

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

N095048455

FACILITY: MICHIGAN METAL COATINGS		SRN / ID: N0950
LOCATION: 2015 DOVE STREET, PORT HURON		DISTRICT: Southeast Michigan
CITY: PORT HURON		COUNTY: SAINT CLAIR
CONTACT: Michael Lentz , Quality Assurance Manager		ACTIVITY DATE: 02/21/2019
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Conducted a scheduled inspection of Michigan Metal Coatings Company to determine the facility's compliance with the Air Pollution Control Rules and Permit to Install (PTI) No. 139-06 and 116-06A, and verify the installation of new equipment for plant 2 and removal of rain caps on the burn-off oven and the wastewater evaporator.		
RESOLVED COMPLAINTS:		

On Thursday, February 21, 2019, Michigan Department of Environmental Quality(MDEQ) (MDEQ is now EGLE-Michigan Department of Environment, Great Lakes and Energy)-Air Quality Division (MDEQ-AQD) staff, Kaitlyn Leffert and I, Shamim Ahammod conducted a scheduled inspection of Michigan Metal Coatings Company (facility) located at 2015 Dove Street, Port Huron, Michigan. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451) and the Air Pollution Control Rules and Permit to Install (PTI) No. 139-06 and 116-06A, and to verify the installation of new equipment for plant 2 and removal of rain caps on the burn-off oven and the wastewater evaporator.

#### INSPECTION & REGULATORY ANALYSIS:

We arrived at the facility at approximately 10:15 AM, entered the Customer Service office and identified ourselves to a member of the office staff. This staff member introduced us to Mr. Richard Rumohr, Quality Assurance Manager, Michigan Metal Coatings Company. We introduced ourselves to Mr. Rumohr, showed him our credentials, provided him our visiting card and stated the purpose of the inspection. Mr. Rumohr introduced us to Mr. Mike Lentz, General Manager. During the pre-inspection meeting, we discussed the current permit no. 116-06B for EUWASTEVAP, FGCOATERS and FGFACILITY and permit no. 139-06 for EU-BURNOFF.

On January 29, 2019, Michigan Metal Coatings Company submitted a PTI application to the MDEQ-AQD, permit section to install a new coating line, i.e., Rack Dip Drain Spin (RDDS) line include an integrated alkaline cleaning system, six shot blasters, two coating booths, and two curing ovens located at 1720 Dove street, Port Huron, Michigan. This new PTI application is being reviewed by MDEQ-AQD, Permit Section now.

#### SOURCE DESCRIPTION:

Michigan metal coatings company uses dip-spin machines to coat metal parts including nuts, and bolts. Parts are washed in an alkaline solution and shot blasted to remove oils, scale, and surface rust prior to coating. The facility has one burn-off oven which is used to clean dirty coating baskets and one wastewater evaporator which is used to reduce the volume of wastewater.

#### PTI No. 116-06B:

##### EUWASTEEVAP

A natural gas-fired wastewater evaporator used to reduce the volume of wastewater from processes at the plant. EUWASTEEVAP is permitted in PTI No. 116-06B.

### **Emission Limits**

As specified in SC I.1, the VOC emission from the wastewater evaporator is limited to 5.00 TPY on a 12-month rolling time period as determined at the end of each calendar month. The PTI requires the permittee to calculate VOC emissions from the evaporator using an emission factor (EF) of 0.8 lb VOC per gallon of wastewater. The submitted records, as of February 2019, show that the VOC emissions from the wastewater evaporator were 6.65 TPY on a 12-month rolling time period as determined at the end of each calendar month (Attachment-1). This is a violation of EUWASTEEVAP SC I.1. A notice of violation will be sent for exceeding the permit limit.

### **Monitoring/Record Keeping**

As specified in SC VI.2, the permittee shall keep the following information on a monthly basis for EUWASTEEVAP.

- a. Gallons of each rinse water used.
- b. An emission factor of 0.8 lbs VOC per gallon of water processed, or another emission factor as approved by the AQD District Supervisor.
- c. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
- d. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

At the time of inspection, Mr. Rumohr provided the wastewater evaporator log which includes the amount of rinse water used each day from the period of March 2018 through January 2019 (Attachment-2). Mr. Rumohr sent me the VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month from January 2018 through February 2019 via email. I reviewed these documents. It appears to me the permittee satisfies the permit condition set forth in SC VI (Attachment-3).

I inspected the stack for EU-WASTEPAV and noticed the stack height appeared to be more than one and one half-time the building height and there was no rain cap on the top of the stack. I did not see any visible emissions from the EU-WASTEEVAP stack during the inspection.

### **FG COATERS**

FGCOATERS are permitted in PTI 116-06B. At the time of inspection, we inspected 5 coating lines (Line 1 through 5) and one cleaning line (Line 6) at the facility.

- Line 1(EUCOATER1A), Line 2(EUCOATER2), Line 3(EUCOATER3) and Line 4 (EUCOATER4) each have two dip coat booths and one cure oven. For these lines, the parts washers and shot blasters are independent.
- Line 5 (EUCOATER5) has integrated cleaning and coating utilizing four dip coat booths and two cure ovens. For this unit, the parts washer, six shot blasters, dip coating equipment and the curing ovens are part of a single unit.
- Lines 1, 2 and 5 are connected to the RTO.
- Line 6 is the only for cleaning purpose (Alkaline washing and blasting)
- Base coats are applied on Line 1, Line 2, and Line 5.
- Lines 1, 3 and 4 are used for top coats. Lines 2 and 5 are also can be used for top coats.

The parts coating process includes alkaline (potassium hydroxide) solution cleaning, shot blasting, dip coating and curing. The exhaust from the shot blasting process is released into the general plant environment after it is controlled by a dust collector baghouse. The shot blasting process is exempt from R.336.1201 per R 336.1285(2)(l)(vi) to have a permit to install.

**Air pollution control equipment:**

The emissions from Line 1, 2 and 5 are controlled by the regenerative thermal oxidizer (RTO). The facility uses RTO to control VOC emissions and show compliance with this VOC limit for EUCOATER1A, EUCOATER2 and EUCOATER5.

**Emission Limits**

As specified in SC I.1, the VOC emissions limit for FGCOATERS is 50 TPY for the 12-month rolling period. Based on records, provided by Mr. Rumohr via email, VOC emissions originating from FG COATERS from January 2018 through February 2019 were 15.5 TPY, far below the yearly limit of 50 TPY (Attachment-4). As specified in SC I.2, records of the VOC emission calculations determining the volume-weighted average VOC content of the coatings as applied on a daily basis for each individual emission unit were provided by Mr. Rumohr via email. These records indicate the daily volume-weighted average of VOC content of the coatings as applied on a daily basis for EUCOATER5\_ exceeded the permit limit of 3.5 lb/gal (minus water) on April 2-5, April 7, April 9-13, April 16-21, April 23-27, April 30, May 1-4, May 7-8, May 10-11, May 14-19, May 22-25, and May 29-31, 2018 (Attachment-5). This is a violation of FGCOATERS SC I.2. A violation notice will be issued to MMC for this violation.

**Design/equipment parameters:**

As specified in SC IV.1, the permittee shall not operate EUCOATER1A, EUCOATER2, and EUCOATER5 unless the RTO is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the RTO includes a minimum VOC destruction efficiency of 95 percent by weight), maintaining a minimum temperature of 1500 degrees based on the most recent acceptable stack test which achieved a minimum overall destruction efficiency of 95%, and a minimum retention time of 0.5 seconds.

Compliance with the RTO destruction efficiency was verified during a stack test conducted on September 8, 2016. A copy of the entire stack test report is on file at the DEQ Southeast Michigan District Office. The summary page indicates the average destruction efficiency of the RTO was 96.05 percent.

Compliance with the 1500-degree Fahrenheit minimum temperature limit for the RTO is demonstrated through recordkeeping in FGCOATERS. The temperature readings during the reported period indicate the 10-second readings of RTO temperatures were greater than 1500 degrees Fahrenheit while EUCOATER1A, EUCOATER2 and EUCOATER5 were operating.

I inspected the RTO temperature monitor during the inspection and noted the temperature was 1515.2 degrees Fahrenheit. The minute average temperature was 1519.2 degrees Fahrenheit and the hourly average was 1515.2 degrees Fahrenheit. The RTO temperature monitor is calibrated annually. I inspected the stack for the RTO and the dimensions appear to be in compliance with the permit requirements. There were no visible emissions from the RTO stack during the inspection.

### **Monitoring/Recordkeeping**

As stated in SC VI.2, the permittee maintains a current listing from the manufacturer of the chemical composition of each coating including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. Mr. Rumohr emailed the Material Safety Data Sheets, which specify the chemical composition of each coating including the weight percent of each component (Attachment-6).

As specified in SC VI.3, the permittee keeps the following information on a daily basis for each emission unit individuals for FGCOATINGS:

**Gallons (with water) of each coating used and, if applicable, reclaimed**

- a. **Percentage of VOC emissions being captured and destructed by the RTO**
- b. **VOC content (minus water and with water) of each coating as applied**
- c. **VOC emission calculations determining the volume-weighted average VOC content of the coatings as applied on a daily basis for each individual emission unit**
- d. **VOC mass emission calculations determining the monthly emission rate in tons per calendar month for FGCOATERS**
- e. **VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for FGCOATERS**

Record keeping information related to SC VI.3 was sent to me by Mr. Rumohr via email. This satisfies the permit conditions set forth in SC VI.3.

### **FGFACILITY**

This flexible group encompasses all process equipment at the stationary source including equipment covered by other permits, grandfathered equipment and exempt equipment. All equipment and processes at MMC are included in FG-FACILITY.

Compliance with each individual HAPs and aggregate HAPs emission limits are demonstrated by recordkeeping requirements set forth in SC VI.2. Records of the 12-month rolling facility-wide HAP emissions for March 2018 through February 2019 were provided by Mr. Rumohr via email (Attachment-7). The 12-month rolling (March 2018-February 2019) average HAPs emissions were 0.0185 tpy for Ethylene and 2.3979 tpy for Methanol, both were well below the permit limits of 9.00 TPY. The 12-month rolling (March 2018-February 2019) average combined HAPs emissions were 2.42 TPY, which was well below the permit limits of 22.5 TPY. These records indicate each individual HAP emissions and aggregate HAPs emission limits were below the permit limits for a 12-month rolling time period from March 2018 through February 2019.

**PTI No. 139-06:**

#### **Burn-off oven**

A burn-off oven (EUBURNOFF) is used to clean dirty coating baskets. EUBURNOFF is permitted in PTI 139-06.

**Emission Limits**

As specified in SC I.1, no visible emissions from EU-BURNOFF stack were observed during the inspection. At the beginning time of inspection, EU-BURNOFF was not in operation. During our inspection time, they started operating the burn-off oven.

**Material Limits**

As required in SC I.1, Mr. Rumohr informed me that they are using natural gas fuel in the burn-off oven. According to SC I.2, the permittee shall not process any material in EU-BURNOFF other than cured paints, oil or grease on metal parts, racks and/or hangers. At the beginning time of inspection, when the burn-off oven was not in operation, I observed only dirty painting basket inside the burn off oven. Mr. Rumohr told me that they do not process any material in EU-BURNOFF other than cured painted dirty basket.

**Process/Operational Restrictions**

As required in SC III.1 and SC III.2, the permittee does not process any material in EU-BURNOFF other than cured painted dirty basket, according to Mr. Rumohr.

**Design/Equipment Parameters**

SC IV.1 requires that the Burn-off oven is equipped with an afterburner and operate the afterburner at a temperature of 1400 degrees Fahrenheit or above.

SC IV.2 and SC IV.3 require that burn-off oven is equipped with an automatic temperature control system and interlock system that shuts down the primary burner when the afterburner is not operating properly. At the time of inspection, we observed a device on EU-BURNOFF used to monitor the temperature of the primary burner and afterburner temperature.

At 12:46 PM, a little while later, after starting the Burn off oven, I noted that the primary burner temperature was 496 degrees Fahrenheit and the afterburner temperature was 1289 degrees Fahrenheit. This is a violation of SC IV.3 because SC IV.3 requires an interlock such that the primary burner won't start until the secondary burner reaches the at the minimum temperature of 1400 degrees Fahrenheit. I observed that the afterburner temperature started increasing. Meanwhile, the primary burner also started. A notice of violation will be sent for not complying with SC IV.3.

I asked Mr. Rumohr regarding interlock system for the burn-off oven and informed him that the interlock system should work during the operation of burn off oven. He inquired about this to the Mr. Val Cioban, Facility Supervisor. Mr. Cioban said interlock system works properly. At 1:12 PM, around half an hour later starting the burn-off oven, I noted again that the primary burner temperature was 680 degrees Fahrenheit and the afterburner temperature was 1413 degrees Fahrenheit. The setpoint for afterburner temperature was at 1800 degrees Fahrenheit and the primary burner was at 882 degrees Fahrenheit. These records indicate the afterburner temperature was above the minimum temperature of 1400 degrees Fahrenheit.

**Monitoring and Recordkeeping**

As specified in SC VI.3, Mr. Rumohr provided me copies of the afterburner temperature recordings for the weeks of January 31, 2019, February 7, 2019 and February 15, 2019. I reviewed the weekly temperature records (charts provided by Mr. Rumohr) for the secondary chamber. The charts show that the oven was operated with the secondary chamber temperature above 1400 degrees Fahrenheit (Attachment-8).

As required in SC VI.5, at the beginning time of inspection, burn-off oven was not in operation. I observed only dirty painting basket inside the burn off oven. Mr. Rumohr told me that they do not process any material in EU-BURNOFF other than used baskets coated in cured paint.

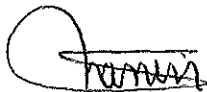
According to SC VI.5, MMC is required to maintain a current listing from the manufacturer of the chemical composition of each coating, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. Mr. Rumohr sent me safety data sheets (SDS) that include component name, CAS Number and percentage of weight (Attachment -9). After reviewing the information provided by Mr. Rumohr, it appears to me the facility satisfies the permit condition set forth in SC VI.5.

**Stack/Vent Restrictions**

I inspected the stack for EU-BURNOFF and noticed the stack height appeared to be more than one and one-half time the building height and that there was no rain cap on the top of the stack. I did not see any visible emissions from the EU-BURNOFF stack during the inspection.

We also inspected the proposed new site for coating line located at 1720 Dove Street, Port Huron, MI. We observed that two WMV Tuz coating lines has been installed at this facility before approval of PTI application for this new coating line. This a violation of Rule 201 of the administrative rules promulgated under Act 451. Rule 201 requires that a permit be obtained prior to installation, construction, operation, reconstruction, relocation, or alteration of any process or process equipment which may be a source of an air contaminant. A violation notice was sent to the facility for this violation.

Based on the on-site inspection, reviewing records and discussion with staff, Michigan Metal Coatings Company is not in compliance with the requirements of PTI No. 139-06 and 116-06B. A violation notice will be sent to the facility seeking compliance with the requirements.

NAME 

DATE 5/7/19

SUPERVISOR 