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

N514562181

FACILITY: INDUSTRIAL METAL COATINGS INC		**SRN / ID:** N5145
LOCATION: 6070 18 MILE RD, STERLING HTS		**DISTRICT:** Warren
CITY: STERLING HTS		**COUNTY:** MACOMB
CONTACT: Philip A. Oliver , President		**ACTIVITY DATE:** 03/16/2022
STAFF: Kaitlyn Leffert	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY2022 Inspection		
RESOLVED COMPLAINTS:		

On March 16th, 2022, I, Kaitlyn Leffert, conducted an inspection of Industrial Metal Coating (SRN: N5145), located at 6070 Eighteen Mile Road, Sterling Heights, Michigan. The purpose of the inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and the conditions of Permit to Install (PTI) Numbers 25-16 and 106-94.

Industrial Metal Coatings is permitted to operate an electrodeposition coating (e-coat) process (PTI No. 106-94), as well as four burn-off ovens (PTI No. 25-16) used to remove cured paint from the coating racks. Industrial Metal Coating is a true minor source of volatile organic compounds (VOCs).

Industrial Metal Coatings has a history of odor complaints alleged against the facility. The majority of the odor complaints were received in 2018 and 2019. The most recent odor complaint was received on February 28, 2022. This was the first odor complaint alleged against the facility since February 26th, 2020. An investigation into the alleged odors was conducted on March 3, 2022 and concluded that odors were present at a intensity and duration that would constitute a Rule 901 violation. A violation notice was issued on March 29, 2022.

I arrived at the facility at 10 am on Wednesday, March 16th. I was accompanied by Jennifer Rosa, Attorney General's Office, and Bob Byrnes, Air Quality Division. We met with Phil Oliver, Owner, Industrial Metal Coating, and Bob Davis, who is an attorney representing IMC. We first met to discuss the permit requirements and the purpose of the inspection.

Following our initial discussion, Bob Byrnes, Jennifer Rosa, and I were led on a walk-through of the facility. The e-coat process is a multi-stage coating process. First, the parts are manually loaded on to racks. Depending on the size of the part, many small metal parts may be loaded onto a single rack, or one single part may need multiple racks to support it during the coating process.

Once loaded onto the racks, parts are pre-cleaned using a soap and water solution and then rinsed off. Then, the parts go through the phosphate line, followed by another rinse stage. Finally, parts move on to the e-coat dip tank and then go into to the curing oven. It takes approximately 1-2 hours for a single rack to move through the line.

PTI No. 106-94 Special Condition (S.C.) 17 requires no visible emission be generated by any portion of the e-coat line. I did not observe any visible emission originating from the e-coat process or any processes in the facility. Throughout the walkthrough, I also noted that any coatings or wastes

generated on site were properly stored in a manner that minimizes fugitive emissions, as required by PTI No. 106-94 S.C. 21.

There are four burn-off ovens located on the exterior of the building. The burn-off ovens were not operating at the time of the inspection. The burn-off ovens are used to remove baked on coating from the coating racks. The burn-off ovens all have a temperature control system for the primary chamber, as required by PTI No. 25-16, S.C. IV.1.

The burn-off ovens were permitted to operate without afterburners. To reduce potential odors and emissions, the facility recently installed afterburners on two of the ovens. The two ovens without after burners have been temporarily disconnected and are not being used until afterburners have been installed. During the inspection, AQD staff Kaitlyn Leffert and Bob Byrnes identifed that the afterburners do not have an automatic shut off control. This is not required by PTI 25-16 but is generally considered best practice. Bob Byrnes recommended that IMC install afterburners on the burn-off ovens. On April 12th, I followed up with the Phil Oliver and was informed that they would be updating the afterburners so that they do have the automatic shut-off function. Emissions from the burn-off ovens are discharged unobstructed vertically and the stacks satisfy the dimensions specified in the permit.

IMC only burns natural gas in the burn-off ovens, as required by PTI No. 25-16, S.C. The burn-off ovens are used to remove baked-on coatings on the racks used to hang the parts being coated during the e-coat process. Therefore, the only material processed in the oven is the baked-on coatings, which satisfies the requirements of S.C. II.3, S.C. III.1, and S.C. III.2.

There is a sister company located on-site, Industrial Metal Finishing (IMF), which primarily operates tumblers for the finishing of metal parts. IMF does not have a permit to operate any of the equipment in that part of the facility. The tumblers all vent to the general in-plant environment and would be considered exempt according to Rule 285(2)(l)(vi).

Phil Oliver also stated that the stacks associated with the e-coat process were recently raised to 65 feet, to promote better dispersion of the emissions associated with the process. Emissions from the e-coat line are vented unobstructed vertically upwards, as required by PTI No. 106-94, S.C. 20.

Following the inspection, AQD staff Kerry Kelly identified a picture from google maps indicating an additional exhaust fan located near the curing ovens. Based on observations made during the inspection, it is expected that these exhaust fans are connected to the general in-plant environment. The coating process, including the dip tank and associated curing oven, operate in an enclosed coating line. Emissions from the curing oven vent through the tall stacks, and not to the general in-plant environment. However, fugitive emissions released from gaps in the coating line would be vented through any exhaust fans connected to the general plant environment.

Records Review

During the inspection, I was provided copies of all requested records, which I further reviewed following the in-person portion of the inspection. Copies of the records will be attached to the physical copy of the report.

PTI No. 106-94

IMC is required to maintain records of the amount of coating used, the VOC content of the coating used, and the VOC emissions calculations on a monthly and 12-month rolling basis (PTI No. 106-94, S.C. 19). Emissions of volatile organic compounds (VOCs) from the e-coat line are limited to 21.5 tons per year, as determined on a 12-month rolling basis. During a previous inspection, IMC was found to be not maintaining records of 12-month rolling VOC emissions. The facility is now maintaining 12-month rolling VOC emissions records. I was provided copies of these records, which included monthly VOC emissions and 12-month rolling emissions calculations from January 2020 to present (Attachment 1). Total VOCs over the 12-month period ending in January 2022 were 4.84 tons per year (tpy). The highest rolling 12-month VOC emissions over the previous year were recorded at the end of July 2021, with 4.92 tpy.

PTI No. 106-94, S.C. 15 also limits VOC emissions to 7.7 pounds per hour. There are no associated recordkeeping requirements for hourly VOC emissions in the permit and therefore, the facility does not maintain hourly emissions records. However, based on the operating hours of the facility in a given year and the highest 12-month rolling emissions of 4.92 tpy, it is estimated that the hourly VOC emissions are around 5.0 lbs/hr. Therefore, based on the available information, IMC appears to operating below the allowed hourly emission rate.

PTI No. 106-94 Special Condition (S.C.) 16 requires that the VOC emission rate from the e-coat line not exceed 3.5 pounds per gallon (minus water). IMC Coatings only uses one coating, Powercron Black Feed Coating, which has a VOC content (minus water) of 0.41 lbs/gal, according to the Safety Data Sheet for this material (Attachment 2).

PTI No. 25-16

IMC maintains a burn-off oven log, where staff record the date and times that the burn-off ovens operated, the temperature of the combustion chamber, visible emissions observations, and the number of carts processed. The facility is permitted to process no more than one cart of paint racks at a time in each burn-off oven and no more than 1,920 carts per 12-month rolling time period (SC. II.1). I collected and reviewed burn-off oven records from August 2021 through March 2022 (Attachment 3). For the period of August 2021 to March 2022, a total of 447 carts were processed in the ovens. The records indicate that IMC usually processes 3 total carts in the ovens per day, with one oven cycle in the morning, one midday and one in the afternoon/evening. Based on the burn-off oven records, the facility appears to be operating in compliance with FG-OVENS S.C. II.1.

The facility maintains records identifying the monthly total number of carts processed in the burn-off ovens but is not currently maintaining 12-month rolling records of the total number of carts processed, as required by PTI No. 25-16, S.C. VI.3. I informed the facility that they needed to update their records to track the 12-month rolling total number of carts processed in the ovens, in addition to the monthly totals. I did not issue a violation notice to the facility since I was still able to determine compliance with the permitted limits on carts processed in the oven based on the records that were provided. Following the inspection, I followed up with Phil Oliver regarding updating the records to include 12-month rolling number of carts processed in the oven. I requested that the facility update their records and submit records to me a monthly basis demonstrating that they are maintaining the 12-month rolling records.

PTI No. 25-16 limits visible emission to 0% opacity. In the facility burn-off oven record (Attachment 3), staff note emissions as light, medium, or heavy. For every day of the records that I reviewed, emission were marked as "Light." I asked what light meant and was told that means there are not any visible emissions, and all that is visible is the heat coming out of the oven stack. I requested that the facility update this record to more clearly identified whether any visible emission or opacity was observed.

IMC also required to calibrate the thermocouples associated with the primary chamber of each burn-off at least once per calendar year (S.C. III.3). The thermocouples have not been calibrated since the last inspection. Based on records collected during the inspection in August of 2021, the thermocouples were last calibrated on July 26, 2021, and are due again for calibration in July 2022.

FG-OVENS VI.2 requires that IMC maintain a current listing of the chemical composition of each material processed in the ovens. As previously mentioned, IMC only uses one coating, Powercron Black Feed. The facility maintains a copy of the SDS for that material on site (Attachment 2).

Odor Complaint

On the day of the inspection, a complaint was received that alleged distinct and definite burning paint-like odor at an intensity of 2 originating from Industrial Metal Coating after 2pm. AQD staff was on-site from approximately 10 am to 1:30 pm for the inspection. Prior to entering the facility, during the inspection, and after leaving the facility, AQD staff Bob Byrnes and Kaitlyn Leffert made odor observations. There were not any odors observed outside of the facility prior to or after the inspection. While inside of the facility, an e-coat odor was detectable immediately next to the curing oven. The odor was not detectable in the general plant environment or in the office area of the facility. The characteristic of the e-coat odor was similar to that observed in previous odor investigations conducted in the area. The odor complaint was received following our departure from the facility, at approximately 2:40 pm. I returned the following day to conduct an odor investigation. The outcomes of this investigation are documented in a separate activity report.

Conclusion

Based on my on-site inspection and corresponding records review, Industrial Metal Coatings was found to be in violation of PTI No. 25-16, S.C. VI.3, for recordkeeping of carts processed in the burn-off oven. A violation notice was not issued, and instead a verbal warning was issued to the facility and follow-up will be conducted to confirm that the recordkeeping violation has been corrected. An additional follow-up investigation was conducted regarding the odor complaint received on the day of the inspection. The outcomes of the odor investigation are documented in a separate activity report.

NAME Kaitlyn Leffert DATE 07/08/2022 SUPERVISOR K. Kelly