

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

*FY 2016 Insp-*

U6314106034216

FACILITY: Moeller Precision Tool, Inc.	SRN / ID: U63141060
LOCATION: 30893 Century Drive, Wixom	DISTRICT: Southeast Michigan
CITY: Wixom	COUNTY: OAKLAND
CONTACT:	ACTIVITY DATE: 04/01/2016
STAFF: Iranna Konanahalli <i>JK</i>	COMPLIANCE STATUS: Compliance
SUBJECT: FY 2016 inspection of Moeller Precision Tool, Inc.	SOURCE CLASS:
RESOLVED COMPLAINTS:	

*U 63 14 1060 - SAR - 2016 04 01*

**Moeller Precision Tool, Inc. (U-63-14-1060)**  
30893 Century Drive  
Wixom, Michigan 48393-2064

[www.moellerpunch.com](http://www.moellerpunch.com)

On April 01, 2016, I conducted a level 2 self-initiated inspection of Moeller Precision Tool, Inc. ("Moeller"), located at 30893 Century Drive, Wixom, Michigan 48393-2064. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules.

During the FY 2016 inspection, Mr. Nick Demski (Phone: 248-668-1166-ext. 133; Cell: 248-703-5195; Fax: 248-668-8186; E-mail: nDemski@MoellerPunch), Chief Pilot for 18-passenger corporate airplane for Moeller executives and customers, assisted me. Mr. Demski handles building and facility matters when not piloting corporate airplane.

Mr. Paul Dery (Phone: 248-668-1166-ext. 122; Cell: 734-751-6275; Fax: 248-668-1004; E-mail: pDery@MoellerPunch), Vice President, did not participate.

Moeller makes stamping and tooling equipment. Moeller makes special punches and die button. Moeller moved to this Wixom facility in December 2012 and it operated, previously, its manufacturing business in Plymouth, Michigan.

Moeller employs about 160 people; mostly skilled (machining, etc.) labor.

### **Saw cutting (2) and Swiss screw (6) machines**

Raw materials (steel bars) are received and cut using two (2) saw cutting machines. Six (6) screw machines (Star Micromics Co. Ltd.) are used make punch blanks. The machines produce waste turnings. Metal particles and turnings fall locally (Stokes' law gravity settling: gravitational forces Vs. viscous drag forces and buoyancy forces) due to mass, weight and size. Water-based coolant is used to cool tools. The screw machines are equipped with Mist Eliminators (ELIMINATOR) to remove oil mist to maintain indoor air quality for worker comfort and safety. No exhaust to outside ambient air. Collected scrap metal (turnings) is sent out (maybe sold) for recycling.

The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285

(l).

### **Milling (10) and drilling (5)**

Ten (10) milling and five (5) drilling machines are present. Each milling machine uses coolant to cool tools. Each milling machine is equipped with a filter system (Royal) to control mist emissions for worker comfort and safety. The parts are sent out for heat-treating. No exhaust to outside ambient air.

The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285 (l).

### **Wet grinding machines (46)**

46 wet grinders that use coolant are present. The grinders are equipped with a several Mist Eliminators (ELIMINATOR) and as well as two Airflow Baghouses (2 blue boxes located inside the building). Some wet grinders are equipped with mist eliminators to improve indoor air quality. Others (NOT equipped with mist eliminators) are ducted to one of two baghouses (two blue boxes located inside the plant). Each baghouse is equipped with 3 bags, which are replaced based upon pressure drop ( $\Delta P$ ). No exhaust to outside ambient air. Wet grinding machines use water based coolant to cool tools.

The 46 wet grinders are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

### **Dry grinding machines (20)**

About 20 dry grinding machines are present. The emissions from the dry grinders are captured and ducted through one common manifold to one control equipment consisting of a cyclone for large particles and a baghouse for fine particles; arranged in series. The cyclone protects bags by eliminating impact by large particles, which have higher momentum. Besides, cyclone reduces load on bags. The cyclone is equipped with two (2) 55-gallon drums (hoppers) for dust collection. The baghouse is equipped with six (6) 55-gallon drums (hoppers) for dust collection. I asked Mr. Demski to empty the drums promptly when full.

The bags are equipped with a shaker mechanism operated by two electric motors, which operate based on timer (1/hour). Two motors are needed because there are six hoppers.

The 20 dry grinders are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

While wet grinders' particulate emissions are controlled using either mist eliminators (ELIMINATOR) or one of two indoor baghouses (two blue boxes located inside the plant) and cleaned exhaust is released to in-plant environment, dry grinders' particulate emissions are controlled using outdoor cyclone and baghouse (arranged in series) and cleaned exhaust is released to outside ambient air.

### **Water-based parts cleaners**

Two water-based detergent parts cleaners are present:

1. Landa automatic parts washer

2. East-Wood cold-cleaner

**Conclusion**

Pursuant to Rule 336.1285, the machining and grinding (both wet and dry) equipment are exempt from Rule 336.1201 (Permit-to-Install).

NAME J. Sheehan DATE 04/14/2016 SUPERVISOR CTE