

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

N514530137

FACILITY: INDUSTRIAL METAL COATINGS INC		SRN / ID: N5145
LOCATION: 6070 18 MILE RD, STERLING HTS		DISTRICT: Southeast Michigan
CITY: STERLING HTS		COUNTY: MACOMB
CONTACT: Scott Roach, General Manager		ACTIVITY DATE: 07/07/2015
STAFF: Francis Lim	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On July 7, 2015, AQD staff conducted an inspection at Industrial Metal Coatings "IMC" located at 6070 18 Mile Road, Sterling Heights. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules; the conditions of Permit-To-Install (PTI) No. 106-94, and to investigate an odor complaint regarding an unpleasant odor from the facility.

Industrial Metal Coatings located at 6070 18 Mile Road, Sterling Heights is owned by Fricia Enterprises. Scott Roach, General Manager of the facility accompanied staff during the inspection.

IMC is a Tier III automotive supplier. It applies a primer, using a coating method called electrocoating (E-coat) to automotive metal parts of varying sizes. E-coat uses an electric current to deposit paint on the metal substrate. The E-coat system applies a charge to a metal part immersed in a water based solution containing paint emulsion with oppositely charged paint particles. The paint particle is deposited on the metal part forming an even continuous film. The metal part can be painted wherever the paint emulsion is able to reach the metal surface. Voltage applied to the E-coat system dictates the thickness of the coating.

Prior to the primer application, the metal parts are cleaned with hot water and soap, goes to a zinc phosphating line, and then rinsed before it goes to the E-coat dip tank. The parts are wet when it goes to the dip tank. As the metal part leaves the dip tank, residual coating clings to the part which has to be removed in a rinse tank. A natural gas fired bake oven operating at 350 °F cures the coating. Because of shorter flash off area, the bake oven is operated at a high temperature.

Accumulated coatings deposited on the paint racks are removed using burn off ovens.

Facility operates a water treatment system to process the E-coat rinse.

Light assembly is also done at this facility. Facility operates one long shift, usually up to 4 PM.

There is another facility in the building called Industrial Metal Finishing ("IMF"), a sister company, under Fricia Enterprises. Primary activity is deburring of metal parts. Deburring is the process of removing jagged edges or protrusions from metal parts. In general, two types of deburring machines are used – tumbling (barrel) machines or vibratory machines. This facility uses vibratory machines with ceramic media stones to debur the metal parts. Some machines do not use ceramic media – deburring is done by metal parts rubbing against one

another. During the process, oil may be added for corrosion resistance. Excess oil is drained and disposed.

IMC and IMF do not use any solvent based washer and cleaner.

Industrial Metal Coatings (IMC) has a permit (PTI 106-94) for an E-coat line with water wash/zinc phosphating line with post rinses, and a natural gas-fired bake oven. Previously, the cationic E coat dip tank uses a 2-component coating. The E-coat used now, Powercron Black Feed is already premixed at the paint manufacture. A solvent, Butyl Cellusolve is occasionally added to the tank – about 5 gallons every week.

The permit has a limit of 21.5 tons per year based on a rolling 12-month time period. Facility does not keep emissions records. This is a violation of Special Condition 19. A Notice of Violation will be sent to the facility. Violation notices were sent to the facility in 2006 and 2009 for the same violation.

A notice of violation will also be sent to the facility for installing a burn off oven without a permit.

The AQD has received odor complaints from 2 citizens since May 12, 2015. The first complainant described a strong chemical odor from the facility. The second complaint described a terrible unpleasant odor from the facility that is entering their intake ventilation.

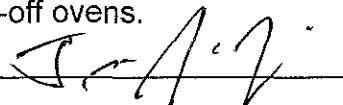
I have been conducting odor observations downwind of the facility since May 2015. I have not detected a strong odor from the facility.

In the past, I would notice a very strong odor musty odor near the facility. E-Coat is a water-based coating and generally contains little toxics. However, the solvent Butyl Cellusolve smells like mold. Strong moldy odor may come out of the oven or as fugitive emissions coming from the coated part itself. Possible explanation is that cross linking of the resins and chemicals during baking emit some other odorous chemicals. When the facility gets busy, especially when coating parts with larger surface area, the E-Coat odor may become stronger.

On July 8, 2015 at noon, I was called by one of the complainants and I responded right away. He was complaining about a strong metal burning odor. Although it was not very strong, the burning metal odor was very noticeable. I did not stop by IMC at that time, but Mr. Roach was informed later that the burning odor source was most likely the burnoff ovens.

It now appears that there are now 2 sources of odor from this facility: from the E-coat line and burn-off ovens.

NAME



DATE

07-10-15

SUPERVISOR

CJE