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

P032863218

FACILITY: PREFIX CORPORATION		**SRN / ID:** P0328
LOCATION: 3500 JOSLYN ROAD, AUBURN HILLS		**DISTRICT:** Warren
CITY: AUBURN HILLS		**COUNTY:** OAKLAND
CONTACT: Ken Siuda , Facilities Manager		**ACTIVITY DATE:** 06/08/2022
STAFF: Adam Bognar	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On June 8, 2022, I (Adam Bognar, Michigan Department of Environment, Great Lakes, and Energy – Air Quality Division (EGLE-AQD)) conducted a targeted inspection of Prefix Corporation (the "facility" or "Prefix") located at 3500 Joslyn Rd, Auburn Hills, MI 48326. 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); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules; and Permit to Install Nos. 128-16B and 40 -12.

Contact: Kenneth J. Siuda, Environmental Manager
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ken.siuda@prefix.com

Contact: Pete Romzick, Consultant
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I requested records electronically from Ken Siuda on May 10, 2022. Ken Siuda provided me the requested records via email. I reviewed records from May 2021 through May 2022. These records can be accessed on the AQD shared drive at the following address: S:\Air Quality Division\STAFF\Bognar, Adam\Inspection Documents\Prefix June 2022 P0328

I arrived at the facility at around 9 am. I met with Ken Siuda, Facilities Manager and Pete Romzick, Consultant (GHD). I identified myself and stated the purpose of the inspection.

Inspection
Prefix has operated at this location for eight years. There are approximately 60 employees operating Monday through Friday (sometimes Saturday) from 6 am to 5 pm.

Prefix has been in business at their separate Rochester Hills location (P0204) for almost 40 years. That business includes engineering prototypes and designs for the automotive industry.

Prefix is contracted to paint and do some assembly on high end vehicles. Formerly Prefix was contracted to paint and perform work on Dodge Viper sports car before production of the Dodge Viper ceased in August 2017. Now, Prefix has taken on various other projects. Prefix is currently contracted to paint the Ford GT, a Mercedes Maybach SUV, and various other vehicles.

Previously, Prefix designed, built, and dynamometer tested specialty race car engines for the Trans-Am racing series. As of October 2020, the dynamometers at Prefix have been removed. Prefix no longer performs dynamometer testing in test cells.

Prefix is in the process of installing an automated coating line that will significantly increase their production capacity. During this inspection, the booth structure, paint delivery systems, conveyor belt, HVAC, humidifying system, drying section, and cooling system are partially or fully constructed. The painting robots, paint delivery

nozzles, floor filters, and various other components were not installed during this inspection. It looks like two coating booths will be installed – one for base coat and one for topcoat. There will also be a staging area where cars are wiped with isopropyl alcohol wipes prior to coating.

Planning and installation of this coating line began after Prefix secured an 8-year contract to paint the Mercedes Maybach SUV. Prefix will eventually ramp up production to paint approximately 18 of these cars per day in this booth. They will aim to paint 1 car per 40 minutes. After this booth is finished, all other paint/manufacturing jobs at this facility will be moved to Prefix's newly purchased Rochester location. Some of the existing paint booths at this facility will also likely be moved to the new facility (Booths A, B, & C).

The plan is to have this facility on Joslyn Road be used only for painting the Mercedes Maybach SUV in the new automatic coating booth. Pete Romzick stated that he is in the process of preparing a permit to install application for the new coating system. Construction of this system appears to be covered under Prefix's general coating line PTI No. 40-12. The new permit may seek greater throughputs than what is currently allowed.

Nine downdraft spray booths are currently in operation. The booths are used to paint cars and other parts using high volume low pressure (HVLP) paint guns. The intake air enters from the back wall of the booth and is exhausted through dry fabric exhaust filters located in the floor of the booth. The exhaust filters in all booths appeared to be in place and functioning properly. Ken Siuda stated that the filters are changed as needed, but usually once per week. Prefix maintains records of each booth filter change. Additionally, there is one more paint booth (Booth D) that is now intermittently used as a sanding area. I observed that sanding operations at Prefix are exhausted through fabric filters and either out through stacks or back to the general in plant environment. Based on my observations, Sanding operations are exempt from Rule 201 requirements pursuant to Rule 285(2)(l)(vi)(B) & (C).

Booths 3 through 8 are located adjacent to each other. These are used for various jobs, but mainly for painting the Mercedes SUV. Booths A, B, & C are located adjacent to each other. Booth A is used for touch up work, Booth B is used for painting the Ford GT, & Booth C is used for priming.

There are several paint mix rooms used as staging areas for the spray booths. These areas were clean and organized during my inspection. All paint containers had their lids closed. There are several solvent based paint gun washers (cold cleaners) located in these paint rooms. Each cold cleaner had proper usage instructions posted and the lids were closed. The air vapor interface of these cold cleaners is approximately 2'x2'. The cold cleaners are equipped with a rack for draining parts. Cold cleaners at Prefix appear to be exempt from Rule 201 requirements pursuant to Rule 281 (2)(h). Based on my observations, the cold cleaners comply with Rule 707 through maintaining a freeboard ratio greater than 0.7. Solvent is stored in a drum beneath the cold cleaner and pumped into the cleaner sink as needed. Waste paint is stored in closed 55-gallon drums.

Prior to painting, vehicles are cleaned using Isopropyl alcohol based wipes. Emissions from these wipes is accounted for in each booth's emissions. The total amount of IPA emissions are added to each booth on a weighted basis based on how many cars are painted in each booth. Prefix provided records showing how this these emissions are accounted for.

Permit to Install No. 128-16B

FG-DYNOS – According to Ken, these dynamometers were removed from facility in October 2020. I did not observe any dynamometer test cells during this inspection. These dynamometers were not on-site during my previous inspection in June 2021.

FGFACILITY

Section I – SC 1,2,3: Places facility-wide emission limits on individual HAP and aggregate HAPs of 8.9 tpy and 22.4 tpy, respectively. Based on the records I reviewed, these limits have not been exceeded. Total reported facility-wide HAP emissions from the coating booths and ancillary equipment were highest during the 12-month period

ending in March 2022 at 11.19 tons. The majority of the HAP emissions are from Methanol. Methanol emissions were reported highest during the 12-month period ending in March 2022 at 7.13 tons. Methanol is the largest constituent of the purge solvent.

Prefix does not take credit for any recovered solvent. Ken stated that most of the purge solvent is recovered and sent out as waste but is currently reported as emissions. I observed that there are waste drums in place where purge solvent is pumped into. Ken stated that the lines are cleaned after each day's operation and when changing coating types.

Section V – SC 1: Requires Prefix to determine the HAP content of any material as received and as applied using manufacturers formulation data. Prefix maintains a chemical formulation database that tracks the HAP content of all materials used at the facility. The Mercedes SUV program that will constitute most of the business at this facility uses a waterborne basecoat and solvent-borne clearcoat. I collected the SDS for the clear coat and the purge solvent. The clear coat used is a two-part product. Part A contains 4.12 lb/gallon VOC and Part B contains 0.31 lb/gallon VOC. The purge solvent used has a VOC content of 6.69 lbs/gallon – roughly 40% of which is methanol.

Section VI – SC 1,2: Specifies FGFACILITY recordkeeping requirements. Prefix must keep records of the amount of HAP containing material used, the HAP content of those materials, the fuel usage for all combustion fuels, and facility-wide HAP emission rates on a 12-month rolling basis. Prefix maintains these records.

Permit to Install No. 40-12 – General permit for coating booths

FG-COATING

This flexible group consists of nine coating booths. Some of the booths have separate curing and coating sections while others have combined coating and curing areas (spray-ovens or "spovens").

Section I – SC 1,2: Establishes emission limits for VOC of 2000 lb/month/booth and 10 tons/year/booth. I reviewed emission records for each of the seven booths. Based on the records I reviewed, these emission limits have not been exceeded.

The highest reported monthly usage for a single booth was 0.68 tons (1,360 lbs) in Booth 5 during February 2021. The highest reported annual usage for a single booth was 4.16 tons in Booth 6 during the 12-month period ending in May 2022.

Section III – SC 1: Requires Prefix to capture all purge/clean-up solvents and waste coatings, store them in closed containers, and dispose of them according to state/federal regulations. Prefix does not currently take credit for any reclaimed materials in their emission calculations. I observed that waste solvents are stored in sealed drums. Ken stated that these are hauled away by a hazardous waste disposal company.

Section IV – SC 1: Requires Prefix to equip each coating booth with HVLP spray applicators. According to Ken, all paint applicators at Prefix are HVLP. I did not verify that each gun was HVLP during this inspection. Prefix recently installed a new "positive displacement mixer" paint delivery system. Paint dosing and mixing at Prefix is now partially automated. The new coating system will utilize bell-type spray applicators, which Prefix claims have even higher transfer efficacy than HVLP.

Section IV – SC 2: States that Prefix shall not operate any spray application unless the booth dry exhaust filters are installed, maintained, and operated in a satisfactory manner. I verified that filters were in place in booths 4, 5, 6, 7, 8, A, B, & C. All filters I observed appeared to be freshly installed. Booth 3 was in the middle of painting a vehicle. Entering the booths while active spraying/drying is occurring can cause craters/imperfections in the finish. Prefix maintains records of each filter change. According to Ken Siuda, each booth filter is changed nearly every week. The filter change records show that the filters are generally changed every week.

Section V – SC 1: States that EPA Method 24 testing is required if requested by the AQD. EPA Method 24 tests for the VOC content of a coating/solvent. AQD is not requesting that Prefix perform any Method 24 testing at this time. Prefix maintains manufacturers information for all chemicals and coatings used at the facility. This manufacturers information includes VOC/HAP content.

Section VI – SC 1,2,3,4,5,6,7: Establishes recordkeeping requirements for FG-COATING. Prefix must keep records of the gallons of each solvent used and reclaimed, the VOC content of all solvents used, and the corresponding VOC mass emission calculations on a monthly and 12-month rolling time period (for each booth). Additionally, Prefix is required to maintain purchase orders/invoices for all coatings, reducers, and purge/clean-up solvents. These records are maintained. Records are stored digitally in a shared network drive at the facility.

I looked at all of the purchase orders/invoices for the coatings and solvents purchased during the month of February 2022. Based on my review of the data, approximately 2290 gallons of coatings/solvents were purchased in February 2022. About half of the volume purchased is waterborne basecoat coatings used for the Mercedes SUV. The other half is a combination of clear coat, purge solvent, and other basecoats – which are mostly solvent-borne. The amount of coatings/solvents purchased makes sense when compared to the reported emissions. 2.19 tons of VOC emissions were reported in March 2022.

Section VIII – SC 1: Requires that exhaust gases from FG-COATING be discharged vertically upwards from exit points not less than 1.5x the building height. I did not verify stack dimensions during this inspection. Stacks appeared to be discharged vertically upwards to the ambient air.

Section IX – SC 1: States that the permittee shall not replace or modify any portion of FG-COATING, including control equipment or coatings, nor install additional coating lines (**or any portion of**, including control equipment or coatings) unless all of the following conditions are met (a, b, & c):

> a) The permittee shall update the general permit by submitting a new Process Information form (EQP5759) to the Permit Section and District Supervisor, identifying the existing and new equipment a minimum of 10 days before the replacement, modification or installation of new equipment.
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> b) The permittee shall continue to meet all general permit to install applicability criteria after the replacement, modification or installation of new equipment is complete.
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> c) The permittee shall keep records of the date and description of the replacement or modification, installation of new equipment, or any coating change. All records shall be kept on file for a period of at least five years and made available to the Department upon request.

In 2022, Prefix began installation of an automated coating line that will include two coating booths. The structure of the booths has been fully erected. Parts of the paint delivery system have been installed. AQD did not receive the proper notification when construction began on this coating system. A violation notice was issued to Prefix for failure to notify AQD about the installation of new coating booths.

In my previous inspection, Prefix had installed 6 additional coating booths without notifying AQD via a EQP5759 form. Prefix submitted the proper form shortly after I informed them of the non-compliance. At AQD discretion, no violation notice was issued. During this previous inspection, I explained to Ken Siuda and Pete Romzick that it is Prefix's responsibility to thoroughly understand the permit conditions. I explained that if Prefix fails to report new booth installations, booth modifications, or booth relocations to the AQD in the future, then a violation notice will be issued.

FG-SOURCE – The conditions of FG-SOURCE limit VOC emissions to 30 tons per year and require facility-wide VOC mass emission calculations to be maintained on site. Based on the records I reviewed, the 30 tons per year VOC emission limit has not been exceeded. Facility-wide VOC mass emission calculations are maintained on a 12-

month rolling basis. The highest reported yearly VOC emission rate for the period I reviewed was in the 12-month period ending in March 2022 at 28.4 tons. These emissions have approximately doubled over the last 12 months. The emissions are becoming very close to the 30 ton per year emission limit.

In Prefix's original record submittal, not all solvent wipe emissions were accounted for. AQD noticed this by comparing 2021 MAERS emissions with the submitted 12-month rolling totals. MAERS emissions were higher than what was submitted. Prefix was under the impression that solvent wipe usage outside of booths did not need to be included in the booth VOC totals (reported as "fugitive emissions" in MAERS). I explained that all solvent wipe usage needs to be included in the FG-SOURCE totals under the general permit if the solvent wipe usage is associated with the coating booths. Prefix stated that all solvent wipe usage is associated with the coating booths. Prefix provided an updated emissions calculation spreadsheet which included emissions from all solvent wiping activities. This increased annual VOC emissions from the coating booths by about 5 tons.

The 2021 MAERS report submitted by Prefix appears to be accurate based on my review of the data.

I left the facility at around 10:30 am.

Compliance Determination

This facility is not operating in compliance with the requirements of FG-COATING SC IX.1 of Permit to Install Nos. 40-12. Prefix failed to notify the AQD 10 days prior to beginning installation of a new coating line. A violation notice was issued to Prefix Corporation for this non-compliance.

Prefix appears to be in compliance with all other AQD rules.

NAME Adam Bognar DATE 7/26/2022 SUPERVISOR K. Kelly