

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

N095052264

<b>FACILITY:</b> MICHIGAN METAL COATINGS		<b>SRN / ID:</b> N0950
<b>LOCATION:</b> 2015 DOVE STREET, PORT HURON		<b>DISTRICT:</b> Southeast Michigan
<b>CITY:</b> PORT HURON		<b>COUNTY:</b> SAINT CLAIR
<b>CONTACT:</b> Rich Rumohr , Quality Assurance Manager		<b>ACTIVITY DATE:</b> 01/09/2020
<b>STAFF:</b> Shamim Ahammod	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> Conducted a scheduled inspection to determine the facility's compliance with the requirements of the federal Clean Air Act and Permit to Install (PTI) Nos. 139-06, 116-06C and 24-29.		
<b>RESOLVED COMPLAINTS:</b>		

On Thursday, January 9, 2020, Michigan Department of Environment, Great Lakes and Energy (EGLE) - Air Quality Division (AQD) staff, I, Shamim Ahammod, conducted a scheduled inspection of Michigan Metal Coatings Company (SRN#N0950) 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) Nos. 139-06, 116-06C and 24-29.

### **INSPECTION & REGULATORY ANALYSIS**

I arrived at the facility at approximately 11:00 AM. I entered the Customer Service office and identified myself to a member of the office staff. This staff member directed me to Mr. Richard Rumohr, Quality Assurance Manager, Michigan Metal Coatings Company. I introduced myself to Mr. Rumohr and stated the purpose of the inspection. During the pre-inspection meeting, we discussed PTI Nos. 139-06, 116-06C and 24-29.

### **SOURCE DESCRIPTION**

Michigan metal coatings company uses dip-spin machines to coat metal parts such as 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 uses a burn-off oven to clean cured coated dirty baskets generated from the dip-spin processes.

### **PTI No. 116-06C**

On April 26, 2019, PTI No. 116-06C was issued for three dip-spin coating lines (EUCOATER1A, EUCOATER2/EUCOATER2A, and EUCOATER5) which apply basecoats to metal parts, and two dip-spin coating lines (EUCOATER3 and EUCOATER4/EUCOATER4A) which apply a water-based topcoat to metal parts.

### **FGCOATERS**

At the time of inspection, I inspected 5 coating lines (Line 1 through 5) and one cleaning line (Line 6) at the facility.

- Line 1(EUCOATER1A) consists of two dip- spin booths that are used to apply basecoats to metal parts and one natural gas-fired oven which is used to cure the parts. For these lines, the parts washers and shot blasters are individual units.
- Line 2, LEUCOATER2 has been modified and now it is called EUCOATER2A. It consists of one dip-spin booth which applies topcoats to metal parts. The parts are cured in a natural gas-fired oven.
- Line 3 (EUCOATER3) consists of two dip-spin booths which apply topcoats to metal parts. The

parts are cured in a natural gas-fired oven.

- Line 4 (EUCOATER4) consists of two dip-spin booths with spring tool coating equipment that apply topcoats to metal parts. The parts are cured in a natural gas-fired oven. EUCOATER4 will be replaced by EUCOATER4A.
- Line 4 (EUCOATER4A) consists of two dip-spin booths with MWV Tuzl coating systems which apply topcoats to metal parts. The parts are cured in a natural gas-fired oven.
- Line 5 (EUCOATER5) has integrated cleaning and coating equipment and utilizes four dip-spin booths and two natural gas-fired ovens. For this unit, the parts washer, six-shot blasters, dip coating equipment and the curing ovens are part of a single unit. 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 appears to be exempt from R.336.1201 requirements per R 336.1285(2)(I)(vi).

#### **Air pollution control equipment**

The Regenerative Thermal Oxidizer (RTO) is used to control the emissions from the oven portions of the basecoat lines: EUCOATER1A, EUCOATER2A, and EUCOATER5.

#### **Emission Limits**

As specified in special condition (SC) I.1, the VOC emissions limits from the FGCOATERS are 50 TPY based on a 12-month rolling period. Based on records, provided by Mr. Rumohr, VOCs emissions from FGCOATERS from January 2019 through December 2019 were 6.638 tons, far below the yearly limit of 50 TPY. As specified in SC II.1, records of 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. These records indicate the daily volume-weighted average VOC content of the coatings as applied on a daily basis for EUCOATER5 was below the permitted limit of 3.5 lb/gal (minus water) for the period of January-December 2019.

#### **Process/Operational Restrictions**

As specified in SC III.2, at the time of inspection, containers of coatings, reducers, solvents, and thinners were covered.

#### **Design/equipment parameters**

As specified in SC IV.1, the permittee shall not operate EUCOATER1A, EUCOATER2A, 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.

The RTO destruction efficiency was 96.05 percent during a stack test conducted on September 8, 2016. A copy of the entire stack test report is on file at the EGLE-AQD Warren District Office. 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 that RTO temperatures were greater than 1500 degrees Fahrenheit while EUCOATER1A, EUCOATER2A,

and EUCOATER5 were operating.

I inspected the RTO temperature monitor during the inspection and noted the temperature was 1509 degrees Fahrenheit. The RTO temperature monitor was calibrated on 8/21/2019. 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.

### **Testing/Sampling**

To comply with the SC V.1, V.2 and V.3, the permittee conducted a stack test on September 8, 2016. A copy of the entire stack test report is on file at the EGLE-AQD warren District Office.

### **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 Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee provided the Safety Data Sheets (SDS) which include the chemical composition of each coating and the weight percent of each component.

As specified in SC VI.3, the permittee shall keep the following information on a daily basis for each emission unit individually for FGCOATING:

VOC content (minus water and with water) of each coating as applied, VOC emission calculations determining the volume-weighted average, and 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.

The permittee keeps the above record on a daily basis for each emission unit individually for FGCOATERS. The compliance requirements for the VOC emissions from the FGCOATERS are explained in SC I.1 (Emission Limits) of FGCOATERS and SC II.1 (Material Limits) of FGCOATERS.

As specified in SC VI.4, the permittee records and monitors temperature in the combustion chamber of the RTO on a continuous basis. The temperature readings during the reported period indicate that RTO temperatures were greater than 1500 degrees Fahrenheit while EUCOATER1A, EUCOATER2A, and EUCOATER5 were operating.

### **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.

### **Emission limits/Monitoring/Recordkeeping**

Per SC I.1 and VI.2, I reviewed the record for each individual HAP emission for the time period of January through December 2019. Each individual HAP was below the permit limit of 8.9 ton and combined HAPs emission was below the 22 ton based on a 12-month rolling time period as determined at the end of each calendar month for FGFACILITY.

### **EUWASTEEVAP**

EUWASTEEVAP was dismantled on May 28, 2019.

**PTI No. 139-06:****EU-BURNOFF**

PTI No. 139-06 was issued to install and operate a burn-off oven (EUBURNOFF) which is used to clean dirty coating baskets.

**Emission Limits**

As specified in SC I.1, no visible emissions from the EU-BURNOFF stack were observed during the inspection. At the time of inspection, EU-BURNOFF was not in operation.

**Material Limits**

As required in SC I.1, Mr. Rumohr informed me that they use natural gas as 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. During the inspection, I observed there were several cured painted dirty baskets 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.

**Design/Equipment Parameters**

SC IV.1 requires that the Burn-off oven is equipped with an afterburner and operates the afterburner at a temperature of 1400 degrees Fahrenheit or above. At the time of inspection, the burn-off oven was not in operation.

SC IV.2 and SC IV.3 require that the burn-off oven is equipped with an automatic temperature control system and an interlock system that shuts down the primary burner when the afterburner is not operating properly. The previous inspection dated 2/21/2019, I verified that the burn-off oven's interlock system worked properly.

**Monitoring and Recordkeeping**

As required in SC VI.1, the permittee monitors and records the temperature in the burn-off oven secondary chamber or afterburner. I reviewed the weekly temperature records from 10/7/2019 to 12/22/2019 (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.

At the time of inspection, I observed only cured painted dirty baskets were inside the burn-off oven. As required in SC VI.5, Mr. Rumohr told me that they do not process any material in EU-BURNOFF other than cured painted dirty basket.

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 the weight percent of each component. After reviewing the information provided by Mr. Rumohr, it appears that 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.

### **Permit No. 24-19**

On April 30, 2019, Permit No. 24-19 was issued to MMC located at 1720 Dove Street, Port Huron, Michigan to install and operate a new coating line (EUDIPSPIN), i.e., Rack Dip Drain Spin (RDDS) line. A Rack Dip Drain Spin coating line comprises an integrated alkaline cleaning system, a 1.22 MMBTU/hr boiler, six-shot blasters, two dip spin coating booths, two natural gas-fired curing ovens, and a cooldown area.

#### **Emission Limits**

EUDIPSPIN started operating on January 6, 2020. The VOC emission limits will be verified when this line has operated for at least 12 months.

#### **Material Limits**

NA

#### **Process/Operational Restrictions**

As required in SC III.2, containers of coatings, reducers, solvents, and thinners were covered.

#### **Design/equipment parameters**

As specified in SC IV.1, the permittee shall not operate the dip-coating booths in EUDIPSPIN 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.

I inspected the RTO temperature monitor during the inspection and noted the temperature was 1501 degrees Fahrenheit. The minute average temperature was 1501 degrees Fahrenheit and the hourly average was 1505 degrees Fahrenheit.

EUDIPSPIN started operating on January 6, 2020. For more details, see the explanation in SC V.1, SC V.2 and SC V.3 of Testing/Sampling section.

#### **Testing/Sampling**

To comply with the SC V.1, V.2 and V.3, the permittee is required to perform a stack test within 180 days of initial startup of EUDIPSPIN. EUDIPSPIN started operating on January 6, 2020, so the permittee has still time to conduct the stack test to meet the requirements specified in SC V.1, V.2, V.3 and IV.1

#### **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. The permittee provided Safety Data Sheets (SDS) that include the chemical composition of each coating and the weight percent of each component.

As required in SC VI.3, the permittee is required to keep records of VOC content of each coating and

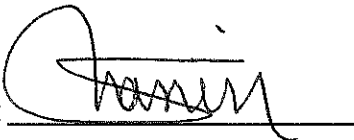
use this data to calculate VOC emissions on a monthly and 12 months rolling time period for EUDIPSPIN. EUDIPSPIN started operating on January 6, 2020. The VOC emission requirements will be determined when this line has operated for a few more weeks.

Per SC VI.4, the permittee is to keep records of the combustion chamber temperature in the RTO on a continuous basis. RTO started operating on January 6, 2020. I reviewed the RTO temperature records as of January 28, 2020. I observed RTO operating temperatures were above the minimum operating temperature of 1500 degrees Fahrenheit.

### Reporting

On January 6, 2020, the facility started operating the EUDIPSPIN. On January 13, 2020, the permittee notified the AQD District Supervisor, via email, of the installation and completion of EUDIPSPIN.

Based on the on-site inspection, reviewing records and discussion with staff, Michigan Metal Coatings Company is in compliance with the requirements of PTI No. 139-06 and 116-06C and 24-19.

NAME 

DATE 2/7/2020

SUPERVISOR 