DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

A085938464

FACILITY: Maco Tool		**SRN / ID:** A0859
LOCATION: 210 SPRING STREET, SAINT JOHNS		**DISTRICT:** Lansing
CITY: SAINT JOHNS		**COUNTY:** CLINTON
CONTACT: Mark Hoover , Plant Manager		**ACTIVITY DATE:** 01/24/2017
STAFF: Julie Brunner	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Compliance Inspection of Maco Tool		
RESOLVED COMPLAINTS:		

On January 24, 2017, I conducted an unannounced, scheduled inspection of Maco Tool (Maco) in Saint Johns. This facility was last inspected on November 17, 2015.

Facility Name/Address:
A0859 – Maco Tool & Engineering
210 Spring Street, Saint Johns, Michigan

Facility Contact:
Mr. Mark Hoover, Plant Manager, 989-224-6723, markhoover@macotool.com

Facility Description:

Maco is a metal fabrication shop that does tooling, fabrication, "turnkey" machine build, and machine rebuilds. The company is a supplier of tooling and machines for companies such as In Motion, Qpac, John Deere, Federal Mogul, GE Mining, and Volvo. Maco was owned by the same owner as F.C. Mason and used to supply parts to F.C. Mason. When the previous owner died, a new owner bought F.C. Mason and Maco became employee owned. F.C. Mason has gone out of business in the last year.

Maco is located in central Saint Johns. The area surrounding the plant is mixed use with residential housing on the east and south sides of the plant, and commercial properties across the street to the north and west.

Commencement of Mfg. Operations: 1974

Plant Capacity: Fully utilized or at capacity

Staff #: 20 Shifts/Day: 1 shift (10 hours) Days of Operation/Week: 5 – 6 (currently 6 days/week)

Boilers? No

Emergency Generators? No

Cold Cleaners? Yes
Contains mineral spirits and serviced by Safety-Clean historically.

Any Additional Exempt Equipment?:
Small manual dip coating process, and metal machining identified on the previous inspection.

List of Active Air Use Permits:
PTI 476-80A for six (6) surface grinders controlled by a cyclone.

Regulatory Review:
The facility is a minor source of any regulated air contaminants including hazardous air pollutants (HAPs) and not subject to the Title V Renewable Operating Permit (ROP) program.

Michigan Air Emissions Reporting System (MAERS):
The facility is not required to report emission information to MAERS.

Inspection:
Arrived: 9:55 AM

Departed: 12:07 PM
Weather: 38°F, WNW@10 MPH, UV 0 Low

No visible emissions (VEs) were observed from any of the facility exhaust stacks upon arrival. No odors were identified surrounding the facility.

A pre-inspection meeting was conducted with Mr. Mark Hoover (Plant Manager). The purpose of my visit and the status of the facility operations were discussed. Then a facility tour was taken followed by a records review. The following types of processes were viewed on the tour.

- **OEM Manufacture**
- **Tooling and Detail Manufacturing**
- **Machine Assembly Area**
- **Hand Scraping Machine Surface Capabilities**
- **Controlled Inspection Department and quality lab**
- **Laser Jet Printing**
- **EDM capacity for cutting**
- **Multiple design and build sources for electrical, programming, hydraulics, pneumatics, and fabrication**
- **Sheet Metal fabrication**
- **Various Types of Welding**
- **Black Oxide Finishes**
- **Numerous Tool Metals Stock**
- **Product and scrap storage**

Various machining processes are located throughout the facility. Two (2) wire EDM machines to cut steel are located in a separate room. The steel is cut under water and there are no vents to the ambient air. More metal machining processes include two (2) boring mills, wet mills, and vertical mills for surface grinding and square up. There are lathes and horizontal boring mills. Computerized and CNC mills to produce various shapes with metal chips from the machines captured in 5 gallon buckets. Coolants are used in many of the machining processes. Metal chips and scrap are sent for recycling to Padnos in Lansing. The metal machining is not vented to the ambient air and the metal recycling area is in the building. The various metal machining equipment all appears to meet the permit exemption Rule 285(2)(l)(vi)(B).

Hand welding is used in the assembly of parts. It is located in a separate room with ventilation and fabric filters in the ceiling. Welding is exempt under Rule 285(2)(i).

A briefcase sized parts washer/cleaner that uses solvent naphtha is located in a vented room. The lid on the machine was closed. The parts cleaner is not used very often. This process is exempt per Rule 281 (2)(h).

Also, located in the same vented room is a black oxide coating process. It consists of five (5) – 5 gallon plastic containers for dipping parts to add a anti-rust proof coating. The five (5) plastic containers have detergent, and various cleaning and coating materials for black oxide application. The process is only for "emergency" and is operated under exemption Rule 290.

An assembly room where machines are built and rebuilt has numerous work benches. Some spray paint touchup (about 20 cans per year) is done in the area. The usage of hand-held spray aerosol cans is exempt per Rule 287(2)(b).

A walk-in coating booth with an overhead door and dry fabric filters located in the ceiling is operated per exemption Rule 287(2)(c). The coating room is located off of the assembly room. The fabric filters are changed regularly depending on use. Hand-held HVLP spray applicators are used. Paint is delivered to the gun from a 600 ml cup on the gun. The paint is solvent-based and thinned prior to application, and cleanup is done using methyl ethyl ketone. A view of the stack vent for the paint booth showed no evidence of particulate emissions due to paint operations. The exhaust system is installed, maintained and operating properly per the requirements of exemption Rule 287(2)(c).

PTI 476-80A - Six (6) Surface Grinders Controlled by a Cyclone:
Five (5) grinders are connected to the cyclone. A sixth similar grinder sits in the middle of the room with a portable cartridge collector that vents into the room. This sixth unit is exempt per Rule 285(2)(l)(vi)(B). There is no indication that a sixth grinder was ever connected to the cyclone.

The cyclone is in a small house that sits outside along the south plant wall. The stack vents out the top of the small house. The stack has a cap and appears to meet the requirements of the stack/vent Special Condition (SC) VIII.1 on PTI 476-80A. The cyclone has a bag attached to the bottom outlet of the cyclone to collect particulate removed from the grinder's exhaust. The bag looked to have a good amount of particulate collected, and particulate had begun to build up in the small house on the floor. The cyclone bag and house are cleaned out once a year with the last cleaning done this past summer. There was no indication of fugitive dust or fallout outside of the building that housed the cyclone. But, due to dust accumulation since the house was last cleaned out, Maco may want to go to twice a year cleaning. The process was operating when inspected and no VEs were seen coming from the stack vent. The cyclone collector was installed, and appeared to be maintained and operated in a satisfactory manner per SC IV.1. Pictures are attached of the cyclone and house.

Records Review:
Safety Data Sheets (SDS) and the records required for Rule 287(2)(c) and Rule 290 were reviewed.

The SDS are kept in a three-ring binder. Some materials in the book such as a ZEP chlorinated solvent are no longer used and this has now been noted on the SDS. SDS for the coolants indicated the ingredients were 10% hydrotreated naphthenic oil (CAS No. 64742-52-5). SDS for the paint coatings and thinners, and cleanup solvents showed various volatile organic compounds (VOC) and acetone which is not a VOC.

The SDS for the materials used in the black oxide coating process (Presto Black and Presto Prep) show phosphoric acid, selenious acid, and ethanolamine as volatile ingredients. These materials are noncarcinogenic and per the requirements of Rule 290 up to 1,000 pounds per month (lb/month) can be emitted. The records indicate that 1 gallon of Presto Black was purchased in March 2016, July 2016, and December 2016. There has not been a purchase of Presto Prep since the process was installed.

Presto Black has a specific gravity (SG) of 1.055. At worse-case, monthly emissions are calculated as follows (well below the permit exemption):

1.055 x 8.34 lb/gallon x 1 gallon/month = 8.8 lb/month

For the paint booth which is operating under Rule 287(2)(c), according to the records for Jan. 2016 to Jan. 2017, the most paint that has been used is 1.75 gallons in November 2016. This is well below 200 gallons per month that is allowed by the exemption.

Copies of the records are attached to this activity report.

Summary:
The facility appeared to be in compliance with all applicable air quality rules and regulations, and PTI 476-80A.

There was a drum of waste oil located in the room with the black oxide coating process. It was not labeled. Maco generates about 150 gallons a year of used oil and was giving it to a local garage for them to burn in their waste oil heater. This is not considered proper handling and disposal of waste oil. This was discussed with Mark and he will immediately change the practice. Information was mailed to Maco on proper handling, labeling, and disposal of waste oil.

Image 1(1) : Cyclone stack

Image 2(2) : Cyclone house

Image 3(3) : Cyclone outlet

Image 4(4) : Duct work from the plant

NAME Julie L. Brunner DATE 1/31/17 SUPERVISOR D.M.