The exhaust of each CNC machine is equipped with a mist eliminator that captures the oil mist and particulate. The older CNC machines that are exhausted outdoors are equipped with "Smog Hogs", a type of mist eliminator. These older machines are gradually being replaced with the newer CNC machines that are exhausted through a mist eliminator and into the general in plant environment.

I explained to Mr. Duchene that the MDEQ-AQD has two active permits for Keo Cutters that were issued in 1994. Both permits are essentially the same, but one applies to Plant 1 and the other applies to Plant 2. It appeared that nobody at Keo Cutters was aware of these permits. I explained that the permits required, among other things, that all grinding processes be equipped with electrostatic precipitators that are installed and operating correctly.

The Smog Hogs have an internal electrostatic precipitation system. All CNC machines that are exhausted outdoors are equipped with Smog Hogs. The newer machines that are exhausted indoors appear to be exempt from Rule 201 requirements pursuant to Rule 285 (2)(l)(vi).

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 outdoors. 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 Smog Hogs appeared to be operating correctly during my inspection. Based on what appears to be proper operation of the electrostatic precipitators, Keo Cutters should meet their emission limits of 0.02 lb particulate matter per 1000 lbs of exhaust gases. They should also meet their particulate matter limit for Plant 1 of 1.98 lbs/hr or 8.7 tons/year and the limit for Plant 2 of 0.04 lbs/hr or 1.8 tons per year. I am not requesting that Keo Cutters verify emission rates with a stack test at this time.

Liquid oil/particulate that is filtered by the Smog Hog is recycled back into the machines. The Smog Hog's are cleaned out monthly by Total Filtration Services. Total Filtration Services removes and disposes the collected air contaminants from the Smog Hog. This cleaning includes scraping/cleaning the positively charged walls of the electrostatic precipitator (ionizer).

Oil from the CNC machines is periodically filtered in an onsite filtration system to remove the metal

shavings/particles. The filtered oil is reused in the machines until it no longer possesses the desired characteristics. Spent oil and metal shavings are collected and disposed of as needed by a third-party company.

The stacks appeared to be ventilated vertically unobstructed to the ambient air. I did not notice any visible emissions coming from the stacks.

Mr. Harper stated that he does not operate any boilers, emergency generators, or solvent cleaners at this facility. There are two aqueous based parts washers that appear to be exempt from Rule 201 requirements pursuant to Rule 281 (2)(k).

I left the facility at around 10 am.

Compliance Determination

This facility appears to be 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); Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) Administrative Rules; and Permit to Install Nos. 177-94 and 178-94.

NAME Adam Boger DATE 12/14/2018 SUPERVISOR SR