

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

P032867559

<b>FACILITY:</b> PREFIX CORPORATION		<b>SRN / ID:</b> P0328
<b>LOCATION:</b> 3500 JOSLYN ROAD, AUBURN HILLS		<b>DISTRICT:</b> Warren
<b>CITY:</b> AUBURN HILLS		<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Ken Siuda , Facilities Manager		<b>ACTIVITY DATE:</b> 05/09/2023
<b>STAFF:</b> Adam Bognar	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> Scheduled Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On May 9, 2023 Michigan Department of Environment, Great Lakes, and Energy – Air Quality Division (EGLE-AQD) staff, I, Adam Bognar, and Chukuemeka Oje, 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, Corporate Compliance Manager

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ken.siuda@prefix.com

Contact: Pete Romzick, Consultant

(248)-893-3422

Pete.romzick@ghd.com

I requested records electronically from Ken Siuda on May 8, 2023. Pete Romzick provided me the requested records via email. I reviewed records from May 2022 through March 2023. These records can be accessed on the AQD shared drive at the following address: S:\Air Quality Division\STAFF\Bognar, Adam\Inspection Documents\Prefix N5848 2023

We arrived at the facility at around 9 am. We met with Ken Siuda and Pete Romzick. We identified ourselves and stated the purpose of the inspection. After a brief discussion in a conference room we toured the manufacturing facility.

### **Inspection**

According to Ken, there are approximately 85 employees operating Monday through Thursday (sometimes Saturday) from 6 am to 4:30 pm, and Friday from 6 am to 2:30 pm.

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. Currently, the only vehicle that is coated at this facility is a Mercedes SUV.

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 has installed an automated coating line that will significantly increase their production capacity. During this inspection, I observed that construction was completed on this coating line and it has been put into production. There are two downdraft coating booths within this automated line – one for base coat and one for topcoat. There is also 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 plans to 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. Currently, around 10-15 cars per day are painted. After this line was finished, all other paint/manufacturing jobs at this facility were moved to Prefix's newly purchased Rochester location (SRN: N5848). Construction of this system is covered under Prefix's general coating line PTI No. 40-12.

This coating system is subject to Rule 621 (metal parts coating), not Rule 610 (automobile coating lines). AQD made this determination because the painting at Prefix is not considered to occur "during assembly of a vehicle". Prefix receives the vehicle body (no chassis) from Mercedes, paints a portion of the body, then ships the vehicle back to Mercedes for final assembly. If Prefix was a wholly owned subsidiary of Mercedes, then these operations might be considered to occur "during assembly".

In addition to the automated coating line, 6 downdraft spray booths are currently in operation. Ken Siuda stated that the filters in these 6 booths are changed as needed, but usually once per week. Prefix maintains records of each booth filter change. Additionally, there is one more paint booth (Prep deck D) that is now intermittently used as a staging/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)(I)(vi)(B) & (C).

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 currently no cold cleaners at this facility. Paint guns are cleaned either automatically or using a small bottle of acetone.

Prior to painting, vehicles are cleaned using Isopropyl alcohol, Axalta 210, or methoxy butyl acetate based wipes. Emissions from these wipes is accounted for in each booth's emissions. The total amount of emissions from wiping are added to each booth on a weighted basis based on how many cars are painted in each booth. Prefix provided records showing how 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 2022.

#### **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 October 2022 at 13.01 tons. The majority of the HAP emissions are from Methanol. Methanol emissions were reported highest during the 12-month period ending in September 2022 at 7.63 tons. Methanol is the largest constituent of the purge solvent.

Prefix only takes credit for reclaimed purge solvent in the automated booths. Purge solvent reclaim in the automated booths is a 100% closed loop process according to Prefix. Based on my observations, this is true. Prefix claims 100% recovery on purge solvent used in the automated booths. The entire system is designed so that the lines can be purged in a closed loop manner. Ken stated that most of the purge solvent used in other booths 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. During my previous inspection in June 2022, 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. There is no methanol storage tank on site.

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 eight coating booths. Two of which are located in the automated coating line.

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.

The highest reported monthly usage for a single booth was 1.1356 tons (2,271 lbs) in Booth 4 during September 2022. A violation notice was sent to the facility for exceeding the 2000/lb/month/booth emission limit in Section I – Special Condition 1. I let Prefix know via email that I observed this exceedance after the inspection. Pete responded stating that the high usage in September was due to a large amount of GRO1501 purge solvent being purchased in that month. Pete stated that this solvent was purchased in a larger quantity than usual, but not used.

Based on the records I reviewed, these emission limits have not been exceeded in the other 6 booths. The highest reported annual usage for a single booth was 5.9236 tons in Booth 4 during the 12-month period ending in September 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. 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 or equivalent technology with equal or better transfer efficiency. According to Ken, all paint applicators at Prefix are HVLP except for in the automated coating booth. I did not verify that each gun was HVLP during this inspection. The automated coating system utilizes bell-type spray applicators, which Prefix claims have even higher transfer efficacy than HVLP. Rotary bell type applicators have a higher transfer efficiency than HVLP applicators based on my research on these applicators.

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 all booths. All filters I observed were installed. Prefix maintains records of each filter change. The automated coating booth has three stages for filtration – a fabric sheet is placed on the ground to collect most of the overspray (this is done to save the more expensive bag type filters). Underneath the fabric sheet there are gasketed bag type filters installed in the floor which collect overspray. Additionally, there are additional bag filters installed near the blower prior to the stack.

Prefix staff stated that the fabric sheet is replaced every two days. The bag type filters are replaced as needed.

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.

Coating use at the facility is tracked on a computer next to each booth. For the two automated booths, paint usage is automatically tracked by flow meters which record the amount of paint dosed to the booths. For the non-automated booths, usage is manually tracked by weighing each batch of paint before adding the paint to the HVLP system.

The quantity of GRO1501 purge solvent used is calculated as proportional to the coating sprayed in each booth. The amount of GRO1501 purchased each month is considered to be used in that month. Prefix does not account for any GRO1501 solvent leftover from the previous month or extra GRO1501 solvent that does not get used the month that it is purchased. Calculating GRO1501 purge solvent usage in this manner is not an accurate way of calculating usage. This method of calculating GRO1501 solvent usage was accepted in previous AQD compliance evaluations because reported VOC emissions were relatively far away from the VOC emission limits; however, due to the recent emission limit violation in Booth 4, and the recent increase in emissions at this facility, this method of calculating GRO1501 solvent usage is no longer acceptable. The usage of VOC laden wipes at the facility is accounted for in the same manner as the purge solvent. A violation notice was sent to Prefix for submitting these records in an inaccurate manner. Going forward, Prefix must account for actual usage of GRO1501 solvent and VOC laden wipes in each booth.

Purge solvent in the automated booths is assumed to be 100% recovered because the purge line is fully closed loop in the automated lines.

During my previous inspection, 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. I did not review paint purchase order data during this inspection.

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.

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.

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. Prefix submitted the proper notification to AQD after this violation notice was issued. This violation will be resolved as a result of this inspection.

I did not observe any new coating lines which would require notifying AQD during this inspection.

**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.

We left the facility at around 10:30 am.

#### **Compliance Determination**

This facility is not operating in compliance with the requirements of FG-COATING SC I.1 of Permit to Install Nos. 40-12. Prefix exceeded their emission limit in September 2022 in Booth 4. A violation notice was issued to the facility for this non-compliance. Additionally, Prefix reported VOC emissions in an inaccurate manner, which is described in more detail in this report under FG-COATING, Section VI, Special Conditions 1,2,3,4,5,6,7.

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

The violation notice issued on June 28, 2022 was resolved as a result of this inspection. Prefix submitted the required documentation to install the automated coating line under the general permit.

NAME Adam Bogner

DATE 6/26/2023

SUPERVISOR K. Kelly