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

P073961913

FACILITY: Paslin Company		**SRN / ID:** P0739
LOCATION: 25411 Ryan Road, WARREN		**DISTRICT:** Warren
CITY: WARREN		**COUNTY:** MACOMB
CONTACT: Dennis Pike , Tool Assembly Manager		**ACTIVITY DATE:** 02/01/2022
STAFF: Robert Joseph	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled inspection of opt-out coating facility		
RESOLVED COMPLAINTS:		

On February 1, 2022, I, Michigan Department Environment, Great Lakes, and Energy-Air Quality Division staff Robert Joseph, conducted a 2020-2021 on-site scheduled inspection of The Paslin Company (SRN: P0739) located at 25411 Ryan Road, Macomb, Michigan. 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; the Michigan Department Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules, and conditions of the facility's Permits' to Install, #153-16 and #153-16A.

Facility Background History

The facility applied for an air-use permit and was issued a HAPs (Hazardous Air Pollutants) opt-out permit, #153-16, in November 2016. In addition, the facility was issued a General Coating Lines permit, #201-16, in December 2016. During a January 2019 AQD inspection, it was revealed via records review that the facility was not properly recording their monthly VOC (volatile organic compound) clean-up and purge material usage. The facility was cited a violation notice and then provided a response indicating that proper recording would occur going forward. The facility also stated due to customer demand they were beginning to shift towards water-based coatings and away from oil-based coatings.

The AQD conducted a follow-up inspection in January 2021, and it was revealed that the facility continued to fail to properly maintain records regarding their VOC clean-up and purge material usage. Records indicated very little usage of oil-based coatings with a greater usage of water-based products. Purchase orders were viewed, and it was determined that the facility had exceeded their VOC General Coatings Line permit (#201-16) emission limit. A violation notice was issued to the facility, and they were directed to apply for a site-specific permit. The facility's General Coating Line permit was then voided in July 2021, and the site-specific opt-out permit, #153-16A, was issued at that time.

Opening Introduction

I arrived at the facility shortly after 1 p.m. and met with Dennis Pike, Tool Assembly Manager, of The Paslin Company. I introduced myself and presented my identification and credentials and stated the purpose of my visit. I asked Dennis to provide me some general information regarding the facility. He indicated the facility employs approximately 200 employees and operates roughly 8 a.m. to 4 p.m. daily and some weekends 6 a.m. to 12 p.m. He said work hours vary based on customer demands and project scheduling.

The facility produces and coats assembly-line parts that are used at automotive plants as well as other industrial and warehouse facilities. The facility's opt-out permits', #153-16A, references the facility's flexible group conditions for Paint Booths 1 (EU-BOOTH-01) and 2 (EU-BOOTH-02), and #153-16, references the facility's source-wide conditions for all

process equipment including equipment covered by other permits, grandfathered equipment, and exempt equipment.

Facility Tour

The Paslin Company conducts their operations out of two buildings. Building #2 (25303 Ryan Road), is the assembly room where robotics work occurs on the simulation of the metal assembly-line parts, and the labor building #1 (25411 Ryan Road), is where the machining and coating of the assembly-line parts occur. The facility has several lathe machines where mechanical cutting of the parts occurs, and if necessary, the parts can also be welded. Both processes are exempt per R 336.1285, permit to install exemptions; miscellaneous, Rule 285, 2(l)(vi) and 2(i), respectively.

Assembly-line parts require surface coatings before being shipped to the facility's customers. The facility previously had one open-face coating booth (EU-BOOTH-01) upon issuance of the General Coating Line permit, and permit #153-16, when the facility was primarily using oil-based coatings. The facility then installed a second enclosed paint booth (EU-BOOTH-02) in 2020 as their usage of water-based coatings began to increase as their primary coating. EU-BOOTH-02 is much larger than EU-BOOTH-01 and houses a larger volume of paint filters.

EU-BOOTH-02 is described as a G-90 Booth/G-90 Mechanical Model and constructed of 18 -gauge galvanized steel. It is equipped with a heating component with temperature and pressures gauges to aid in the drying of the coatings once applied to the parts. Mr. Pike indicated the facility seldomly uses EU-BOOTH-01, and that it is only used for large-scale projects with a demanding schedule which requires an additional coating area to be available.

The facility used oil-based coatings exclusively through 2019 and has been using water-based and waterborne coatings almost exclusively since September 2020. Dennis indicated the facility has not used oil-based materials since early 2021. Waterborne coatings use water as the solvent to disperse the resin used to make the coating. Water-based coatings contain solvents primarily made up of water and release lesser quantities of VOCs. The facility applies the paint coatings using a high-volume low pressure (HVLP) spray gun which have a one-gallon pressure pot for delivery. The water-based/waterborne coatings must be applied very slowly based. Oil-based coatings, if used, are also applied using a HLVP spray gun which contain a 20-ounce cup for the paint. HAPs in these coatings include Xylene, Toluene, Ethylbenzene, and Methanol.

Materials requiring cleaning after the use of water-based paints are cleaned with Aquacron, and those materials in which oil-based coatings are used are cleaned with mineral spirit. The facility soaks the application guns in 6.5-gallon containers filled with the Aquacron solution which is then disposed into a 55-gallon drum when needed for disposal. The facility contracts Service Environmental Engineering, Inc. to manifest the drums out to a licensed facility.

Both spray booths are fitted with dry filters and changed at minimum on a weekly basis for EU-BOOTH-02, and depending on usage at least monthly for EU-BOOTH-01. The filters are also properly containerized and disposed of by Service Environmental Engineering, Inc.

Exhaust gases from the coating operations discharge unobstructed vertically upwards to a single stack opening for EU-BOOTH-01 and two stack openings for EU-BOOTH-02. There

did not appear to be any obstructions with any of the stacks or any visible emissions.

Permit #153-16A (flexible group conditions for EU-BOOTH-01 and EU-BOOTH-02)
FG-BOOTHS

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment
1. VOC	6.5 tpy	12-month rolling time period as determined at the end of each calendar month	FG-BOOTHS

Based on facility records, the following 12-month rolling VOC totals were used:

Oil-based coatings: 0.307 tons
Water-based coatings: 1.343 tons
Waterborne coatings: 0.005 tons
Purge and clean-up materials: 0.665 tons

The facility is meeting the VOC emission limit requirement of 6.5 tons or less per 12-month rolling time period.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment
1. VOC content of coatings	3.0 lb/gal (minus water)[a] as applied	Instantaneous	Each Spray Booth of FG-BOOTHS

Based on safety data sheets and facility records, the VOC content of the coatings is as follows:

Oil-based coatings: 3.0 lb/gal (primarily prior to permit issuance of July 2021).
Water-based coatings: 1.28 – 1.5 lb/gal
Waterborne coatings: 0 – 0.16 lb/gal

The facility is meeting the VOC content coatings material limit instantaneously.

III. PROCESS/OPERATIONAL RESTRICTIONS
The facility captures all clean-up and purge materials in 55-gallon drums and measures the amount daily. It was also observed that the covering of the drum was left open. Facility staff stated it was left open from earlier work. I indicated this was subject to violation and advised them to keep all drum coverings closed after accessing them. The facility also stores used filters in the drums, and they are disposed of by an outside vendor, Service Environmental Engineering, Inc. There did not appear to be open containers from the VOC-containing coatings during the inspection.

IV. DESIGN/EQUIPMENT PARAMETERS

The facility utilizes high volume-low pressure (HVLP) spray applicators on its products. The applicators produce approximately 35 lb/in^2 for oil-based applications. I did not perform a pressure test on any of the applicators. The facility uses dry filters in both coating booths, EU-BOOTH-01 and EU-BOOTH-02, and they are replaced on a weekly basis at minimum and as needed per Dennis. The facility does not utilize a thermal or catalytic oxidizer in its coating operation.

V. TESTING

The AQD has not requested the facility to verify VOC emissions or the VOC content of any coatings, purge, or clean-up solvent materials.

VI. MONITORING/RECORDKEEPING

The facility maintains a current listing of the chemical composition of each coating and its weigh formula on file per special condition VI.2. Oil-based coatings include Safety Black, SW769 Honda Blue, and Traffic Orange. Water-based coatings include Metalsa Blue, White Primer, and RAL 6018 Yellow Green. Waterborne coatings which the facility utilizes as a base include Rivian Black, Grey, and Blue.

The facility maintains records of the gallons of each coating and clean up and purge materials used daily. This also includes the VOC content of each material applied with values ranging up to 3.0 lb/gal for oil-based coatings, 1.2-1.5 lb/gal for water-based coatings, 0-0.16 lb/gal for waterborne coatings, and 0.04-6.59 lb/gal for cleaning materials.

The facility also maintains the monthly VOC mass emission rate per calendar month. The following highlights the 2021 highest and lowest amounts per month for each coating type:

Oil-based coatings: January (0.058 tons) and May (0.003 tons)
Water-based coatings: August (0.253 tons) and May (0.04 tons)
Waterborne coatings: February (0.003 tons) and 0 tons.
Purge and clean-up materials: August (0.125 tons) and December (0.082 tons)

The facility has also maintained the 12-month rolling VOC emission emissions as follows:

Oil-based coatings: 0.307 tons
Water-based coatings: 1.343 tons
Waterborne coatings: 0.005 tons
Purge and clean-up materials: 0.665 tons
This totals to 2.3 tons/yr which is less than the VOC permit limit of 6.5 tons per 12-month rolling total.

VIII. STACK/VENT RESTRICTIONS

There did not appear to any obstructions within the facility's exhaust stacks.

Permit #153-16A (flexible group for facility-wide)

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment
1. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-Facility
2. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FG-Facility

Based on facility records, the following individual 2021 HAP emissions (highest and lowest) recorded per 12-month rolling total:

Oil-based coatings: Toluene (0.048 tons) and Ethylbenzene (0.01 tons)
Water-based coatings: Triethylamine (0.029 tons – high and low)
Waterborne coatings: 0 tons
Purge and clean-up materials: Ethylbenzene (0.0002 tons – high and low)

Based on facility records, the following aggregate 2021 HAP emissions were recorded per 12-month rolling total:

Oil-based coatings: 0.151 tons
Water-based coatings: 0.029 tons
Waterborne coatings: 0 tons
Purge and clean-up materials: 0.001 tons
This totals to 0.180 tons/yr which is less than the HAP permit limit of less than 22.5 tons per 12-month rolling total.

VI. MONITORING/RECORDKEEPING

The facility maintains a current listing of the chemical composition of each coating and its weigh formula on file per special condition VI.2.

The facility also maintains the pounds of each HAP containing used as previously described in Section I as well as the HAP content in pounds/gallon of each HAP containing material used. This also includes the HAP content of each material applied with values ranging between 0.28-1.16 lb/gal for oil-based coatings, 0.0366 lb/gal for water-based coatings, 0 lb/gal for waterborne coatings, and 0.0072 lb/gal for cleaning materials. The facility reclaims ethylbenzene (mineral spirit) for several cleanings before disposing in a drum for waste.

As described in Section 1, the facility is maintaining the individual and aggregate HAP 12-month rolling total emissions. The following is the highest and lowest individual monthly 2021 HAP emissions.

Oil-based coatings: Toluene (January 0.026 tons) and Xylene (May 0.001 tons)
Water-based coatings: Triethylamine, both (June 0.006 tons) and April (0.001 tons)
Waterborne coatings: 0 tons
Purge and clean-up materials: Ethylbenzene, both (January 4 x 10^{-5} tons) and December (December 1 x 10^{-5} tons)

The following is the highest and lowest aggregate 2021 monthly HAP emissions.

Oil-based coatings: January 2021 (0.058 tons) and May 2021 (0.003 tons)

Water-based coatings: Triethylamine, both (June 0.006 tons) and April (0.001 tons)
Waterborne coatings: 0 tons
Purge and clean-up materials: Ethylbenzene, both (January 4 x 10^{-5} tons) and December (December 1 x 10^{-5} tons)

CONCLUSION

Based on the EGLE-AQD's inspection and records review, The Paslin Company is currently in 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; the Michigan Department Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules, and conditions of the facility's Permits to Install, #153-16 and #153-16A.

NAME Robert Joseph DATE 03-01-22 SUPERVISOR Joyce