

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

N661126825

FACILITY: E / M Coating Services, a Div. of MIC		SRN / ID: N6611
LOCATION: 14830 E 23 Mile Rd, SHELBY TWP		DISTRICT: Southeast Michigan
CITY: SHELBY TWP		COUNTY: MACOMB
CONTACT: Lisa Chehab Manelski, EH&S Coordinator		ACTIVITY DATE: 06/10/2014
STAFF: Rem Pinga	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced Level 2 Target Inspection		
RESOLVED COMPLAINTS:		

On 6/10/2014, I conducted an unannounced level 2 target inspection at E/M Coating Services, a Division of Metal Improvement Company, LLC and subsidiary of Curtiss-Wright Corporation. The facility is located at 14830 23 Mile Road, Shelby Township, Michigan 48315-3005. 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), the administrative rules, and the facility's Permit to Install No. 43-99D and Permit to Install No. 163-13. During the pre-inspection meeting, I initially showed my credential (ID Badge), stated the purpose of my visit, and gave a copy of the pamphlet "Environmental Inspections: Rights and Responsibilities" to Ms. Lisa Chehab Manelski, EH & S Coordinator and facility contact person. I was at the facility on a partial compliance evaluation on 3/13/2014 with newly hired AQD staff Sam Liveson to assist him in his inspection training education.

The facility coats miscellaneous metal parts. Permit to Install (PTI) No. 43-99D was issued to the facility on April 17, 2012 to address the facility's noncompliance issue relative to capture efficiency/destruction efficiency as contained in PTI No. 43-99C. The facility accepted 85% capture efficiency and a minimum of 90% destruction efficiency per the results of VOC capture and destruction testing conducted prior to issuance of PTI No. 43-99D. This equates to 76.5% effective VOC control efficiency. The company utilizes a lower 73.5% control efficiency as conservative factor to show compliance with emission limits to create a 3% buffer.

PTI No. 43-99D was also issued as a synthetic minor permit to opt the facility out of the Renewable Operating Permit (ROP) Program as mandated by Title V of the Clean Air Act of 1990. To be considered as synthetic minor, the permit contained enforceable restrictions to limit the facility wide VOC emissions to 90 tons/year, the single Hazardous Air Pollutant (HAP) emission to less than 9 tons/year, and the aggregate HAP emissions to less than 22.5 tons/year.

PTI No. 43-99D contained the following emission units and flexible groups:

EUROBOT,
EUHANDSPRAY, EUDUAL24, EURONCI, EUTUMBLER, EUGRITBLAST,
EUBOWLBLAST, EUPHOSPHATE, FGVOCS, and FGFACILITY.

EUDUAL24, also known as Model 24, refers to a dip coating process line with an enclosed

curing oven. The dip tank is connected to SVCONTROL while the curing oven is ducted to outside air. During the inspection, I observed that the enclosure remained around the dip tank. A damper was installed to control the gap between the coated parts in the conveyor and enclosure around the flash off area leading to the oven and improve capture of VOC/minimize the release of fugitive VOC in-plant. This emission unit was operating on 3/13/2014 and 6/10/2014. A sample was collected in March and the results showed 4.1 lb/gal. VOC content for Zintec 300 coating and 4.3 lb/gal. reduced which is close to the facility's 4.18 lb/gal. VOC content emission factor.

EUROBOT refers to a coating process line that starts with a manual spray booth,
Spray

Booth 2 (no longer reflected in EUHANDSPRAY), circles around to the automatic coating process booth, Robotic Booth, and goes to curing/drying oven. These coating processes form part of the Overhead Coating Line. This line was operating in 3/13/2014 and down in 6/10/2014. I observed filters in place and HVLP gun for the manual spray booth.

Booth emissions were ducted to SVCONTROL while emissions from curing/drying ovens were ducted directly to outside air. The enclosure around the spray booth was enhanced to improve capture and an additional ductwork was installed and connected to the main duct to balance air flow.

EUHANDSPRAY now refers to manual spray Booth 1. I observed filters in place and an

improved enclosure around the hood for better overspray and VOC capture.

Booth emissions were ducted to SVCONTROL. For Booth 1, coated parts are hanged in a metal rack stationed outside the spray booth that also served as flash off area, and then rolled out into any of 4 independent natural gas fired curing ovens located across from the booths. The oven emissions are uncontrolled.

Booth 3, beside Booth 1, has been deactivated and now only utilized to house one of 2

small dip tanks exempt from permit to install requirements per R 336.1290. This was also removed from EUHANDSPRAY. Parts coated from the dip tank are also dried

from any of the 4 ovens.

EURONCI is a medium size dip tank coating process. The dip tank had a hood and the emissions are ducted to SVCONTROL. Coated parts are either hanged or spread in a tray in an open area beside the equipment and rolled over for drying to any of the 4 ovens being

shared by Booth 1 and the Rule 290 dip tanks. Flash off area is the building. EUCOE, a small chain on edge coating process behind EU DUAL24, was no longer installed

during the 6/10/2014 inspection. This mission unit was no longer included in PTI No. 43-99D.

EUTUMBLER refers to several coating equipment (5 units) at the rear of the facility that

looked like small cement mixers. Utilized mostly for water based coatings, this process was not operating during the inspections and seldom utilized.

EUGRITBLAST refers to 2 grit blast equipment and located in a room near EU TUMBLER. No equipment was operating during the 6/10/2014 inspection.

EUBOWLBLAST refers to shot blast equipment in the Grit Blast room and was not operating during the inspection.

EUPHOSPHATE refers to metal surface cleaning and phosphate line beside EU DUAL24. It

was not operating during the inspection.

FGVOCS refers to 5 emission units; EUDUAL 24, EUROBOT, EURONCI, EUHANDSPRAY, AND EUTUMBLER, that duct the VOC emissions into the control equipment. The control equipment consists of a zeolite concentrator followed by a catalytic oxidizer. As mentioned above, a couple of testing were conducted before April 2012 to verify compliance with capture and destruction efficiency per PTI No. 43-99C at that time which resulted in a revised PTI No. 43-99D.

FGFACILITY is a flexible group pertaining to the individual HAP and combined HAPs

enforceable restrictions to enable the facility to opt out of the ROP program as discussed above.

Regarding compliance with Permit to Install (PTI) No. 43-99D, special conditions, the

facility kept and submitted recordkeeping requirements. Per PTI No. 43-99D, special condition FGVOCS(III)(1), a malfunction abatement plan was submitted to AQD for

implementation during a malfunction episode.

During the 3/13/2014 inspection, I noted the following temperatures:

Location	Temperature, °F
Catalyst Inlet	699

Catalyst Outlet	715
Heat Exchanger Inlet	599
Heat Exchanger Outlet	430

The catalyst bed inlet temperature was above the minimum temperature requirement of 550°F per PTI No. 43-99D, special condition FGVOCS(IV)(3). I did not observe any solvent odors while outside the facility area at the time of the inspection including the RCO system. This was an indication that there were no leaks in the ductwork system, around the RCO system. It was also an indication that fugitive VOC emissions are properly controlled. Per PTI No. 43-99D, special condition FGVOCS(VI)(4), the facility utilized a rotary chart recorder to monitor the inlet and outlet catalyst bed temperatures.

Per PTI No. 43-99D, special condition FGVOCS(I)(1), the highest FGFACILITY monthly total VOC emissions based on 12 month rolling time period for FY2013 as reported in December 2013 were 11.7 tons and less than the 90 tons/year permit limit. Per PTI No. 43-99D, special condition FGVOCS(I)(2), the highest monthly VOC emission rate was reported in October 2013 at 1.13 tons/month. This equated to 9.42 lb/day (12 hours/day and 20 days/month operating scenario) and less than the 1080 lb./day permit limit. Per PTI No. 43-99D, special condition FGFACILITY(I)(2), the facility reported that the total aggregate HAP emission for FY2013 as reported in December 2013 were 5.64 tons after control and less than both the individual and aggregate HAP emission limits of 9 tons/year and 22.5 tons/year respectively. The highest individual HAP emission was Toluene and reported at 1951 pounds before controls. Per PTI No. 43-99D, special condition FGVOCS(IV)(1), all exhaust filters appeared to be in place and operating in a satisfactory manner. Per PTI No. 43-99D, special condition FGVOCS(IV)(2), HVLP applicators were in use during the inspection.

Permit to Install No. 163-13 was issued for a natural gas fired burn-off oven to burn off solid residual coatings in metal racks. During the inspection, this equipment was installed but not operating yet.

Overall, I did not find any compliance issues during the inspection.

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DATE 8/10/2014

SUPERVISOR CTE