DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection FY2015 Insp-

U6310066329512

FACILITY: Three M Tool and Machine, Inc., Wind Turbine	**SRN / ID:** U63100663
LOCATION: Wind Turbine Facility, Wixom	**DISTRICT:** Southeast Michigan
CITY: Wixom	**COUNTY:** OAKLAND
CONTACT:	**ACTIVITY DATE:** 05/12/2015
STAFF: Iranna Konanahalli **COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:**
SUBJECT: FY 2015 initiated inspection of Three M Tool and Machine, Inc. ("Three M")	
RESOLVED COMPLAINTS:	

U 63 10 0663 _ SAR_ 2015 05 12

Three M Tool and Machine, Inc. (U-63-10-0663)
Wind Turbine Facility
50759 Century Court
Wixom, Michigan 48393-2066

www.threem.com

On May 12, 2015, I conducted a level 2 self-initiated inspection of Three M Tool and Machine, Inc. ("Three M") located at 50759 Century Court, Wixom, Michigan 48393-2066. 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. Mike Gray (Phone: 248-960-9698; Cell: 248-207-2212; Fax: 248-363-4422; E-mail: MGray@three-m.com), Quality Inspector, assisted me.

Mr. Larry West (Mobile: 248-207-2212), Second Shift Supervisor, was present but did not participate. Mr. Mike Medwid (Ph: 248-363-1555), owner and president, was not present. Mr. Medwid's office is located at Corp. HQ (**N2937**), 8155 Richardson Road, Walled Lake, Michigan.

Mr. John Rusch (Phone: 248-363-1555; Fax: 248-363-4422; Mobile: 248-881-7345; E-mail: jrusch@three-m.com), Plant Manager, separated about November 2013.

Three M is in machining business and makes machined parts such as gear boxes using vertical and horizontal lathes / mills. Each gear box weighs 4-10 tons. A windmill turbine gear dimension that the gear box accommodates is equal to one man-size (6 feet diameter). The gear boxes are supplied to wind power companies: ZF (4 tons) and Clipper Wind Power (10 tons); at this time (FY2015) there is hardly any ZF business.

In addition, Three M is producing natural gas compression cylinders for GE Oil & Gas and Dresser-Rend. Furthermore, Three M makes train carriages, hubs (12 feet tall) for windmills, etc. All are big parts (4-15 feet tall) that are machined.

Raw gear box castings are received. The castings are machined separately. Being heavy, the chips (machined steel chips) fall down. There is no exhaust to outside ambient air. There are both horizontal (4 CNC mills) and vertical (1 lathe) machines. CMM (Computer Measuring Machine – Zeiss MMZ G) machine checks for dimensions of machined parts.

Each machine (4 CNC mills & 1 lathe) is equipped with two liquid filtration systems. Each filtration system consists of a bag filter (8 inches diameter and 36 inches height). All particulate matter is trapped in coolant liquid and not emitted to plant air. The coolant is recycled upon filtration using a pair of liquid phase filter systems.

One Mag VTC 2500 Vertical Turning Center (lathe) equipped with a pair of filter systems as stated above is present. All particulate emissions are trapped in the coolant that goes through liquid phase filter systems. The coolant is recycled upon filtration.

Water-based Micro-sol coolant (NALCO Tech Cool 3718) is used during machining and milling.

Hence, the machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285.

While Clipper gear boxes weigh 19,000 pounds, ZF gear boxes weigh 7,000 pounds; ZF gear boxes are not produced at this time (FY2015). Each wind mill when assembled and installed costs 2.5 million dollars.

Solvent cleaning

4-5 gallons per month, 55 gallons (400 pounds) per year lacquer is used for wiping gear boxes clean. Rags moistened with solvent are used. Solvent-based (ketones) lacquer removes oils, grease and dirt from gear boxes. The process is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1290 (50 actual << 500 lbs. / month).

CADCO Lacquer Thinner (Cadillac Oil Company Product): Ketone (CAS 78-93-3: Methyl Ethyl Ketone; Synonyms: 2-Butanone; ethyl methyl ketone; MEK; Methyl acetone; Chemical Formula: CH3COCH2CH3), Specific Gravity (SG water = 1.0) = 0.81 at 20 °C / °C. Density ρ = 0.8050 g/cm3 (805 kg / L = 6.75 pounds / gallon). Clear liquid in appearance. Boiling Point (BP) = 79.64 °C = 353 K = 175 °F.

Neither a cold / parts cleaner nor paint spray booth is present.

Conclusion:

A small source of PM and VOC (<< 2 tpy).

NAME LS Ellenwood DATE 05/26/2015 SUPERVISOR CJE

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection FY 2015 Insp

N730529398

FACILITY: OVERHEAD CONVEYOR COMPANY	**SRN / ID:** N7305
LOCATION: 1330 HILTON ROAD, FERNDALE	**DISTRICT:** Southeast Michigan
CITY: FERNDALE	**COUNTY:** OAKLAND
CONTACT:	**ACTIVITY DATE:** 05/01/2015
STAFF: Iranna Konanahalli **COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY 2015 inspection of Overhead Conveyor Company ("Overhead" or "OCC Systems) dba OCC Systems	
RESOLVED COMPLAINTS:	

N7305 - SAR - 2015 05 01

Overhead Conveyor Company (N7305), aka OCC Systems
1330 Hilton Road
Ferndale, Michigan 48220-2837.

Duplicate SRNs: All-type Truck Body (N3771) does not exist at this site. Duplicate SRN N7305 was issued in error for Overhead Conveyor Company. All-type Truck Body moved out and the neighbors have no knowledge of this company. The SRN N3771 existed in AQD's MAPR database before 1992. The neighbors on Hilton Road, including Overhead have no knowledge of this facility.

PTI Void: Permit-to-Install No. 366-92 (N3771) dated May 8, 1993, for paint spray booth, was voided on May 19, 2011 based upon FY 2011 inspection.

PTI Application Void: Permit-to-Install Application No. 197-03 (N7305) dated August 8, 2003, for painting operation, was voided on March 3, 2004. Perhaps, this application was voided based upon OCC Systems' commitment to abide by 200 gallons per month usage limit (Rule 336.1287(c)).

On May 01, 2015, I conducted a level-2 self-initiated inspection of Overhead Conveyor Company ("Overhead" or "OCC Systems) dba OCC Systems, located at 1330 Hilton Road, Ferndale, Michigan 48220-2837. 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 FY2015, inspection, Mr. Greg Porter (Phone: 248-547-3800; Fax: 248-547-8344; Cell: NA; E-mail: GregP@occ-conveyor.com), Quality / Safety Director, and Ms. Alanna Woodbeck (Phone: 248-547-3800; Fax: 248-547-8344; Cell: NA; E-mail: AlannaW@occ-conveyor.com), assisted me.

During the FY2015 inspection, Mr. Don Gross (Ph: 248-547-3800; Fax: 248-547-8344; Cell: 248-343-8483; E-mail: dong@occ-conveyor.com), Manufacturing Manager, did not participate.

OCC Systems makes conveyor systems, headers, etc., for automotive industry. The process consists of cutting, welding, drilling, punching, grinding, etc., and finally painting. OCC Systems designs, builds and installs material handling systems.

Paint spray area

One 15 ft * 30 ft paint spray area with back filters on one side of the corner's wall is present. Although a booth is not present, nine exhaust filters (about 20 ft long) are present on the wall. The area is located at a corner of the manufacturing plant. I observed and confirmed that paint overspray particles were moving towards the filter system. The filters are changed once every 2-3 weeks. All coatings are water-based paints. While primer is always white, topcoats are yellow, brown and orange in color. About 10 years ago (2005), OCC Systems stopped using solvent-based coatings.

Paint usage logs are kept on a weekly basis. The logs are transferred to a MS Excel Workbook / Spreadsheet. Using MS Excel, monthly usage calculations are performed. Paint usage is less than 200 gallons per month; typical usage is 100 gallons per month including water. Solvent-based paints are not used; i.e., all coatings are water-based. Only air-dried coatings are used; i.e. no baking and hence no oven.

The painting area (no booth, one corner of the plant) is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1287(c). A booth does not exist. However, paint overspray particles are controlled using a dry filter system located at one corner of the plant. Coated parts are large (up to 20 feet).

I asked Mr. Porter to install the filters such that they fit, at all times, snug and tight without gaps and holes. I confirmed air draft at the backdraft filters. Overspray paint particles (dried powder) are on the floor as well.

Welding

Welding is performed. Fumes are released to in-plant environment. MIOSHA inspected and performed breathing zone sampling. According Mr. Porter, 8-hour exposure was acceptable.

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

No cold-cleaner is present.

Conclusion:

N3771 does not exist anymore and its associated Permit-to-Install No. **366-92**, for paint spray booth, was voided. Duplicate SRN N7305 should never have been issued for the same address; but now SRN 7305 must be retained for data integrity for OCC Systems.

NAME H Allenmahall DATE 05/13/2015 SUPERVISOR CJE