

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

N095029564

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: 04/28/2015
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite inspection and records review.		
RESOLVED COMPLAINTS:		

On Tuesday, April 28, 2015, MDEQ-Air Quality Division staff Daniel Schwanik, Permit Engineer and SEMI District staff Kerry Kelly and Sebastian Kallumkal conducted an annual targeted inspection at the Michigan Metal Coatings Company located at 2015 Dove, Port Huron, Michigan. The purpose of the inspection was to verify facility's compliance with requirements of Article II, Air Pollution Control, Part 55 of Act 451 of 1994 and with the requirements of the issued Permits to Install (PTI) No. 116-06 and 139-06 and discuss the permit to install application PTI NO.: 139-06A.

We arrived at the facility at about 10:30 AM and met with Mr. Michael Lentz, Quality Assurance Manager, Stephen Doyle, General Manager, and Kyoji Sato, Vice President. We introduced ourselves and stated the purpose of our inspection. I provided them a copy of the MDEQ Brochure for Environmental Inspections: Rights and Responsibilities. During the pre-inspection meeting we discussed the facility operations.

During the pre-inspection meeting, we discussed the permit to install application for adding a second coating booth in EUCOATER5 and installing a regenerative thermal oxidizer to control VOC emissions from the cure ovens for EUCOATER1, EUCOATER2 and EUCOATER5. The emissions control would allow the facility to use coatings with higher VOC content. The facility proposed to control VOC emissions from the cure ovens and not the booth emissions. AQD was concerned whether the facility could be in compliance with the VOC emission limits if booth emissions are not controlled. Facility agreed to calculate the VOC emissions including uncontrolled emissions from the booths to verify compliance.

The facility is a job shop dip coater with five dip spin machines. It coats small automotive parts such as nuts, bolts, fasteners, etc. It uses water based coatings. They use about 5 basecoats including 2 basecoats containing hexachrome. They use about 30 top coats. The facility has five coating lines. Four of the five dip spin machines (#1 through #4) were relocated from their facility located at 2871 Research Drive, Rochester Hills, Michigan.

The facility coats about 75% automotive parts and other heavy trucks parts. The parts are made of stainless steel and include nuts/bolts/small brackets, etc. Facility has about 40 employees, operates Monday through Friday and 24 hours per day.

Next, he accompanied us for an inspection of the facility. Initially we inspected the EUCOATER5 which is a new dip spin machine (WMV unit) is fully automated. For this unit the parts washer, shot blaster, dip coating equipment and the curing oven are parts of a single unit. For the other four units each process equipment is separate. Units No. 1, 2 and 5 are used for base coat and units 3 & 4 are used for top coat.

In EUCOATER5, the cleaned parts are loaded to a bucket and immersed into the coating bath (Tulz). For this coating line the booth is covered and the bucket with the parts enters into booth from the side door and the door is closed during the coating process. The bucket is spun after the coating is completed. The coated parts are dried in the pre-cure oven (200°F) and in the cure oven (625°F). The parts are allowed to cool. The cooled parts are coated for a second time in the dip coating booth and dried.

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 baghouse. The shot blasting process is exempt from permit to

install requirements pursuant to Rule 285(I)(vi).

We also inspected EUCOATER1, EUCOATER2, EUCOATER3, EUCOATER4, shot blasting and the paint kitchen. The coating booths for these lines are open to atmosphere. All parts undergo same coating process as EUCOATER5.

The parts washer exhaust is vented to the outer atmosphere through stacks. During PTI review the parts washer was considered exempt from PTI requirements. The facility has a wastewater evaporator which is also covered in PTI No. 116-06. Facility's burnoff oven is covered in PTI No. 139-06. The Burn-off oven and the evaporation were not operating at the time of our inspection.

#### Permit No.: 139-06- Burnoff Oven

Mr. Lentz informed me that they are using natural gas as a fuel in the burnoff oven. According to him they are only burning dip spin baskets in this oven to remove the paints. They are not burning any rubber, plastics, uncured paints, any material containing sulfur or halogens, transformer cores, wire or parts coated with lead or rubber, paint sludge, or waste powder coatings. I reviewed the weekly temperature records (charts) for the secondary chamber. The permit requires the secondary chamber temperature to be a minimum of 1400°F. The charts show that the oven was operated with the secondary chamber temperature above 1400°F.

I did not verify the records of the temperature monitor calibration. He told me he is keeping records.

During the inspection the burnoff oven was not operating. He stated that the burnoff oven is equipped with an automatic temperature control system for the primary chamber and the after-burner (secondary chamber). The oven is also equipped with an interlock system that shuts down the primary burner when the after burner is not operating properly. This is in compliance with the PTI Condition No. 1.11. The current chart on the oven showed that the secondary chamber reached 1400°F.

They are keeping a current listing of the chemical composition of each material (cured coating) processed in EUBURNOFF. Facility also keeps information provided by the manufacturer regarding secondary chamber, automatic temperature control and interlock system. The stack height appeared to be in compliance with the permit requirements.

#### PTI No. 116-06: Dip Coating and Evaporator

The permit covers 5 dip spin coating applicators (EUCOATER1, EUCOATER2, EUCOATER3, EUCOATER4, & EUCOATER5) which apply water based base/top coats to metal parts. The parts undergo base coating, top coating or both. The coated parts are cured in natural gas fired ovens. The five coating applicators are also combined into a flexible group (FGCOATERS). The permit also includes a natural gas fired evaporator (EUWASTEVAPE) used to reduce the volume of collected clean up water. This permit also includes opt out limits for the hazardous air pollutants (HAP) emissions.

As a new source of volatile organic compounds (VOC), this facility is subject to Rule 702 BACT which limits the VOC content of the coatings to 3.5 lb/gal(-water).

#### EUCOATER1, EUCOATER2, EUCOATER3, EUCOATER4, & EUCOATER5

Facility keeps combined records for all the coating lines. All coating lines have the same VOC content limits. The requirements are similar for all these emission units. So the discussions of the requirements for all the emission units are combined.

Condition 1.1 limits the VOC content of the coatings to a daily volume weighted average of 3.50 lb/gal coating (-water), as applied. The coatings are used as received. They add coating and water (thinner), to the coating tanks (baskets) daily, to replenish solids and acquire desired viscosity. He stated that they

don't use any VOC solvent as thinners; instead, they only use water as the thinner. Submitted records show that each coating line is in compliance with this limit on a daily average basis except for March 25 for EUCOATER1. Facility would be installing a RTO to control VOC emissions. A violation notice is not recommended for this deviation.

Condition 1.3 requires that the facility shall complete all required calculations (specified in Condition 1.5) in a format acceptable to the AQD DS and make them available to the by 15<sup>th</sup> of the month. Mr. Lentz informed us that he is making all the calculations in a timely manner. I requested him to send the calculations data via email.

Facility is keeping records of the daily coating usage, hours of operation, and amounts of daily VOC emissions. It also calculated the VOC content (lb VOC/gal-water) of each coating on a monthly basis.

Facility is using information from the manufacturer provided technical data sheet for each coating to determine the VOC content, water content and density of the coating. The facility is keeping a current listing of the material safety data sheets in file.

The dimensions of the stacks were not verified, but they appear to be in compliance with the requirements.

#### **EUWASTEEVAP: Waste water evaporator**

The VOC emissions from wastewater evaporator is limited to 5.0 TPY on a 12-month rolling time period as determined at the end of the each calendar month. Facility keeps records of rinse water processed. 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 show, as of March 2015, that the VOC emissions from the EUWASTEEVAP was 4.02 TPY calculated based on a 12 month rolling time period. This is in compliance with the PTI limit. The facility is planning to analyze the waste water for VOC content to calculate the VOC emissions more accurately.

The stack dimensions were not verified, but appear to be in compliance.

#### **FGCOATERS**

The VOC emissions from the flexible group is limited to 50.0 TPY based on a 12-month rolling time period as determined at the end of each calendar month. The facility used Volume coating used (-water) and VOC content (-water) to calculate the VOC emissions. The 12-month rolling period VOC emissions, as of March 2015, are 31.73 Tons. The Facility is keeping all the waste paint material in closed containers.

Facility is using Technical Data Sheets (TDS) provided by suppliers to calculate the VOC emissions. The TDS shows that the VOC content was based Method 24 analysis. Facility is keeping a current listing of the MSDS from the manufacturer of the coatings. Permittee is keeping necessary records of the coating usage, VOC content, mass emission calculations, hours of operations, etc.

#### **FGFACILITY**

The facility's HAP emissions are limited to less than 9.0 tpy for individual HAP and less than 22.5 tpy for aggregate HAPs based on a 12-month rolling time period as determined at the end of each calendar month. Facility is keeping monthly individual and aggregate HAP emission calculations. On May 27, 2015, facility forwarded HAP content data for the mainly used coatings. Facility's coating usage data used in the HAP emission calculations spreadsheet and VOC emissions calculations data differs. Recalculation of Methanol emissions (highest single HAP content) showed that the emissions exceeded the single HAP emission limit in the PTI by March 2014 and the major source threshold of 10 TPY pursuant to Michigan

Administrative Rule R336.1210(1)(a)(i)(A) by October 2014.

The aggregate 12-rolling time period HAP emissions, as of March 2015, appears to be less than 22.5 TPY, based on a 12-month rolling time period. Facility's calculations for aggregate HAP emissions were not acceptable. During review of the data I pointed this out to Mr. Lentz and he agreed to correct it.

Facility is keeping records of HAP content, gallons of coating used, and necessary calculations.

Discussions:

The facility is storing waste materials in drums. He informed me that those waste drums are hauled offsite.

Based on the single HAP emission calculations, the facility appears to be subject to 40 CFR Part 70-State Operating Permit Programs (Title V Permit) and Michigan Administrative Rule R336.1210 (Renewable Operating Permit) requirements. The facility shall submit a timely administratively complete application with 12-months after it became a major source.

Similarly based on the single HAP emission calculations, the facility appears to be subject to 40 CFR 63, Subpart MMMM-National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products. The facility shall be in compliance with the requirements of this federal standard within 1 year after the facility became a major source.

This facility is not subject to 40 CFR 63, Subpart HHHHHH-National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (Promulgated January 9, 2008). The facility doesn't perform surface coating of miscellaneous metal and/or plastic parts using "spray-application of coatings". It uses dip-spin coating.

Conclusion: Based on the emission calculations the facility appears to have exceeded the single HAP opt out limit specified in PTI No. 116-06. A Notice of Violation is recommended for this violation.

NAME Sebastian Kallimta DATE 5/29/15 SUPERVISOR CJE