DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N178668554

FACILITY: Kendrick Plastics		**SRN / ID:** N1786
LOCATION: 5050 Kendrick St SE, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: Zach Mikulec , EHS Manager		**ACTIVITY DATE:** 07/11/2023
STAFF: April Lazzaro	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division staff April Lazzaro conducted an unannounced scheduled inspection of Kendrick Plastics located at 5050 Kendrick in Cascade Township. The purpose of the inspection was to determine the facility's compliance with Permit to Install No. 222-10D. Accompanying staff on the inspection was Zach Mikulec, EHS Manager. No odors or visible emissions were observed originating from the facility. Mike Austin and Jerome McCray also provided information during the inspection.

FACILITY DESCRIPTION

Kendrick Plastics is a Tier II supplier of plastic interior automotive parts. The facility consists of plastic injection molding, finishing, and some assembly. This facility is considered a synthetic minor source for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) under PTI No. 222-10D.

The company has a regenerative thermal oxidizer (RTO) to control VOCs from one paint line.

COMPLIANCE EVALUATION

There are over 50 plastic injection molding machines where five types of plastics are made which are exempt from permitting under Rule 286.

PTI No. 222-10D covers two paint lines (EUPAINTLINE1 and EUPAINTLINE2), miscellaneous solvent usage (FGWIPESOLVENTS), as well as facility wide emissions (FGFACILITY).

FGWIPESOLVENTS:

Isopropyl alcohol (IPA) is used at the facility to remove grease, oils, and dirt from parts prior to painting. This is done either in an enclosed booth at the beginning of each paint line or in small cans located throughout the facility. Wipes or rags are wetted with IPA from one gallon metal cans. The company is required to capture and store all waste wipe solvent and rags in closed containers and handle in a manner to minimize emissions.

EUPAINTLINE1:

After parts are wiped clean, they go through the paint line. EUPAINTLINE1 consists of two automated coating booths equipped with robotic high volume low pressure (HVLP) applicators (Devilbiss Compact model guns), a flash tunnel, and one natural gas-fired curing oven. The company uses both water-based and solvent-based two-component coatings on this line. Emissions from the spray booths, the flash tunnel, and oven are controlled by an RTO which was installed in August 2016. The paint line is considered a non-fugitive enclosure (NFE) and during the last stack test was deemed in compliance using smoke tube method. Under EUPAINTLINE1, Special Condition V.3, the company is required to verify the direction of air flow at each natural draft opening to ensure airflow is into the NFE using a smoke test or approved method. The most recent NFE smoke test was conducted in March 2023 and the results indicated compliance.

The mat filters in the spray booths are changed once per shift and appeared to be installed properly in accordance with permit requirements.

Line flush is captured in waste containers in an acceptable manner. The company has test caps onsite and was advised to verify that the HVLP guns are operated with a pressure measured at the HVLP gun air cap less than 10 pounds per square inch gauge (psig).

The RTO was operating at 1,747°F which is above the minimum temperature limit of 1,400°F. The setpoint is currently at 1,640°F during times of production. The unit is turned down to 1,200°F during the overnight/non-production hours. A stack test was performed in 2017 which determined the efficiency of the RTO to be 95%. The company continuously monitors the oven temperature with a digital temperature gauge and associated data logger. An inspection of the RTO system was conducted, including discussions on maintenance and inspections of the unit. Kendrick Plastics stated that if any repairs are recommended following an outside inspection, they are immediately made. All seals on the RTO chamber valves are replaced annually, preventing bad seals and release of uncontrolled emissions. A review of the maintenance log found that this statement is accurate. They are in the process of upgrading the ductwork, to a thicker gauge steel for system integrity. The pre-RTO filters are monitored by pressure drop and replaced as needed. It is noted that the current bed switch timing is 4-5 minutes, the poppet valves sounded normal for each bed during the switch. A Malfunction Abatement Plan dated 2016 is being implemented in accordance with the plan and the requirements of the permit. It is recommended that the facility review and update the plan and use the new facility name in the process.

EUPAINTLINE2:

Under PTI No. 222-10D , EUPAINTLINE 2 is described as two automated coating booths equipped with robotic HVLP applicators (Devilbiss Compact model guns), a flash tunnel, and one natural gas-fired curing oven. Each booth, the flash tunnel and the oven has its own designated exhaust stack. The mat filters in the spray booths are changed once per shift and appeared to be installed properly in accordance with permit requirements.

Line flush is captured in waste containers in an acceptable manner.

EUPAINTLINE3:

This line was installed in 2018 and is considered exempt under Rule 287(2)(c). The booth is a carousel booth with a robotic spray system that sprays water -based coatings. The robotic sprayer consists of a HVLP gun. This booth is operated by an outside company that uses the space at the facility. Coating usage is maintained on a monthly basis as required, and the total coating usage in 2022 was 17.65 gallons.

Recordkeeping:

The company maintains material usage and emission records in accordance with the permit. The company had the following emissions information for January 2022 through June 2023:

EU/FG	Parameter	Limit	Actual	Compliance	Comment
EUPAINTLINE1	VOC	20.0 tons per 12-month rolling	1.98 tons	Y	
EUPAINTLINE2	VOC	34.0 tons per 12-month rolling	2.52 tpy	Y	
EUPAINTLINE2	VOC	3.3 lb/gal daily weighted avg.	<3.3 lbs/gal	Y	Only water-based coatings are used on EUPAINTLINE2. The highest value

					observed is 3.17 lb/gal
EUPAINTLINE3	Coating	200 gallons/month	<5 gallons/ month	Y	
FGWIPESOLVENTS	VOC	8.0 tons per 12-month rolling	1.59 tpy	Y	
FGFACILITY	VOC	< 100.0 tpy	6.10 tpy	Y	
FGFACILITY	Individual HAP	< 10.0 tpy	0.34 tpy (toluene)	Y	HAP recordkeeping needs additional details (see below)
FGFACILITY	Aggregate HAP	<25.0 tpy	1.59 tpy	Y	

The company currently uses manufacturer's data to determine the VOC content of applied coatings. The company was approved to use manufacturer's formulation data in April 2011.

All information required by the permit is present in the recordkeeping, however, there are some details that do not appear to affect the compliance status that require attention by the facility. Specifically, each individual HAP is not presented on a 12-month rolling basis. The highest reported material in the spreadsheet that are listed as HAPs is t-butyl acetate (CAS #540-88-5), which is not a HAP and should be removed. The second highest reported is toluene. The records provide a value for the 12-month rolling total for the highest emitted single HAP, but not for each one separately which is what the permit requires. The company is apportioning usage of four (4) coatings between Line 1 and Line 2, instead of keeping track of actual usage per line. Since Line 2 has a daily volume-weighted average limit, the percent assumption is not acceptable. As indicated above, it appears that all coatings used have a VOC content less than 3.3 lb VOC/gallon coating, so this does not affect the compliance status. A review of several requested formulation data sheets/safety data sheets found that the information in the spreadsheet is not accurate, while the VOC content for all but one coating was lower than reported. Since the name of the spreadsheet still reflects the previous company owner (YFAI), it appears these items were not previously identified as needing attention. As such, the AQD requests that Kendrick Plastics conduct a review to ensure that the recordkeeping is current, accurate and maintained in an appropriate manner. On August 11, 2023, AQD spoke with Zach Mikulec to go over these items, and the updates that are needed.

MISCELLANEOUS:

The company has a pad printer which is exempt under Rule 285(l)(ix).

The one cold cleaner at the facility is exempt from permitting under Rule 281(2)(h), the lid was observed in the closed position and operational instructions were posted.

SUMMARY

Kendrick Plastics was in compliance at the time of the inspection.

NAME April Lazzaro DATE 08/14/2023 SUPERVISOR HH