

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

N062262012

FACILITY: PROGRESSIVE FINISHING, INC.		SRN / ID: N0622
LOCATION: 50800 Russell Schmidt Blvd, CHESTERFIELD		DISTRICT: Warren
CITY: CHESTERFIELD		COUNTY: MACOMB
CONTACT: Paul Hinderliter , President		ACTIVITY DATE: 02/24/2022
STAFF: Adam Bognar	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Thursday, February 24, 2022, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar, conducted a scheduled inspection of Progressive Finishing (the “Facility”) located at 50800 Russell Schmidt Blvd, Chesterfield, MI. The purpose of this inspection was to determine the facility’s compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) rules; and Permit to Install Nos. 131-09E and 132-07.

I arrived at the facility at around 10 am. I met with Mr. Paul Hinderliter, President. I identified myself and stated the purpose of the inspection. Due to the ongoing COVID-19 pandemic, an in-office record review was conducted rather than an on-site record review. I requested records via email prior to this inspection. I reviewed records from July 2021 (date of previous inspection) through January 2022. Mr. Hinderliter provided me with a binder containing all of the records I requested and accompanied me for a facility inspection.

Progressive Finishing is an automotive and industrial plastic parts coater. Some metal parts may be coated as well. There are approximately 20 employees that operate 3 coating lines (Systems 1, 2, and 3) Monday through Friday during one shift from 7am to 3pm. Progressive Finishing may operate more frequently and on weekends depending on customer demand.

Their customers are Tier 1 & Tier 2 automotive manufacturers including, Ford, GM, Toyota, and Rivian. In general, coating is performed on interior parts of cars such as trim moldings, door panels, and dashboard parts.

Mr. Hinderliter was explaining that he frequently needs to change coating types because customer demand has been volatile. Customer contracts that are meant to last several years sometimes only last several months. Production on a new contract with Rivian is scheduled to begin later in 2022. The problem is that the coating they need to use for this will not comply with the lb/gallon volatile organic compound (VOC) limit for the booth they want to use (booth 2).

Mr. Hinderliter stated that he is already in the process of putting together a permit application to modify PTI No. 131-09E. PTI No. 131-09E was originally issued in 2009. The permit was modified in 2012, 2016, 2019, and two times in 2020.

There are three paint systems located at this facility:

System 1 is a chain-on-edge conveyer coating line consisting of 2 manual coating booths, oven, and flash off tunnels. It is typically used to apply solvent based coatings.

System 2 is a chain-on-edge conveyor line consisting of 2 automatic coating booths, an oven, and flash off tunnels. The majority of facility emissions currently come from this coating system.

System 3 is a chain-on-edge conveyor coating line with three automatic coating booths, an electric oven, and a flash off tunnel.

In addition to the three coating systems, there is one test coating booth. This booth is used to manually spray new coatings for testing purposes. This booth is equipped with dry exhaust filters. Based on the records I reviewed, coating use is less than 200 gallons/month. Mr. Hinderliter refers to this booth as the “exempt” booth. This booth has a batch oven next to it with a maximum heat input capacity of 350,000 Btu/hr. Both the “exempt” booth and the oven are covered under general permit to install No 132-07.

PTI No. 131-09E

PTI No. 131-09 was originally issued on September 15, 2009 because a new coating line was installed (EU-SYSTEM2). Installing EU-SYSTEM2 caused the facilities potential to emit HAPs and VOC to increase above major source thresholds. The source-wide opt-out limits for hazardous air pollutants (HAPs) & VOC contained in this permit were needed for Progressive Finishing to avoid being subject to EGLE’s Renewable Operating Permit (ROP) program.

EU-SYSTEM2

EU-SYSTEM2 is an automotive plastic parts coating line that consists of two robotic paint booths and one natural gas-fired cure oven. Particulate emissions from both spray booths are controlled by dry filters. VOC/HAP emissions are exhausted uncontrolled.

Section I – SC 1,2: Limits VOC and Acetone emissions from EU-SYSTEM2 to 45 TPY and 4.2 TPY, respectively, based on a 12-month rolling time period. The records I reviewed show that VOC emissions were highest during the 12-month period ending in July 2021 at 11.31 tons. Acetone emissions are reported highest at 1.48 tons during the same time period.

Section II – SC 1: Limits the VOC content of coatings used in EU-SYSTEM2 to 3.9 lb/gallon, minus water, as applied. Since the beginning of 2019, the highest (and currently the only) VOC coating used in System 2 has a VOC content of 3.6 lb/gallon, minus water, as applied.

Section III – SC 1: Requires the permittee to capture all waste materials and store them in closed containers. Waste coatings are disposed of in a 5-gallon container outside of the booths. Any purge solvent is also disposed of in these containers. These containers are periodically transferred to a larger waste solvent drum that is eventually picked up by Krystal Kleen to be disposed of. Progressive Finishing does not subtract waste from VOC emissions. Mr. Hinderliter stated that if emissions begin to get closer to the permit limits, then he may begin accounting for VOCs sent off as waste.

Section III – SC 2: Requires the permittee to dispose of spent filters in a way that minimizes the introduction of air contaminants to the outer air. Booth filters are bagged in sealed plastic before they are thrown away.

Section III – SC 3: Requires the permittee to handle all VOC and/or HAP containing materials in a manner that minimizes fugitive emissions. I observed that solvent containers were stored neatly with their lids fitted on securely.

Section IV – SC 1: States that the permittee shall not operate EU-SYSTEM2 unless the dry filters on both booths are installed. I observed that both robotic spray booths were equipped with dry filters. The filters appeared to fit snugly. The filters are located on the wall and the spray direction is horizontal towards the filter.

Section IV – SC 2: Requires the permittee to equip EU-SYSTEM2 with HVLP applicators (or comparable technology). All applicators at Progressive Finishing are HVLP applicators. Pressure caps are available for pressure testing. An operator showed me these test caps and stated that pressure testing is generally conducted once per month.

Section V – SC 1: Requires the permittee to determine the VOC content of any coating, as applied, using EPA Method 24. With prior approval, this condition allows Progressive Finishing to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted Progressive Finishing this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. Progressive Finishing sent AQD the results of their annual Method 24 analysis on January 17, 2022.

The coating “GIAA8152620 Shadow Grey” was analyzed. The analysis showed the material to be 3.46 lbs/gallon VOC. The manufacturers environmental data sheet shows 3.21 lbs/gallon for this coating. This coating is used in EU-SYSTEM 1 which has a maximum VOC content of 6.2 lbs/gallon, with water, as applied. Progressive Finishing updated their VOC records to account for the extra 0.25 lb/gallon VOC difference between the manufacturer’s data and Method 24 analysis.

Section VI – SC 1,2,3: Specifies recordkeeping requirements for EU-SYSTEM2. Progressive Finishing must keep records of the chemical composition of each coating used and the amount of each coating used/reclaimed. This information must be used to calculate the monthly and 12-month rolling VOC and acetone emissions.

Mr. Hinderliter provided me with these records in a binder during this inspection. Coating composition information is maintained electronically and on paper. The amount of coating used is recorded by booth operators on paper logs at the beginning and end of each shift. The paper usage logs are routinely entered into a database that tracks total coating usage. Mr. Hinderliter also provided me with purchase orders for all coatings/solvents ordered since July 2021.

Mr. Hinderliter conducts his own audits on coating usage as well. Mr. Hinderliter uses a measuring dip stick to assess the volume in each bulk coating container on a monthly basis. The difference between coating liquid levels can be used to estimate usage. Mr. Hinderliter compares his dip stick audits to the usage logs maintained by booth operators and selects the highest of these two usage values to report to the AQD.

Section VIII – SC 1: Specifies stack parameters. I did not verify stack parameters during this inspection. Stacks appeared to be discharged unobstructed vertically upwards. I observed that the stacks for booths 2 & 3 both vent to a common duct and out through a large stack.

FGFACILITY

Section I – SC 1,2,3,4: Specifies facility-wide emission limits for Individual HAPs (9 tpy), Aggregate HAPs (22.5 tpy), VOC (89.9 tpy), and Napthalene (368 lb/year). Based on the records I reviewed during my inspection, these emission limits have not been exceeded. Facility-wide HAP emissions were reported highest during the 12-month period ending in July 2021 at 0.56 tons. Facility-wide VOC emissions were highest during the same period at 14.47 tons. No naphthalene emissions were reported in the period I reviewed. It appears Napthalene has not been used at Progressive Finishing for at least two years.

In general, reported VOC emissions and total throughput have decreased month over month since early 2020.

Section II – SC 1,2,3,4: Specifies facility-wide material limits. The VOC content of coatings is limited differently for each coating line (see table below). Based on the records I reviewed, Progressive Finishing is in compliance with all material limits.

Reported Values				
Equipment	Maximum VOC Content, As Applied (lb/gallon)	Annual Usage Limit	Highest Rolling 12-month Usage (gallons)	Max VOC Content in 2021, As Applied (lb/gallon)
EU-SYSTEM1	6.2	3,226 gallons (with water) per year	1,123 (August 2021)	6.05
EU-SYSTEM2	3.6	25,000 gallons (with water) per year	6,281 (July 2021)	3.6
EU-SYSTEM3	3.8	5,265 gallons (with water) per year	273 (January 2022)	0.72
All Lines Operating Under an Exemption	9.0	2,400 gallons (with water) per year	909 (July 2022)	6.89

Section V – SC 1: Requires the permittee to determine the HAP content of any material as received and as applied, using manufacturer’s formulation data. This information is maintained. Mr. Hinderliter maintains a database of all coatings used at the facility. This database consolidates the manufacturer’s HAP data into a spreadsheet. This HAP data spreadsheet informs the emission calculation spreadsheet.

Section V – SC 2: Requires the permittee to determine the VOC content of any coating, as applied, using EPA Method 24. With prior approval, this condition allows Progressive Finishing to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted Progressive Finishing this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. Progressive Finishing sent AQD the results of their annual Method 24 analysis in January 2022.

Section VI – SC 1,2,3,4: Specifies monitoring/recordkeeping requirements for FGFACILITY. Progressive Finishing must maintain all records necessary to demonstrate compliance with emission limits and material use limits. Mr. Hinderliter provided me with all of these records.

Mr. Hinderliter maintains records each time a coating is used, the booth the coating was used in, the amount of coating used, and the chemical composition of each coating (as applied and as received). This data is recorded on hand written logs and is inputted into a digital database. Mr. Hinderliter uses this data to calculate the facility-wide VOC & HAP emission rates on a monthly and 12-month rolling basis. I reviewed both the hand written logs and the digital database records. The emission rates for EUSYSTEM1, EUSYSTEM2, EUSYSTEM 3, and the Rule 201 exempt booth are all kept separately and summed to get the facility-wide emissions.

PTI No. 132-07

General Permit to Install No. 132-07 was issued on April 18, 2007 for a chain-on-edge conveyor coating line consisting of two manual spray booths, an oven, and flash off tunnels (System 1). This PTI includes conditions that allow the permittee to install additional coatings lines without applying for a new PTI. However, this permit does not contain ROP opt-out limits for HAP and VOC. When System 2 was installed, opt-out limits were needed. PTI No. 131-09E contains facility-wide ROP opt-out limits.

FG-COATING

Section I – SC 1,2: Establishes VOC emission limits for each coating line. VOC emissions are limited to 2000 lb/month/booth and 10 tons/year/booth. This only applies to coating lines operating under the general permit (Paint System 1, Paint System 3, and the “exempt” coating booth). Based on the records I reviewed during this inspection, Progressive Finishing is in compliance with these emission limits. The highest yearly emissions for Paint System 1 was during the 12-month period ending in January 2022 at 1.04 tons. The highest monthly emissions for Paint System 1 was 0.11 tons in August 2021.

The highest annual emissions for Paint System 3 was during the 12-month period ending in January 2022 at 0.35 tons. The highest annual emissions for the “exempt” paint booth was during the 12-month period ending in July 2021 at 2.14 tons. The highest monthly emissions for the “exempt” paint booth was 0.21 tons in January 2022.

Section III – SC 1: Requires Progressive Finishing to capture all purge/clean-up solvents and waste coatings from all coating applicators used in FGFACILITY. Purge solvents, clean-up solvents, and waste coatings are captured and contained in sealed drums located outside of each coating booth. Some parts are precleaned with isopropyl alcohol soaked rags. These rags are also disposed of in these drums. Isopropyl alcohol emissions are included in the respective booth emissions.

For purging, the gun is removed from the paint line and paint is allowed to drip into a bucket. The paint lines are cleaned using acetone, MEK, or water depending on the type of coating sprayed. The appropriate solvent is run through the coating lines to clean out any leftover coating from the previous coating batch. The amount of purge solvent used varies depending on the length of the line. Mr. Hinderliter estimates around half a gallon of solvent is used for each purge. Purge solvent usage is accounted for by tracking total usage from the bulk drum with a dip stick. Purge solvent is accounted for as VOC or Acetone if appropriate.

Section IV – SC 1: Requires Progressive Finishing to equip and maintain each coating booth with HVLP applicators or equivalent technology. All booths at Progressive Finishing are equipped with HVLP applicators. Pressure test caps are available to pressure test paint guns.

Section IV – SC 2: States that Progressive Finishing shall not operate any spray application unless particulate control (dry filters or a water curtain) is installed. All booths at this facility are equipped with dry filters. I observed that these filters were relatively clean and were installed snugly such that there are no gaps. Each booth filter is changed after every 8-hour shift a booth operates.

Section V – SC 1: Requires the permittee to determine the VOC content of any coating, as applied, using EPA Method 24. With prior approval, this condition allows Progressive Finishing to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted Progressive Finishing this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. Progressive Finishing sent AQD the results of their annual Method 24 analysis in January 2022.

Section VI - SC 1,2,5,6,7: These conditions are not applicable to Progressive Finishing because VOC/HAP emissions from these booths are not controlled by a thermal oxidizer or catalytic oxidizer.

Section VI – SC 3: Specifies recordkeeping requirements for FG-COATING. Progressive Finishing must maintain records of purchase orders, VOC content, the amount used, and the amount reclaimed of each coating used at the facility. This information shall be used to calculate VOC emissions on a monthly and 12-month rolling basis. These records are maintained. Mr. Hinderliter provided me with these records during my inspection.

Section VI – SC 4: Requires Progressive Finishing to maintain a current listing from the manufacturer of the chemical composition of each coating. These records are maintained electronically and in binders located in the main lobby.

Section VIII – SC 1: Specifies stack requirements. Stacks must be discharged unobstructed vertically upwards to the ambient air at exit points not less than one and one half times the building height. The stacks at Progressive Finishing appear to conform to these permit standards. I did not take measurements to confirm stack dimensions during this inspection.

Section IX – SC 1: States that the permittee shall not replace or modify any portion of FG-COATING without notifying the AQD district supervisor. Additionally, any new equipment must comply with all conditions of PTI No. 132-07. No new equipment has been installed since the last AQD inspection in July 2021.

FG-SOURCE

Section I – SC 1: This condition states that VOC emissions from all coating lines and all associated purge and clean-up operations at the stationary source are limited to 30 tons per year based on a 12-month rolling period. The 30 tpy “source-wide” limit in PTI 132-07 only applies to emission units operating as exempt from Rule 632 pursuant to R 336.1632(15)(i) (System 1, System 3, and the test coating booth).

Combined VOC emissions from System 1, System 3, and the test coating booth were highest during the 12-month period ending in January 2022 at 3 tons. Based on the records I reviewed, Progressive Finishing is in compliance with this limit.

Section VI – SC 1: Progressive Finishing must demonstrate compliance with this limit by maintaining facility-wide (minus System 2) VOC mass emission calculations on a monthly and 12-month rolling period. Mr. Hinderliter provided me with these records during my inspection.

Compliance Determination

Based on my observations during this inspection and my record review, Progressive Finishing is operating 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, as amended (Act 451); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules; and Permit to Install Nos. 131-09E and 132-07.

NAME Adam Bogner

DATE 3/16/2022

SUPERVISOR K. Kelly