

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

N178648106

FACILITY: Yanfeng Global Automotive Interiors		SRN / ID: N1786
LOCATION: 5050 Kendrick St SE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Colleen Bowden , Environmental Health and Safety		ACTIVITY DATE: 03/14/2019
STAFF: David Morgan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

At 1:00 PM on March 14, 2019, Air Quality Division staff Dave Morgan conducted an unannounced scheduled inspection of Yanfeng Global Automotive Interiors (YFAI) located at 5050 Kendrick in Cascade Township. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations as well as Permit to Install No. 222-10D. Accompanying staff on the inspection was Colleen Bowden, the EHS Manager; Jennifer Ritsema, Regional EHS Manager; and Mike Austin, Paint Operations Manager.

FACILITY DESCRIPTION

YFAI is a Tier II supplier of plastic interior automotive parts. The facility consists of plastic injection molding, finishing, and some assembly. The facility currently operates three shifts per day. This facility is considered a synthetic minor source for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) under PTI No. 222-10D. The facility employs about 450 workers.

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

COMPLIANCE EVALUATION

There are approximately fifty-five plastic injection molding machines exempt from permitting under Rule 286.

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

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. All spent wipes appeared to be disposed of properly and lids were closed in accordance with the permit.

Records of wipe solvent usage and emissions are being maintained in accordance with the permit and will be discussed below. Emissions are found in the table below.

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. According to Mr. Austin, approximately 60% of the painting on this line is done with solvent based coatings. Emissions from the spray booths, the flash tunnel, and oven are controlled by an RTO which was installed in August 2016. The entire enclosure is considered a non fugitive enclosure (NFE) and during the last stack test was deemed in compliance using smoke tube method. However, on the day of the inspection, solvent odors were observed outside of the enclosure between the first and second spray booths. In addition, solvent odors were observed out side of the transition between the last spray booth and the flash tunnel. Based on the observed odors the NFE status is questioned. 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 company has not conducted a smoke test since the 2017 stack test. This is a violation of the permit.

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. According to Mr. Austin a new Graco paint delivery system was installed in 2018 which has reduced the amount of purge solvent used to flush the lines. The company has test caps onsite and was advised to verify on a minimum frequency 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 a temperature around 1,735°F which is above the minimum temperature limit of 1,400° F. 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. According to Mr. Austin, the company does not have 2018 RTO temperature records due to the electronic file from the data logger being corrupted. This is a violation of EUPAINTLINE1, Special Condition VI.4.

Coating and VOC recordkeeping are discussed below.

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. According to Mr. Austin, the company only uses water-based coatings on this line and it is not plumbed to allow solvent-based coatings. 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 curing oven was operating at a temperature around 181 °F which is below the permit limit of 194 °F. In addition, the company continuously monitors the oven temperature with a circular chart recorder. The temperature record showed compliance with the limit.

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. Coating and VOC recordkeeping will be discussed below.

Recordkeeping:

The company maintains material usage and emission records in accordance with the permit. The company had the following emissions information for January 2018 through December 2018:

EU/FG	Parameter	Limit	Actual	Compliance	Comment
EUPAINTLINE1	VOC	20.0 tons per 12-month rolling	2.43 tons	Y	
EUPAINTLINE2	VOC	34.0 tons per 12-month rolling	4.64 tpy	Y	
EUPAINTLINE2	VOC	3.3 lb/gal daily weighted avg.	<3.3 lbs/gal	Y	Only water-based coatings are used on EUPAINTLINE2. According to company records, water-based coatings are all less than 3.3 lbs/ gallon minus water as applied.
EUPAINTLINE3	Coating	200 gallons/month	<8.8 gallons/month	Y	
FGWIPESOLVENTS	VOC	8.0 tons per 12-month rolling	3.54 tpy	Y	
FGFACILITY	VOC	< 100.0 tpy	10.79 tpy	Y	
FGFACILITY	Individual HAP	< 10.0 tpy	2.39 tpy	Y	
FGFACILITY	Aggregate HAP	<25.0 tpy	3.50 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.

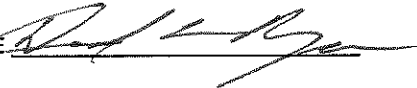
MISCELLANEOUS:

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

Cold cleaners at the facility are exempt from permitting under Rule 281(2)(h).

SUMMARY

YFAI will be sent a violation notice for violations identified above. Attached to this report are records obtained during the inspection.

NAME 

DATE 4/10/19

SUPERVISOR 