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

U6314106059028

FACILITY: Moeller Precision Tool, Inc.		**SRN / ID:** U63141060
LOCATION: 30893 Century Drive, Wixom		**DISTRICT:** Warren
CITY: Wixom		**COUNTY:** OAKLAND
CONTACT:		**ACTIVITY DATE:** 07/09/2021
STAFF: Iranna Konanahalli	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:**
SUBJECT: FY 2021 inspection of Moeller Precision Tool, Inc. ("Moeller"), located at 30893 Century Drive, Wixom, Michigan 48393-2064.		
RESOLVED COMPLAINTS:		

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

www.MoellerPuch.com

On July 9, 2021, I conducted a level 2 self-initiated FY 2021 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 Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules.

During the FY 2021 inspection, Mr. Dean Haven (Phone: 248-668-1166-ext. 122; Cell: 937-307-8859; Fax: 248-668-8186; E-mail: dHaveni@MoellerPunch.com), VP Operations, Mr. Frank J. DuQuet (Phone: 248-668-1166-ext. 102; Cell: 810-349907-3732; Fax: 248-668-8186; E-mail: fDuQuet@MoellerPunch.com), President , assisted me

Moeller makes stamping and tooling usig140,000- square- feet manufacturing and warehouse facilities in Wixom, Michigan,. Moeller makes special punches and die button, True Strip, Accessory Components, mechanical die springs in various sizes and load levels. Moeller moved to this Wixom facility in December 2012, and Moeller operated, previously, its manufacturing business in Plymouth, Michigan. Moeller's capabilities include CNC conventional/Wire EDM, CNC Turning &Milling, CNC Jig Grinding, and Profile Grinding

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. Eight (8: 2 were added about 3 years ago) screw machines (Star Micromics Co. Ltd.) are used to make punch blanks. The machines produce waste turnings (chips). 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 (2)(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 (2)(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 for worker comfort and safety. Others (NOT equipped with mist eliminators) are ducted to one of two indoor baghouses (two blue boxes located inside the plant). Each baghouse is equipped with 3 bags, which are replaced based upon pressure drop (ΔP). Bags are replaced about once in 5 years. No exhaust to outside ambient air. Wet grinding machines use water-based coolant to cool tools; as a result, there is no oil mist in the plant and no sign of grease on the floors.

The 46 wet grinders are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(l).

Dry grinding machines (20)

About 20 dry grinding machines are present. The emissions from the dry grinders are captured, using a capture system dedicated to each machine, 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 particulate load on bags thus improving effectiveness. 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. Dean 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; one is insufficient.

The 20 dry grinders are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(l).

(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 in both heating (winter) and cooling (summer) seasons.

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). Moeller is compliance with the conditions of the exemptions.

NAME J Stillmanhall. DATE July 26, 2021 SUPERVISOR Joyce