

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Other**

N574754210

FACILITY: PIONEER METAL FINISHING INDUSTRIAL HWY		SRN / ID: N5747
LOCATION: 24600 INDUSTRIAL HWY, WARREN		DISTRICT: Southeast Michigan
CITY: WARREN		COUNTY: MACOMB
CONTACT: Justin Engel , EHS Coordinator		ACTIVITY DATE: 06/18/2020
STAFF: Kaitlyn Leffert	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Observation of smoke tube test, as is required by PTI No. 2-03M, SC V.2		
RESOLVED COMPLAINTS:		

On June 18, 2020, I, Kaitlyn Leffert, attended the smoke tube test at Pioneer Metal Industries, located at 24600 Industrial Highway, Warren, Michigan. Pioneer Metal operates coating lines which coat various metal parts, primarily for use in the automotive industry. The purpose of the smoke tube test is to assess the direction of air flow at the natural draft openings (NDOs) in order to verify volatile organic compound (VOC) capture efficiency. The test is to be done on a semi-annual basis, as required by PTI No. 2-03M, SC V.2.

I arrived at the site at approximately 9:00am, which was the scheduled start time of the test. I met Justin Engel, Pioneer Metal, at the entrance to the building, where I first did a health check prior to entering the building, due to the ongoing COVID-19 outbreak. I also wore a mask for the duration of my inspection and maintained a safe distance from facility and testing staff. Mr. Engel escorted me back to the test site, where I met Tyler Wilson, Senior Project Manager, Impact Compliance and Testing. The testing was completed by Impact Compliance and Testing. EGLE received notification of the testing on June 3, 2020. The smoke test was done according to the test protocol previously submitted on May 21, 2014 and approved on June 16, 2014.

Smoke tube inward flow tests are done at all the natural draft openings and differential pressure measurements were taken only at the permanent total enclosures. There are four total permanent total enclosures at the facility: the primer booth and the topcoat booth at EU-LINE4-COE2, the coating booth at EU-LINE5-COE3, and EU-LINE6-MODEL10, which is a small batch coating booth. The remaining natural draft openings were located within EU-LINE1-MODEL24, EU-LINE7-MODEL25, EU-LINE6-MODEL26, and EU-BATCHOVEN. Smoke tube testing was done at every opening or gap within the coating system, include openings where conveyor belts enter the coating lines, window openings within the system, gaps under and between strip curtains within the equipment, and oven doors within the coating lines and at the batch oven.

Smoke tube testing was done on EU-LINE4-COE2, EU-LINE1-MODEL24, EU-LINE7-MODEL25, EU-LINE13-MODEL26, EU-BATCHOVEN, and EU-LINE6-MODEL10 on June 18th. The COE2 line, the Model 24 line, the Model 25 line, and the Model 26 line were operating during the test. The COE3 line, batch oven, and the Model 10 line were not operating during the test on June 18th. The testing company returned to do testing of the COE3 line and the Model 10 line on Friday, July 17th since COE3 was not operating and Model 10 did not deliver consistent results during the first test. I did not return to the site on July 17th to observe the second set of testing.

The smoke test at the COE line, the Model 25 Dip Spin line, booth #1 of the Model 26 line, and the Batch oven all showed smoke clearly entering the natural draft openings (NDOs). There were a couple of points where 100% of smoke did not appear to be entering the NDO during the first test. At the Model 24 Dip Spin line, there was one gap opening where only about 50% of smoke was entering. However, after adjusting a nearby fan, 100% of the smoke entered this NDO. The Model 26 Dip Spin line has two dip spin coating booths. While Booth #1 passed, smoke was not entering Booth #2 during the test. Mr. Engel informed me that this booth was no longer used and would require significant maintenance and repair before being operable. Therefore, the poor results are not a concern. Pioneer Metal may install a sign on the unit so that it is clear that Booth #2 is not currently operable.

Pressure differential measurements were taken on the COE and Model 10 lines. Pressure differential readings at the COE line were around -0.04 inches of water for the first spray booth and around -0.024 inches of water for the second spray booth. These readings appear to demonstrate compliance, as the permit requires the pressure differential to be at a minimum of 0.007 inches of water pressure differential.

The Model 10 Dip Spin line did not show strong smoke results but did have a small negative pressure differential

during testing. This unit is a small batch dip spin machine with no associated oven. Due to the small size and limited use of the oven, the permit was modified so that this unit does not have to meet the minimum pressure differential, but rather must show that there is a lower pressure in the unit than the surroundings. The testing group returned on July 17th to additional testing of the Model 10 unit and confirm the negative pressure of the unit.

Conclusion

The testing appeared to indicate compliance. Full compliance will be determined upon review of the final test report.

NAME *Kaitlyn Jeffert* DATE 08/13/2020 SUPERVISOR *Sebastianykallemkal*