

FY 2015 Insp.

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

U6313001231052

FACILITY: SuperAbrasives, Inc.		SRN / ID: U63130012
LOCATION: 28047 Grand Oaks Court, Wixom		DISTRICT: Southeast Michigan
CITY: Wixom		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 09/01/2015
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: FY 2015 inspection of SuperAbrasives, Inc.		
RESOLVED COMPLAINTS:		

U63130012_SAR_20150901

SuperAbrasives, Inc. (U-63-13-0012)
28047 Grand Oaks Court
Wixom, Michigan 48393-3340

Web: www.SuperAbrasives.com

Rules 336.1285, 336.1287, 336.1290

On September 01, 2015, I conducted a level-2 self-initiated inspection of SuperAbrasives, Inc. ("the company"), located at 28047 Grand Oaks Court, Wixom, Michigan 48393-3340. 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 inspection, Mr. Rick Perri (Phone: (248) 348-7670 or (800) 341-4426; Fax: (248) 348-8037; E-mail: rperri@SuperAbrasives.com), Purchasing / Engineering Manager, assisted me.

SuperAbrasives manufactures diamond, borazon (cubic boron nitrate), etc. grinding wheels. The company prepares proprietary diamond mix (like cake mix) for a specific application. The company performs custom manufacturing of grinding wheels for given application. The company is in this building in Wixom since 1996.

Diamond mixing laboratory

Diamond mixing laboratory the mixes are according to specification or recipe. Mostly man-made diamonds are used.

Diamond testing laboratory

One diamond testing laboratory is present. The laboratory mixes three different types of formulations:

1. Metal bonds;
2. Resin bonds;
3. Vitrified

Electric furnaces, kilns, ovens

Grinding wheels are formed per customer specifications. Grinding wheels are fired in a kiln. Vitrified products are fired in kiln. Metal bond products are heated kiln. Resin bond product are pressed in electric press and cured in electric oven. All ovens / kilns are electrically heated. All fumes / emissions are discharged to outside ambient

air. The processes are exempt from Rule 336.1201 (Permit-to-Install) pursuant Rule 336.1290.

Resin bond area has 2 kilns for vitrified products and 4 furnaces for metal bonds. All are electrically heated. The emissions are estimated to be 15-20 pounds per month.

TRINCO dry blast machine

TRINCO dry blast machine was equipped with an air pollution control system consisting of a cyclone and dry filter system; arranged in series.

About 2014, TRINCO dry blast machine was removed.

Rule 287(b) Paint Spray Booths (2)

Two paint booths (10 ft. x 10 ft.) with back-draft dry filter systems are present. Two booths share one common ventilation system. No spray gun; only spray cans are used.

Grinding machines (6)

Six grinding machines are present. Six machines share a common capture device for particulate matter emissions. The captured particulate laden exhaust gases are transported via a manifold to one control system consisting of a cyclone and a baghouse installed inside the building; they are arranged in series

The cyclone is equipped with one 55-gallon drum for collection of captured dust. The baghouse is equipped with a hopper for collection of captured dust. The baghouse uses shaker mechanism to clean bags and discharges cleaned air to in-plant ambient air.

The bags will be replaced about December 2015.

In addition, six (6) wet grinding machines that use water based coolant are present. The machines are equipped with a cartridge filter.

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

Badboy sandblasting machine

Two Badboy sandblasting machines are present. Each machine has its own capture and control system for particulate matter emissions. Each baghouse is equipped with a hopper for collection of captured dust. The baghouse uses shaker mechanism to clean bags and discharges cleaned air to in-plant ambient air.

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

Wheel assembly area

Grinding segments are assembled on wheels using two-component epoxy glue. This is a small source of VOC; no exhaust to outside ambient air. The gluing process is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1290.

Water-jet cutting

One water-jet cutting machine is present. The machine uses to cut metals high pressure (40,000 psi) water jet with abrasives. The machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

Burn-off oven

I explained Mr. Perri that a burn-off oven to be installed may need an air quality permit. Proper design is an equipment with a primary combustion chamber for burn-off and a secondary combustion chamber to thermally oxidize fumes, odors, etc.

RCRA

On March 15, 2012, MDEQ-OWMRP (Mark Daniels of Office of Waste Management and Radiological Protection) conducted RCRA inspection in CY 2012. As a result of the inspection, OWMRP reclassified SuperAbrasives from "small quantity generator" to "conditionally exempt generator".

Conclusion

Rule 336.1201 (Permit-to-Install) exempt processes / process equipment pursuant to Rule 336.1285, 336.1287, 336.1290 are present.

NAME J. S. Llenemahalt DATE 03/15/2015 SUPERVISOR CTE