

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

A356972295

<b>FACILITY:</b> Axalta Coating Systems USA LLC		<b>SRN / ID:</b> A3569
<b>LOCATION:</b> 400 Groesbeck Hwy, MOUNT CLEMENS		<b>DISTRICT:</b> Warren
<b>CITY:</b> MOUNT CLEMENS		<b>COUNTY:</b> MACOMB
<b>CONTACT:</b> Joseph Marecic , Environmental Health and Safety Manager		<b>ACTIVITY DATE:</b> 04/30/2024
<b>STAFF:</b> Adam Bogнар	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> Scheduled Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On Tuesday, April 30, 2024, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff Adam Bogнар conducted a scheduled inspection of Axalta Coating Systems, LLC (Axalta or the “facility”) located at 400 North Groesbeck Highway, Mount Clemens, MI 48043. 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; 40 CFR Part 63, Subpart CCCCCC – National Emission Standards for Area Sources: Paints and Allied Products Manufacturing; 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Stationary Reciprocating Internal Combustion Engines; 40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; and ROP No. MI-ROP-A3569-2017a.

Axalta has a potential to emit Volatile Organic Compounds (VOC) greater than 100 tons per year making the facility subject to the Clean Air Act of 1990, Title V, Renewable Operating Permit (ROP) program. In addition, the facility is a synthetic minor (area) source for Hazardous Air Pollutants (HAPs).

In regard to the National Ambient Air Quality Standards (NAAQS), this facility is located in Macomb county which is currently designated as attainment for ozone, CO, lead, NOx, and PM. The facility is adjacent to both commercial businesses and residential properties.

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I arrived at Axalta at around 9 am. I identified myself and stated the purpose of the inspection. We held a pre-inspection meeting where we discussed current facility operations and planned our facility inspection. Myself, Tony Kashat, Joseph Marecic, and David d’Abadie (Global Environmental

Competency Leader) were present. We discussed the changes that Axalta has made to their recordkeeping processes since the previous inspection.

Axalta has switched from calculating emission factors based on a weighted average of “worst-case” formulations, to calculating the actual emission factor for each formulation used in each emission unit. This change was a significant undertaking for Axalta to complete and involved the near full-time work of several staff over a 6-8 month period. Axalta demonstrated how raw data including throughput, concentrations, vapor pressures, temperatures, etc., are entered into their spreadsheets and software to calculate some of these emission factors. After the pre-inspection meeting, Axalta staff led us through an inspection of the manufacturing facility.

Axalta is a Tier 1 automotive coating manufacturer. Most of the coatings manufactured at Axalta are used at automotive assembly plants. There are approximately 550 employees that operate this plant 24/7 over three shifts.

Coating manufacturing at Axalta is a batch process. Axalta manufacturers epoxy, urethane, and acrylic resins in five reactors. Additionally, the facility manufacturers dispersions, intermediates, and other coating constituents. To prepare the final product, constituents of a paint/coating mixture are blended in one of the many mixing tanks. Finished products are generally in the form of e-coat, basecoat, primer, color coat, or clear coat. Both solvent-based and water-based coatings are produced.

### **Record Review**

On April 11, 2024, I requested Axalta provide me the required records digitally or via mail. AQD received these records on a flash drive during this inspection. As requested, Axalta provided a detailed emission factor calculation document for one of the coating formulations in EU-DISP-TANK on May 23, 2024.

### **ROP Renewal**

AQD received a ROP renewal application from Axalta on February 24, 2022. The application was determined to be administratively complete on March 8, 2022. AQD is currently drafting a consent order which needs to be incorporated into this ROP renewal. This ROP renewal will be processed after the consent order is finalized.

### **IP-21**

Process data at Axalta is tracked using a software called “IP-21”. Axalta has many of their process sensors calibrated to output to this software. In several cases, there are old sensors/software which report to other databases. For example, there are two temperature sensors for the thermal oxidizer. The sensor which outputs a reading to the terminal near the thermal oxidizer is not used to determine proper operation. Only the sensor which reports to IP-21 is utilized for compliance purposes. There are hundreds of process sensors at this facility. It is important that both facility staff and AQD staff are specific about which one is used to determine compliance.

### **Emission Master**

VOC emissions from all resin reactors are now calculated using a software called “Emission Master” (website: [mitchellscientific.com/emission-master](http://mitchellscientific.com/emission-master)). Axalta began using this software at the beginning of calendar year 2023. Emission master calculates HAP and/or VOC emissions from batch and continuous processes using computerized EPA equations in a process modeling environment. The equations utilize the EIIP Guidance Document “Methods for Estimating Air Emissions from Chemical Manufacturing Facilities” Chapter 16. This is the same document that Axalta has long used to calculate emissions from the resin reactors.

Previously in 2022, Axalta calculated an emission factor from the resin reactors based on a weighted average emission factor of the top 3 highest VOC (“worst-case”) formulations. Now, with emission master, Axalta inputs the data from every formulation produced and the software calculates the emission factor for each formulation and multiplies it by the amount produced.

I went through some of the emission master calculations with Axalta. Axalta showed me how they input each formulation into the system and how the system calculates the emission factors based on the inputs. Emission Master calculates the emissions from each step of the manufacturing process (material add, nitrogen sweep, heat up, ect.). Based on my review of the Emission Master calculations and software suite, Emission Master reports accurate emission factor values which can be used for compliance purposes.

Emission factors from other emission units are calculated using the same equations, but in excel rather than in a software program.

#### **ROP No. MI-ROP-A3569-2017a**

**Source Wide Conditions:** Axalta has source-wide conditions limiting each individual HAP to less than 9 tons per year and aggregate HAPs to less than 22.5 tons per year (tpy). VOC emissions from coating lines (spray booths) are limited to 30 tpy for plastic parts, 30 tpy for metal parts, and 48.2 tpy for metal and plastic parts combined. VOC emissions for metal parts spraying are also limited to 10 tons/booth/year. The spray booths are generally used to spray coatings on metal or plastic square panels for R&D or quality control purposes. Both plastic and metal panels are sprayed. Axalta differentiates between what is sprayed on plastic versus metal in their recordkeeping.

VOC emissions while painting metal parts were reported highest during the 12-month period ending in August 2023 at 7.62 tons.

VOC emissions while painting plastic parts were reported highest during the 12-month period ending in February 2024 at 1.14 tons.

Facility-wide VOC emissions were reported highest during the 12-month period ending in April 2023 at 42 tons.

Facility-wide aggregate HAP emissions were reported highest during the 12-month period ending in April 2023 at 5.4 tons.

Section V – S.C. 1: Requires Axalta to perform Method 24 testing on each coating as applied, or, alternatively, get written approval from the AQD district supervisor to use manufacturers data in lieu of Method 24. Axalta performs these tests on-site on all coatings as part of their quality control

checks. Safety data sheets are maintained by Axalta for each chemical used on site. Tony stated that Axalta is using Method 24 data to determine VOC content of coatings as described in this condition.

Section VI – S.C. 1,2,3,4: Specifies source wide recordkeeping requirements. For each coating used, Axalta must keep records of the gallons used, the VOC content, and the corresponding monthly and 12-month rolling VOC emission rate. Additionally, each coating used must be categorized as either metal part spraying or plastic part spraying. Axalta must also keep monthly and 12-month rolling records of both individual and aggregate HAP emissions. I verified that these records are maintained. I did not request all individual HAP emissions on a 12-month rolling basis because aggregate HAP emissions are reported less than 9 tpy.

**EU-RESIN-REACT-4:** Also known as Reactor 4. This reactor is used to manufacture acrylic resin for automotive topcoats. This process consists of a 2,500-gallon reactor, a monomer weigh tank, a catalyst weight tank, a quench tank, a decanter, a feed tank, a receiver, a charge tank, and a thin tank. The basic process in this reactor is to load the reactants into the reactor and feed tanks, heat the reactor to polymerization temperature, add reactants to build acrylic resin, cool resin in thin tank, then filter the resin and send it to storage tanks. The reactor has an integral condenser for process control but is not connected to the MACT condenser.

Section I – Special Condition (S.C.) 1,2: Limits VOC emissions from Reactor 4 to 4.5 tons per 12-month rolling period. There is also a VOC limit for each batch produced of 0.50 lbs of VOC emitted per 1000 lbs of completed resin produced. Based on the records I reviewed Axalta meets these emission limits. VOC emissions were reported highest in during the 12-month period ending in February 2024 at 1.6 tons.

Section III – S.C. 1: States that Axalta shall not splash solvents during loading of the reactor. Personnel who load the reactor utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor near the bottom at a 45-degree angle instead of falling straight down into the reactor.

Section III – S.C. 2: Requires that cleaning of paint manufacturing equipment and shipping containers be done by methods and materials that minimize VOC emissions. Organic solvent is used to clean organic solvent manufacturing equipment/containers. According to Tony, equipment is kept sealed during cleaning to minimize emissions. I did not observe the equipment cleaning process during this inspection. Tony stated that manufacturing equipment/containers that contain waterborne materials are cleaned using hot water. The water used is always kept below 140°F for safety reasons.

The organic solvent used for cleaning at Axalta is KH-10630. KH-10630 is also used in all solvent based cold cleaners at the facility. The solvent consists of 100% VOC and 2% HAPs (approximately 1% cumene and 1% xylene). Emissions from equipment cleaning are accounted for in each emission unit as a separate cleaning emission factor (this is the case for all emission units).

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. I observed that wash solvent is stored in sealed totes/tanks.

Section IV – S.C. 1: Requires all stationary and portable mixing tanks and high-speed dispersion mills be equipped with tight fitting covers. All tanks appeared to have tight fitting covers. The covers were closed during my inspection.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for Reactor 4. Axalta must determine the VOC emission factor in accordance with Appendix 7 of the ROP, keep records of the amount of resins produced per calendar month, use the most recent VOC emission factor and amount of resins produced to calculate the VOC emission rate during each calendar month, and the keep 12-month rolling VOC emission records. I verified that these records are kept. VOC/HAP emissions from EU-RESIN-REACT-4 are estimated using Emission Master.

**EU-RESIN-REACT-5:** Also known as Reactor 5. This reactor is used to manufacture urethane cross linkers and other intermediates for automotive cathodic primer. This emission unit consists of a 2,500-gallon reactor, two raw material tanks, a decanter, a receiver tank, and a thin tank. The typical process is to load reactants into the reactor and feed tanks, heat the reactor to polymerization temperature, add reactants to build resin, cool resin in thin tank, then filter the resin and send it to storage tanks. There is an integral condenser for process control. VOC emissions from the reactor vents are controlled by a knock-out tank and a -35°C “MACT condenser”.

Section I – S.C. 1,2: Limits VOC emissions from Reactor 5 to 2 tons per 12-month rolling period. There is also a VOC limit for each batch produced of 0.22 lbs of VOC emitted per 1000 lbs of completed resin produced. Based on the records I reviewed Axalta meets these emission limits. VOC emissions were reported highest during the 12-month period ending in May 2023 at 0.8 tons.

Section III – S.C. 1: States that Axalta shall not splash solvents during loading of the reactor. Personnel who load the reactor utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor on a 45-degree angle instead of falling straight down into the reactor.

Section III – S.C. 2: Requires that cleaning of paint manufacturing equipment and shipping containers be done by methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. Tony stated that equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. I observed that wash solvent is stored in sealed totes.

Section IV – S.C. 1: Requires emissions from Reactor 5, the weigh tank, the decanter tank, and the thin tank to be vented to the condenser system. During a previous inspection, I looked closely at the piping for this reactor. I observed that these tanks are vented to the condenser system. It is difficult to verify with 100% certainty since the pipes go through walls/ceilings and cannot always be seen.

Section IV – S.C. 2: Requires all stationary and portable mixing tanks and high-speed dispersion mills be equipped with tight fitting covers. All tanks appeared to have tight fitting covers. The covers were closed during my inspection.

Section VI – S.C. 1,2,3,4: Specifies recordkeeping requirements for Reactor 5. Axalta must determine the VOC emission factor in accordance with Appendix 7 of the ROP, keep records of the amount of resins produced per calendar month, use the most recent VOC emission factor and amount of resins produced to calculate the VOC emission rate during each calendar month, and keep 12-month rolling VOC emission records. I verified that Axalta maintains these records.

**EU-RESIN-REACT-6:** Also known as Reactor 6. This reactor is used to manufacture acrylic resin for automotive topcoats. This emission unit consists of a 2,500 gallon reactor, a monomer weigh tank, a catalyst weigh tank, a quench tank, a decanter, a feed tank, a charge tank, and a thin tank. VOC emissions from the reactor, weigh tank, quench tank, feed tank, and charge tanks are vented to a catch tank. The typical process is to load the reactants into the reactor and feed tanks, heat the reactor to polymerization temperature, add reactants to build resin, cool resin in the thin tank, then filter the resin and send it to storage tanks.

Section I – S.C. 1,2,3: Limits VOC emissions from Reactor 6 to 5.4 tons per 12-month rolling period. There is also a VOC limit for each batch produced of 0.50 lbs of VOC emitted per 1000 lbs of completed resin produced. T-butyl peroxyacetate emissions are limited to 0.475 lbs per hour and usage is limited to 6695 lbs per year. Based on the records I reviewed Axalta meets these limits. Total VOC emissions were reported highest in February 2024 at 1.5 tons.

Section II – S.C. 1. Usage of t-butyl peroxyacetate is limited to 6,694 lbs per 12-month rolling time period. T-butyl peroxyacetate usage was reported highest during the 12-month period ending in December 2023 at 700 lbs. The ROP specifies that compliance with the 0.475 lb/hr T-butyl peroxyacetate limit is determined by keeping monthly and 12-month rolling records of T-butyl peroxyacetate usage.

Section III – S.C. 1: States that Axalta shall not splash solvents during loading of the reactor. Personnel who load the reactor utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor on a 45-degree angle and run down the side of the tank instead of falling straight down into the reactor. I observed the J-Tube device during a previous recent inspection. Tony stated that no recent changes have been made to the reactor loading process.

Section III – S.C. 2: Requires that cleaning of paint manufacturing equipment and shipping containers be done by methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. According to Tony, equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. I observed that wash solvent is stored in sealed totes.

Section IV – S.C. 1: Requires all stationary and portable mixing tanks and high-speed dispersion mills be equipped with tight fitting covers. All tanks appeared to have tight fitting covers. The covers were closed during my inspection.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for Reactor 6. Axalta must determine the VOC emission factor in accordance with Appendix 7 of the ROP, keep records of the amount of resins produced per calendar month, use the most recent VOC emission factor and amount of resins produced to calculate the VOC emission rate during each calendar month, keep records of the VOC emission factor used, keep records of the amount of resins produced per calendar month, keep records of t-butyl peroxyacetate usage on a 12-month rolling basis, and maintain 12-month rolling VOC emission records. I verified that these records were kept.

Section VI – S.C. 4: Requires Axalta to keep monthly and 12-month rolling records of t-butyl peroxyacetate usage. I verified that these records are kept.

**EU-RESIN-REACT-7:** Also known as Reactor 7. This reactor is used to manufacture epoxy “grind and backbone resins” for automotive cathodic primer. This emission unit consists of a 5,000-gallon reactor, three reactor weigh tanks, a charge tank, a stripper shared with the Reactor 8 process, and two thin tanks. Vents from the reactor, three weigh tanks, and the charge tank go to the catch tank and then through a -35°C “MACT condenser” for VOC emission control. The basic process is to load the reactants to the reactor and feed tanks, heat the reactor to polymerization temperature, add the reactants to build resin, cool resin in the thin tank, then filter the resin and send it to storage tanks. In-plant dust from this process is controlled by a dust collector (DC-8).

Section I – S.C. 1,2: Limits VOC emissions from Reactor 7 to 2 tons per 12-month rolling period. There is also a VOC limit for each batch produced of 0.5 lbs of VOC emitted per 1000 lbs of completed resin produced. Based on the records I reviewed Axalta meets these emission limits. The highest reported VOC emissions were in the 12-month period ending in April 2023 at 0.8 tons. The highest reported VOC emission factor was 0.1 lbs VOC per 1000 lbs completed resin.

Section III – S.C. 1: States that Axalta shall not splash solvents during loading of the reactor. Personnel who load the reactor utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor on a 45-degree angle instead of falling straight down into the reactor. I observed the J-Tube device during a previous recent inspection. Tony stated that no changes have been made to the reactor loading process.

Section III – S.C. 2: Requires that cleaning of paint manufacturing equipment and shipping containers be done by methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. Tony stated that equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. I observed that wash solvent is stored in sealed totes/tanks.

Section III – S.C. 4: States that Axalta shall not operate Reactor 7, the three weigh tanks, and/or charge tank unless the catch tank is installed, maintained, and operated in a satisfactory manner. I observed that the catch tank was in place during my inspection.

Section III – S.C. 5: Requires Axalta to perform the annual inspection of the catch tank as described in the preventative maintenance plan kept at the facility. According to Tony, this inspection is performed at least once per month when the catch tank is drained. There is no requirement to keep records of this inspection in the current ROP.

Section IV – S.C. 1: Requires all stationary and portable mixing tanks and high-speed dispersion mills be equipped with tight fitting covers. All tanks I observed appeared to have tight fitting covers. The covers were closed during my inspection.

Section VI – S.C. 1,2,3,4: Specifies recordkeeping requirements for Reactor 7. Axalta must keep records of the VOC emission factor used, the amount of resins produced per calendar month, and the 12-month rolling VOC emission rate. I verified that these records are kept.

**EU-RESIN-REACT-8:** Also known as Reactor 8. This reactor is used to manufacture epoxy “backbone resin” for automotive cathodic primer. This emission unit includes a 5,000 gallon reactor, two reactor weigh tanks, four charge tanks, two receiver tanks, and one 12,500-gallon thin tank. The typical process is to load reactants into the reactor and feed tanks, heat the reactor to polymerization temperature, add reactants to build resin, emulsify the resin, cool resin in thin tank, “strip” VOC from resin, then transfer the resin to the cathodic blend tank. The vents for all Reactor 8 tanks are manifolded together to a catch tank then to a -35°C “MACT condenser” for VOC reduction. A dust collector (DC-8) is used to control in-plant dust.

Section I – S.C. 1,2: Limits VOC emissions from Reactor 8 to 6.9 tons per 12-month rolling period. There is also a VOC limit for each batch produced of 0.5 lbs of VOC emitted per 1000 lbs of completed resin produced. Based on the records I reviewed Axalta meets these emission limits. The highest reported VOC emissions were in the 12-month period ending in February 2024 at 2.7 tons. The highest reported VOC/batch was 0.1 lbs VOC per 1000 lbs completed resin.

Section III – S.C. 1: States that Axalta shall not splash solvents during loading of the reactor. Personnel who load the reactor utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor on a 45-degree angle instead of falling straight down into the reactor. I observed the J-Tube device during a previous recent inspection. Tony stated that no changes have been made to the reactor loading process.

Section III – S.C. 2: Requires that cleaning of paint manufacturing equipment and shipping containers be done by methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. Tony stated that equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. I observed that wash solvent is stored in sealed totes/tanks.

Section III – S.C. 4: States that Axalta shall not operate Reactor 8, the two weight tanks, and/or charge tanks unless the catch tank is installed, maintained, and operated in a satisfactory manner. I observed that the catch tank was in place during my inspection.

Section III – S.C. 5: Requires Axalta to perform the annual inspection of the catch tank as described in the preventative maintenance plan kept at the facility. According to Tony, this inspection is performed at least once per month when the catch tank is drained.

Section IV – S.C. 1: Requires all stationary and portable mixing tanks and high-speed dispersion mills be equipped with tight fitting covers. All tanks appeared to have tight fitting covers. The covers were closed during my inspection.

Section VI – S.C. 1,2,3,4: Specifies recordkeeping requirements for Reactor 8. Axalta must keep records of the VOC emission factor used, the amount of resins produced per calendar month, and the 12-month rolling VOC emission rate. I verified that these records are kept.

**EU-WBI:** Waterborne Intermediate paint manufacturing consisting of dispersions making and intermediates making process. Colored or pigmented materials go through a mechanical process to disperse the particles for waterborne paint manufacturing using mills and portable tanks. There are no stacks associated with this process. The intermediates process blends resins, solvent, and aluminum paste or mica pearls, or laponite into one of five process tanks. A dust collector (DC-06) is used to control emissions during powder loading.

Section I – Limits VOC emissions from this emission unit to 3.8 tons per 12-month rolling time period. Based on the records I reviewed Axalta meets these emission limits. The highest reported VOC emissions were in the 12-month period ending in February 2024 at 0.6 tons.

Section II – Limits the amount of product manufactured in EU-WBI to 4,500,000 gallons per 12-month rolling time period. Axalta is in compliance with this limit based on the records I reviewed. The highest reported production in this emission unit is 1,469,951 gallons during the 12-month rolling time period ending in February 2024.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for EU-WBI. Axalta must keep, in a format acceptable to the AQD district supervisor, monthly and 12-month rolling records of the gallons of product produced and VOC emission rates. I verified that these records are maintained.

**EU-IMP:** Also known as Improved Manufacturing Process. This emission unit is an automated system designed to produce pigmented solvent-borne products. The system consists of seven 500-gallon dosing tanks, three 250-gallon dosing tanks, four solvent viscosity adjustment tanks, two 3000-gallon blend tanks, two storage tanks, two fill heads, and a mix head. The system is equipped with a manifold venting system that reduces VOC emission from the blend tanks, wash tanks, and product damper tanks.

Axalta no longer operates EU-IMP as of August 2019 and has no plans to restart operation. The tanks associated with this process have been emptied, cleaned, and idled. Axalta requested to have this removed from the ROP in their 2022 renewal application; however, AQD could not remove it from the ROP because the equipment cannot be considered dismantled. This process could still be started back up with relative ease in its current state.

This emission unit was not operated during the time period I reviewed. I did not evaluate compliance with the conditions of this emission unit. Axalta reported 0 emissions from this equipment in their 2023 SLEIS submittal.

**EU-MEL-UNLOAD:** This emission unit is a melamine resins unloading operation. The facility receives melamine resins from off-site via 5000-gallon tank wagons. The melamine is unloaded to the stationary tanks located at the resin storage area.

Section I – S.C. 1,2: Limits formaldehyde emissions from EU-MEL-UNLOAD to 0.28 lbs/hr and 0.24 tons per 12-month rolling time period. Based on the records I reviewed Axalta is in compliance with these emission limits. Formaldehyde emissions were highest during the 12-month period ending in February 2023 at 0.0111 tons.

Hourly formaldehyde emissions remain consistent at 0.00235 lbs/hour for each month evaluated. This is because the formaldehyde emissions are calculated using the monthly hours of operation. The emission factor for each wagon unloaded is calculated and multiplied by the number of wagons unloaded per month. Axalta assumes that each unload takes 2 hours.

Section III – S.C. 1: States that Axalta shall not off-load formaldehyde containing resins for more than 1752 hours per 12-month rolling time period. Based on the records I reviewed Axalta is in compliance with this limit. The records indicate that Axalta off-loaded formaldehyde containing resins for 328 hours during the 12-month period ending in February 2024 (this was the highest number of hours for the 12-month periods I reviewed).

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for EU-MEL-UNLOAD. Axalta must keep records of the number of tank wagons unloaded per month and the throughput of formaldehyde containing resins (melamine) per month based on the number of tank wagons per month and the capacity of each tank wagon. Axalta must also compute the hours of operation based upon the number of tanks unloaded and use AQD approved emission factors (or mass balance techniques) to calculate formaldehyde emissions each calendar month. I verified that these records are maintained. Axalta stated that EPA Chapter 8, equation 8.4.1 is used to calculate formaldehyde emissions from EU-MEL-UNLOAD.

**EU-S-MEDIA-MILLS (1-4):** This emission unit is comprised of four “small media mills”. The process for each mill/premix tank system is the same. There is no chemical reaction in these processes, only mixing and mechanical grinding to disperse pigment in binder and solvent. A dust collector (DC-06) is used to control emissions during powder loading.

Section I – S.C. 1: Limits VOC emissions from EU-S-MEDIA-MILLS to 25.0 tons per 12-month rolling time period. VOC emissions were highest during the 12-month period ending in January 2023 at 5.1 tons.

Section II – S.C. 1: Limits the amount of material produced in EU-S-MEDIA-MILLS to 147,000 gallons per month. Based on the records I reviewed this limit has not been exceeded. The highest reported monthly production volume is 72,361 gallons in February 2024.

Section III – S.C. 1: Requires that the cleaning of equipment in EU-S-MEDIA-MILLS be done using methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. Equipment is kept sealed during cleaning to minimize emissions. Manufacturing equipment/containers that contain waterborne materials are cleaned using hot water. Some smaller parts and components are hand wiped down with solvent. I observed that used solvent rags are kept in closed bins located throughout the plant. I observed that wash solvent is stored in closed containers pursuant to Section III – S.C. 2.

Section IV – S.C. 1: Requires all mills to be equipped with tight fitting covers. All tanks appeared to have tight fitting covers except for openings just large enough to accommodate the mixing shaft. The covers were closed during my inspection.

Section IV – S.C. 2: Requires Axalta to equip and maintain each mill in EU-S-MEDIA-MILLS with equipment to monitor the temperature of the mill's contents during processing and to stop the milling process if temperatures exceed 150°F. I reviewed continuous (15-minute) temperature records for July 2023 and February 2024. Reported temperatures do not exceed 150°F. The highest reported temperature was 121°F. All four mills were off during my inspection.

There isn't a benefit for Axalta to operate these at a higher temperature than 120°F. 120°F is the temperature required to achieve the desired dispersion consistency for one of their formulations. Based on my discussions with Axalta staff, there is not currently a formulation that requires higher than 120°F in the mills.

Section VI – S.C. 1,2,3,4,5: Specifies recordkeeping requirements for EU-S-MEDIA-MILLS. Axalta must keep records of the temperature of each mill every 15 minutes for at least 90% of operating time, the volume of material produced, and records of any exceedances of the maximum mill temperature. Additionally, Axalta must keep records of the monthly and 12-month rolling VOC emission rate for EU-S-MEDIA-MILLS. I verified that these records are maintained.

**EU-WBSB:** This emission unit consists of small (50-500 gallon) batch waterborne paint manufacturing used to make OEM paint products. Tanks vent to the manufacturing building room and fugitive emissions leave via building ventilation.

Section I – S.C. 1: Limits VOC emissions from EU-WBSB to 2.4 tons per year based on a 12-month rolling time period. Axalta appears to comply with this limit based on the records I reviewed. VOC emissions were highest during the 12-month period ending in February 2024 at 0.0014 tons.

Section II – S.C. 1: Limits the material produced in EU-WBSB to 58,333 gallons per month. The throughput records submitted by Axalta for EU-WBSB show compliance with this condition. Throughput was reported highest during the month of March 2023 at 29,161 gallons.

Section III – S.C. 1: Requires that the cleaning of equipment in EU-WBSB be done using methods and materials that minimize VOC emissions. Organic solvent is used to clean manufacturing equipment/containers. Equipment is kept sealed during cleaning to minimize emissions. Manufacturing equipment/containers that contain waterborne materials are cleaned using hot water. Some smaller parts and components are hand wiped down with solvent. I observed that

used solvent rags are kept in closed bins located throughout the plant. I observed that wash solvent is stored in closed containers pursuant to Section III – S.C. 2.

Section IV – S.C. 1: Requires all production vessels in EU-WBSB to be equipped with tight fitting covers. All tanks appeared to have tight fitting covers except for openings just large enough to accommodate the mixing shaft. The covers were closed during my inspection.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements of EU-WBSB. Axalta must keep records of the monthly and 12-month rolling VOC emission rate as well as records of the volume of material produced in EU-WBSB. I verified that these records are kept.

Section IX – S.C. 1: States that Axalta shall comply with all provisions of 40 CFR Part 63 Subparts A and CCCCCC, National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing. I did not verify compliance with this requirement. During a previous inspection, Axalta showed me a document which lists the applicable Subpart CCCCCC requirement and the corresponding method that Axalta uses to comply with the requirement. AQD has not taken enforcement delegation of this area source MACT.

Axalta should note that they may be subject to the 40 CFR Part 63, Subpart CCCCCC standards for “New” tanks now that they have replaced several mills.

**FG-RESIN-CATHODIC:** This flexible group refers to the previously mentioned -35°C “MACT condenser” system that controls VOC/HAP emissions from reactors 1,5,7, and 8. VOC/HAPs are vented from the process vessels and collected in a common vent header. The vent header transports the emissions to a pre-condenser which condenses and removes water vapor and some solvents. The emissions then proceed to two condensers (28 & 29) in parallel to reduce VOC/HAP emissions. Only one of the two condensers are run at any one time. While one condenser is functioning as a condenser, the other condenser is in a defrost cycle. The condensers are controlled by a refrigeration unit. The remaining emissions proceed through an induction fan and are exhausted through a stack. Condensate is collected in one of two 500-gallon portable tanks. One 500-gallon tank is always in standby.

Section I – S.C. 1: Limits Toluene diisocyanate emissions from this flexible group to 0.002 lbs/hr. The records I reviewed show the highest TDI emission rate at 0.000623 lbs/hour (during multiple batches). Axalta used equations from Section 3.1.1 of the EPA EIIP Volume II Chapter 16 document to calculate these emissions. The stack test conducted in November 2017 showed the TDI emission rate at 0.00004 lbs/hour. Axalta appears to be in compliance with this emission limit.

Section III – S.C. 1: Requires FG-RESIN-CATHODIC MACT condenser system to be installed, maintained, and operated in a satisfactory manner. This includes maintaining the condenser system at a temperature not to exceed the maximum temperature specified in the malfunction abatement plan (MAP).

Axalta provided me with the MAP for the MACT condenser during my previous inspection. The stated exhaust temperature ranges for the exit stack are 40-44°F. The MAP states that the normal operating range is 41°F-46.4°F for the chilled water in the water-cooled pre-condenser.

When reviewing real time operating temperatures/data, it is important to know which condenser is being referenced. While one condenser is operating in compliance with the MAP, the other condenser is in a defrost cycle and may have a much higher temperature than specified in the MAP. The condensers switch roles approximately every 4 hours depending on weather. The switch is triggered by a change in exhaust temperature.

During this inspection, the water-cooled pre-condenser was operating with a transfer fluid (water) temperature of 42°F and flow of 38 gallons per minute. Dynalene condenser 29 was operating during this inspection. Dynalene condenser 28 was in a defrost cycle. In condenser 29, dynalene temperature was -29°F during this inspection (MAP states negative 18°F maximum temperature). Exhaust gas temperatures were 6°F for condenser 29 (in operation) and 43°F for condenser 28 (defrost cycle).

I reviewed continuous exhaust temperature data for July 2023 and February 2024. One data point is recorded every 15-minutes. I did not notice any deviations from the MAP in the February 2024 temperature data. In the July 2023 data, there were four 15-minute periods where the exhaust gas temperature of both tandem dynalene condensers was slightly greater than 46°F (between 53°F and 65°F). Axalta highlighted this exceedance in the records provided. Axalta stated that this was a “temporary emergence” and then units were inspected and found to be operating normally. Since the exhaust temperature was only out of range for a period of 1-hour and Axalta self-reported this issue, AQD will not issue a violation notice at our discretion; however, AQD is requesting that Axalta provide AQD a more detailed explanation for why this happened and what might be done to prevent exhaust temperature exceedances from happening going forward.

Other than the issue noted above, the MACT condenser system appears to be operating in compliance with the MAP.

Section III – S.C. 2: States that Axalta shall not use Toluene diisocyanate (TDI) in Reactor 5 and 7 at the same time, and shall not be used in Reactor 1 or Reactor 8. Tony stated that operators are aware of the requirement to use TDI in only reactor 5 or 7 and not both at the same time. Axalta provided records stating that TDI was not used in Reactors 5 and 7 at the same time, and that TDI was not used in Reactors 1 or 8. Axalta is in compliance with this condition based on the information I reviewed.

Section IV – S.C. 1: States that Axalta shall not operate FG-RESIN-CATHODIC unless a MAP is implemented and maintained. Axalta exceeded the maximum exhaust temperature specified in the MAP during four 15-minute periods in July 2023. No violation notice was sent to Axalta at AQD discretion. Based on my inspection and the continuous temperature data I reviewed, the MACT condenser appears to be operating in compliance with the MAP for all other periods I reviewed.

Section IV – S.C. 2: Requires Axalta to equip the MACT condenser exhaust with a temperature monitor that records the exhaust temperature at least once every 15 minutes. The MACT condenser exhaust is equipped with a temperature monitoring device. I observed that this device reports to software that records and displays the temperature data on a continuous basis.

The exhaust temperature monitor for both MACT condensers was last calibrated in October 2023 based on the records I reviewed.

Section IV – S.C. 3: Requires Axalta to determine the maximum condenser exhaust temperature based on their most recent toluene diisocyanate emission rate test. The most recent TDI emission test was in 2017. The average exhaust gas temperature recorded during the most recent TDI test was 75°F. Based on the records I reviewed, Axalta maintains the condenser exhaust below this temperature.

Section V – S.C. 1,2: Requires Axalta to perform emissions testing on the condenser system within 180 days of this permit issuance using an approved EPA method. Axalta performed this test on November 20-21, 2017.

Section VI – S.C. 1: States that Axalta shall install, calibrate, maintain, and operate a device to monitor and record the exhaust gas temperature of the MACT condenser system on a continuous basis. Based on the process data I observed during my inspection and the records I reviewed, the MACT condenser is equipped with a device to monitor and record the exhaust gas temperature. Axalta provided records showing that these devices were calibrated in July 2023 and in February 2024.

Section VI – S.C. 2: States that the permittee shall record the time and duration of bypass of any part of the MACT condenser system. Axalta did not report any bypasses of the MACT condenser system.

Section VI – S.C. 3: States that the permittee shall keep a record of exceedances of the maximum allowed condenser exhaust gas temperature specified in the MAP. I verified that these records are maintained.

Section VI – S.C. 4: Axalta must calculate emissions from FG-RESIN-CATHODIC based on Appendix 7. Emissions from the condenser are calculated by summing the emissions from each reactor connected to the condenser. Based on my review of previous PTI's which were rolled into the facility's ROP, this condition is referring to HAP emission calculations. I verified that these records are kept.

Section VI – S.C. 5: States that when TDI is used in either EU-RESIN-REACT-5 or EU-RESIN-REACT-7, the permittee shall keep records of the date TDI was used, the lbs/hour TDI emissions associated with each batch, Antoine's equation data used to calculate the lb/hour TDI emission, and the reactor operating temperature associated with each batch. I verified that these records are kept.

Section VI – S.C. 6: States that when TDI is used in either EU-RESIN-REACT-5 or EU-RESIN-REACT-7, the permittee shall keep records of the coolant inlet and outlet temperatures of the condenser associated with each batch. I verified that these records were kept.

Section VI – S.C. 7: States that, if any bypass line was opened, the permittee shall include a description of why the bypass line was opened and the duration of the bypass. No bypasses of the MACT condenser system were reported.

**FG-RESIN-DC8:** This flexible group includes a dust collector, DC-8, that controls particulate emissions from reactors 4,7, and 8 during powder loading.

Section I – S.C. 1: Limits particulate matter (PM) emissions from FG-RESIN-DC8 to 0.1 lbs/1000 lbs exhaust gas. This limit should be achieved based on satisfactory operation of the dust collector. The pressure drop records I reviewed show that the dust collector was down for 65.8 hours while the FG-RESIN-DC8 was operated (see Section VI – S.C. 1,2). A violation notice was sent for this non-compliance. The records I reviewed show that the dust collector was operated properly during all other periods I reviewed. The dust collector was functioning during my inspection. I did not notice any particulate on the ground near the collector or ducting.

Section IV – S.C. 1: Requires DC-8 to be equipped with a device to illuminate a visual alarm if the pressure drop across the filter exceeds 5.5” of water or falls below 0.3” of water. I observed that DC-8 is equipped with a visual and digital alarm system. The pressure is monitored and recorded continuously in the IP-21 monitoring system. The pressure drop during my inspection was approximately 1.5” of water (observed on analog meter near DC-8). Later on in the inspection, I observed that the IP-21 monitoring system showed a pressure drop of 1.2” of water.

Section VI – S.C. 1,2: Requires Axalta to install, calibrate, maintain and operate a pressure drop monitoring/recording device on DC-08 on a continuous basis (defined as every 15 minutes). DC-8 is equipped with a pressure drop monitoring device. Pressure drop readings are recorded every 15 minutes. I reviewed continuous pressure drop data for all of July 2023 and February 2024.

I did not notice any recorded values below 0.3” of water or above 5.5” of water in February 2024.

In July 2023, Axalta reported that resin reactor operations were down for maintenance from June 30, 2023 through July 5, 2023. During this time, DC-08 was not operated. When the resin operations were started back up on July 5, 2023, Axalta stated that DC-08 failed to restart. Axalta reported that the resin reactors were operated for 65.8 hours with DC-08 off before an operator noticed that the pressure gauge was not registering. A violation notice was sent to Axalta for failing to operate DC-08 while operating resin reactors 4, 7, & 8.

Also, Axalta must perform and maintain records of monthly checks on DC-8 to ensure proper function. Operators of DC-8 record the pressure drop at the start of pigment loading and again at the end of pigment loading. Records of monthly checks are maintained. Records of any maintenance on DC-08 are maintained. Visible emissions readings are taken monthly by a certified reader on both DC-08 and DC-06 (this is for internal audit purposes, not required by AQD).

**FG-RULE 290:** This flexible group includes any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a, and 290. Axalta provided Rule 290 data for the following Rule 290 exempt emission units.

Axalta submitted Rule 290 demonstrations for EU-RESIN-REACT-1, EU-BT(1-3), EU-FSO, EU-LMZ (1,3,and 4), EU-TSM, EU-LMZ-5, EU-MBFPT(1-22), EU-SBI(1-11), EU-CGM1000M(22), EU-CGM1000S (8), EU-CGM2500(5), EU-CGM250(4), EU-CGM3500(5), EU-CGM5000(4), EU-CGM500(9), and EU-

SOLV-RECOVERY. Axalta provided a table for each of these emission units which lists the pollutants, their screening levels, and the monthly emissions from each Rule 290 exempt emission unit. The records I reviewed show compliance with Rule 290 limits.

For EU-STORAGE-SOLV(TF-08) and EU-STORAGE-SOLV(TF-13), Axalta submitted Rule 291 demonstrations along with a letter talking about how these units are exempt under Rule 291. I reviewed these documents and found them to be accurate. EU-STORAGE-SOLV(TF-08) has a potential to emit up to 0.64 tons of VOC annually, which is 100% MEK. EU-STORAGE-SOLV(TF-13) has a potential to emit up to 1.34 tons of acetone annually. These emission units will be moved to Rule 291 in the upcoming ROP renewal.

The following Rule 290 emission units have emission controls:

EU-RESIN-REACT-1: MACT condenser system is used to control emissions during production. The records I reviewed show compliance with Rule 290 limits. Total VOC emissions in 2023 were reported at 90.96 lbs.

EU-LMZ 1,3,4: Dust filters LMZREDHP and LMZBLKHP are used to control emissions during powder loading. VOC emissions were reported highest in January 2023 at 187.9 lbs.

EU-TSM: Dust collector (DC-06) is used to control emissions during powder loading. VOC emissions were reported highest in August 2023 at 236.4 lbs.

EU-SBI (1-11): Dust collector (DC-06) is used to control emissions during powder loading. Monthly VOC emissions were reported highest in March 2023 at 362.42 lbs.

EU-SOLV-RECOVERY –This emission unit is used for semi-batch distillation of the parts washer and equipment washing solvent, KH10630. VOC emissions from this process are controlled by a condenser. The condenser is cooled using chilled water which is maintained at less than 45 °F. During this inspection, I observed that the chilled water was at 34 °F (IP-21 reading). VOC emissions from EU-SOLV-RECOVERY were reported highest during the month of September 2023 at 93.6 lbs.

**FG-DISP-TANKS**: This flexible group includes emission units associated with dispersion premix tanks. The color or pigmented materials go through a mechanical process to disperse the particles for solvent borne paint manufacturing and associated premix tanks. A dust collector (DC-06) is used to control emissions during powder loading. This flexible group contains EU-S-MEDIA-MILLS(1-4), EU-LMZ(1,3, and 4), EU-TSM, EU-SBI(1-11), EU-WBI, EU-DISP-TANK(1-11), EU-ECOATSUP.

Section I – S.C. 1: Establishes a PM emission limit for FG-DISP-TANKS. PM emissions are limited to 0.10 lb/1000 lbs exhaust gases. Compliance with the PM emission limit is demonstrated through proper operation of the dust collector, DC-06. Based on my inspection and record review, DC-06 is maintained and operated correctly.

Section I – SC 2,3: Limits VOC emissions from EU-DISP-TANK (1-11) to 22.5 tons per 12-month rolling time period. VOC emissions from EU-ECOATSUP are limited to 6.9 tons per 12-month rolling time period.

VOC emissions from EU-DISP-TANK were reported highest during the 12-month period ending in January 2023 at 1.4 tons.

VOC emissions from EU-ECOATSUP were reported highest during the 12-month period ending in February 2024 at 0.02 tons.

Section IV – S.C. 1,2,3: States that Axalta shall not operate FG-DISP-TANKS unless DC-06 is installed, maintained, operated in a satisfactory manner, and equipped with a visual alarm to notify personnel if the pressure drop falls below 0.3” water column or climbs above 5” water column. Based on the pressure drop I observed, DC-06 appeared to be operating correctly during my inspection. DC-06 is equipped with a visual alarm. Pressure drop is monitored on a physical gauge and also digitally monitored in the IP-21 process monitoring system. The pressure drop during this inspection was 2.35” of water on the physical gauge. Later on in the inspection I observed that IP-21 showed 3” of water. The pressure drop records provided by Axalta that I reviewed show that pressures are maintained between the required levels. I reviewed each 15-minute period in July 2023 and February 2024. The data I reviewed showed that DC-06 is being operated within the required pressure differential range.

Section VI – S.C. 1,2,3,4,5: Specifies recordkeeping requirements for FG-DISP-TANKS. Axalta must implement and maintain records of monthly routine checks on the dust collectors. Records of monthly routine checks are maintained. Axalta must keep records of the pressure drop of DC-06 and the two dust filters. Pressure drop readings from DC-06 are recorded every 15 minutes digitally. Pressure drop from the two dust filters is recorded before and after each batch of dispersion. Records of maintenance and pressure drop for DC-06 are maintained in a satisfactory manner.

Axalta must keep records of the VOC emission rate from EU-DISP-TANK and EU-ECOATSUP on a monthly and 12-month rolling basis. These records are maintained.

**FG-THERMOX-MIXTANKS:** This flexible group includes 29 product mix tanks. Vents from these tanks are manifolded together and vented to a thermal oxidizer for VOC control. The thermal oxidizer is engineered to achieve 95% destruction efficiency. The mixing process for each tank is the same – A clean tank, which has been kept blanketed with nitrogen, is charged with raw materials through a closed loading system. Vapors displaced from the tank exit through a conservation vent and are ducted to the oxidizer. Positive pressure is maintained in the tank with a nitrogen regulator. Once the batch is completed, the tank is cleaned with a wash solution, if necessary.

Section I – S.C. 1: Limits VOC emissions from these 29 mix tanks to 2.0 tons per 12-month rolling time period. Axalta appears to comply with this limit based on the records I reviewed. Total VOC emissions were reported highest during the 12-month period ending in January 2023 at 0.58 tons.

Section III – S.C. 1: Requires the thermal oxidizer to be installed, maintained, and operated in a satisfactory manner. 3-hour average temperature must be above 1500°F and instantaneous temperature must never fall below 1450°F. Retention time must be above 0.5 seconds. Based on this inspection and the records I reviewed Axalta complies with these temperature requirements.

During this inspection the thermal oxidizer temperature was 1569°F on the IP-21 database. Axalta uses the IP-21 connected thermocouple for process control.

I reviewed records of any malfunctions. There were two maintenance activities that caused the temperature to dip to between 1274°F and 1379°F. The first was for a period of 3-hours and the second was for a period of 5-hours. In both cases, the pilot combustion gas was adjusted and the TO was restarted promptly. Axalta staff stated that they are looking into replacing this TO unit as it is nearing the end of its useful life.

According to Axalta, during times the instantaneous oxidizer temperature falls below 1450°F, the interlocking device automatically shuts down all mixing processes and closes the mix tank loading valve and bulk material header valve to physically prevent the mix tank loading process.

During my previous inspection, Axalta provided records showing that the interlocking system was activated during each case of low oxidizer temp. The records are in the form of a chart of oxidizer temperature and flow rate of material to the mix tanks. The charts show that during periods the oxidizer temperature fell below 1450°F, the flow rate to the mix tanks was 0. I did not review these records as part of this inspection.

When the interlock system is activated, the powerhouse personnel are paged, and the environmental health and safety group receives an automatic email alert. Once the alarm condition is resolved, the inlet valves will reopen. The bulk material manifold valves require operator intervention to reopen.

Section III – S.C. 2: States that Axalta shall not splash solvents during loading of the mix tanks. Personnel who load the tanks utilize either a “J-Tube” or another device that minimizes splashing by causing liquids to enter the reactor on a 45-degree angle instead of falling straight down into the tanks. I observed the J-Tube device during a previous recent inspection. Tony stated that no recent changes have been made to the reactor loading process.

Section IV – S.C. 1,2: Requires the thermal oxidizer to be equipped with a temperature measurement device and an interlock system so that if the temperature falls below the limits of Section III – S.C. 1, the mixing process is automatically stopped. I verified during my inspection that a temperature monitoring device is present. I reviewed the most recent calibration of the thermocouples which occurred on December 6, 2023. I observed that there is an interlock system pursuant to this condition.

Section V – S.C. 1,2: Requires stack testing using an approved EPA method listed in 40 CFR Part 60, Appendix A, within 180 days of the issuance of this renewable operating permit. A stack test was performed on the thermal oxidizer pursuant to this condition on November 20-21, 2017 by Derenzo Environmental Services. The results of this stack test indicate that VOC destruction efficiency is greater than 99%.

Section VI – S.C. 1,2,3,4,5: Specifies recordkeeping requirements of FG-THERMOX-MIXTANKS. Axalta must keep records of the throughput, in gallons, of each coating type (clearcoat, solvent-borne basecoat, waterborne basecoat, etc.) on a monthly and 12-month rolling basis. Axalta is

required to keep records of the VOC emissions based upon a properly determined VOC emission factor. Additionally, the temperature monitoring device on the thermal oxidizer must be calibrated every six months. I verified that these records were maintained. The most recent calibration of the temperature monitoring device was in December 2023 based on the records I reviewed.

**FG-RULE284TANKS:** This flexible group includes any existing, new, or modified storage tanks that are exempt from Rule 201 requirements pursuant to Rule 284, and that are subject to 40 CFR Part 60.110 (a), (b), and 60.116 (b). This includes the following emission units: EU-STORAGE-SOLV (1-7, 9-12, 14-21), EU-STORAGE-MONOM(1-6), EU-STORAGE-RESIN(1-64), and EU-STORAGE-MISC(1-6).

Section IV – S.C. 1,2,3,4,5,6: Restates the requirements of EGLE-AQD Rule 284. Based on the records submitted and the information I have about these tanks. The tanks appear to be exempt pursuant to Rule 284.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for FG-RULE284TANKS. For each storage vessel, Axalta must keep records of the tank ID name, location, capacity, date of installation/modification, type of material contained in the vessel, true vapor pressure of the material contained in the vessel at actual storage conditions, annual material throughput and VOC emissions as determined at the end of each calendar year, and the applicable requirements. For volatile organic liquid storage vessels larger than 10,560 gallons but smaller than 19,800 gallons Axalta must record the dimensions of each vessel and an analysis showing the capacity of the vessel and notify the district supervisor before constructing, reconstructing, or modifying a storage vessel of this size. I verified that Axalta maintains these records. Total VOC emissions in 2023 were reported at 1.9 tons. This is reported in SLEIS under “EU-FUGITIVES”.

**FG-COLDCLEANERS:** This flexible group includes any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a, and Rule 281(2)(h) or Rule 285(2)(r)(iv). I looked at each of the 8 operational cold cleaners during this inspection.

Section II – S.C. 1: States that Axalta shall not use cleaning solvents containing more than five percent by weight of certain halogenated compounds. The cleaning solvent used in all cold cleaners at this facility is an organic solvent blend known as KH10630. KH10630 does not contain any halogenated compounds according to the data sheets I have reviewed.

Section III – S.C. 1,2: Requires cleaned parts to be drained for no less than 15 seconds or until dripping ceases and states that the permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. Tony stated that parts are drained in this manner. Proper usage instructions were visibly posted near the cold cleaners I observed during my inspection.

Section IV – S.C. 1,2,3,4,5: Requires that the air/vapor interface of the cold cleaner is no more than 10 square feet. Based on the cold cleaners I observed and the records I reviewed, all cold cleaners are less than 10 square feet. I observed that all cold cleaners are equipped with a device for draining parts according to S.C. IV.2. During my previous inspection, the cold cleaner in the resin reactor area was not equipped with a device for draining parts in the unit. As a result of that inspection, a violation notice was sent to Axalta for failing to equip one of the eight cold cleaners

with a device for draining parts (violation of FG-COLDCLEANERS Section IV – S.C. 2. During this inspection, I verified that the cold cleaner has been equipped with a device for draining parts.

All cold cleaners I observed were equipped with mechanically assisted covers that were closed during my inspection as required in S.C. IV.3 and 4. The records I reviewed show that the freeboard ratio is above 0.7 (between 0.8 and 1.0) in accordance with S.C. 5a. There are 10 total cold cleaners with 8 active and 2 not in service. All cold cleaners are equipped with a blower and capture system that exhausts VOC laden air outside whenever the tank lid is opened.

Section VI – S.C. 1,2,3,4: Specifies record keeping requirements for FG-COLDCLEANERS. None of the cold cleaners are heated therefore S.C. 1 does not apply. Axalta keeps records for each cold cleaner of the name, date of installation, air/vapor interface, applicable Rule 201 exemption, Reid vapor pressure of solvent, and the chosen option to comply with Rule 702 (2) in accordance with S.C. VI.2. Proper operating procedures were posted on all cold cleaners I observed during my inspection pursuant to S.C. VI.3. Waste solvent is stored in closed containers based on the cold cleaners I have seen, therefore S.C. VI.4 does not apply.

**FG-R&DBooths:** This flexible group includes eighteen plastic and metal paint spray booths used for research and development (R&D). Each spray booth is equipped with dry filter(s) to control particulate matter (PM) emissions. I walked through and observed each of these booths during this inspection. I verified that there are 18 total paint booths all equipped with dry filter control.

Section A: Establishes emission limits for FG-R&DBooths. Axalta appears to comply with these limits based on the records I reviewed. Axalta differentiates between what is sprayed on metal versus plastic parts. VOC emission limits are limited to 48.2 tons per year for all parts combined and 10 tons per year for metal parts only. Total VOC emissions from FG-R&DBooths was reported highest during the 12-month period ending in April 2023 at 8.32 tons.

Total VOC + Acetone emissions from all booths were reported highest during the 12-month period ending in December 2023 at 21.24 tons (Limit = 35 tons/year/booth).

VOC emissions for metal parts only is limited to 2,000 lbs/month/booth. The month with the highest total VOC emissions from metal parts reported was March 2023 at 1859 lbs (emissions from all booths combined).

Acetone emissions from all booths combined are limited to 32 tons per year. Acetone emissions were reported highest during the 12-month period ending in May 2023 at 12.44 tons.

Cumene emissions from all booths combined are limited to 0.6 tons per year. Cumene emissions were reported highest during the 12-month rolling period ending in February 2024 at 0.052 tons.

Ethyl Benzene emissions from all booths combined are limited to 2.4 tons per year. Ethyl Benzene emissions were reported highest during the 12-month rolling period ending in December 2023 at 0.307 tons.

Diethylene Glycol Monobutyl Ether (Di-EGME) emissions are limited to 5.6 tons per year. Di-EGME emissions were reported highest during the 12-month period ending in January 2023 at 0.364 tons.

Naphthalene emissions are limited to 0.5 tons per year. Naphthalene emissions were reported highest during the 12-month period ending in February 2024 at 0.083 tons.

Methyl Isobutyl Ketone (MIBK) emissions are limited to 7.7 tons per year. MIBK emissions were highest during the 12-month period ending in January 2024 at 0.146 tons.

Section III – S.C. 1,2,3,4: Requires Axalta to dispose of coatings, paints, spent filters, and other paint waste products in accordance with applicable regulations. Also, all VOC/HAP containing materials must be handled/stored in a way that minimizes fugitive emissions. Tony stated that waste coatings/filters are sent off-site for disposal. Based on my conversations of facility staff Axalta is in compliance with these conditions.

Section IV – S.C. 1,2: Requires that booths are equipped with dry exhaust filters and HVLP applicators. I observed fabric filters in place in all booths. All applicators I observed appeared to be HVLP style.

During my previous inspection in 2023, Axalta submitted a document which lists the type of applicator used in each coating booth. This document showed that there is a total of 25 applicators, of which 21 of them are HVLP or equivalent. The “Devilbiss – AGMD”, “Devilbiss – AGX”, “Devilbiss – JGA”, and “Binks 62/95” applicators are listed as not HVLP compliant in this document. I asked Axalta what the non-HVLP compliant applicators were and explained that Axalta is required to use HVLP technology, equivalent, or better.

In response to my request, Axalta submitted additional information from the manufacturer of the Devilbiss atomizers. The manufacturer provided Axalta with a letter containing correspondence between the manufacturer and the EPA. In this letter, the EPA states that they evaluated these applicators for use in the South Coast Air Quality Management District. The results of the transfer efficiency testing indicated that these applicators are capable of achieving equivalent or better transfer efficiency than HVLP applicators.

Axalta stated that the “Binks 62/95” applicator is not HVLP compliant; however, the permit allows Axalta to use non-HVLP comparable technology for a maximum of 15% of the total applicator usage in this flexible group. Axalta stated that this applicator has limited use. Since only 1 of the 25 applicators is non-HVLP compliant, it is likely that this applicator accounts for less than 15% of total applicator usage. Axalta is in compliance with this condition based on the information stated above.

Section V – S.C. 1: Requires Axalta to perform EPA Method 24 analyses on any coating as applied and as received. I did not collect copies of these analyses as part of this inspection. Axalta performs these tests on all applied coatings because they need to provide that information to their customers. I have verified this in past inspections. Tony stated that Axalta is using Method 24 to determine VOC content of coatings as prescribed in this ROP.

Section VI – S.C. 1,2,3,4,5: Specifies recordkeeping requirements for FG-R&DBooths. Axalta must keep records of the chemical composition of each coating material, the type of applicators used, the type of parts painted (metal or plastic), gallons of each coating used, VOC content of each material used, and a 12-month rolling VOC emission rate for all booths combined. Additionally, Axalta is required to keep usage records of acetone and several specific HAPs on a 12-month rolling time period. I verified that these records are kept.

**FG-EMER-CI-RICE<500HP:** This emission unit includes three existing (commenced construction or reconstruction before June 12, 2006), emergency use, <500 brake horsepower, compression ignition, reciprocating internal combustion fire pump engines. These engines are located at an area source of HAP emissions and subject to 40 CFR Part 63, Subpart ZZZZ.

Section II: Establishes a maximum sulfur content in fuel oil of 0.0015% sulfur by weight. The diesel fuel used in these pumps is “BP ultra low sulfur diesel”, has a maximum sulfur concentration of 15 ppm (0.0015%). This fuel appears to comply with this limit based on the fuel supplier certification sheet provided to me by Axalta.

Section III – S.C. 1,2,3,4,5,6,7,8: Specifies operational restrictions for FG-EMER-CI-RICE<500HP. Axalta appears to comply with these restrictions based on the records I reviewed. The east pump house diesel pump was operated for 23 hours each in all of 2023. The west pump house diesel pump 1 was operated for 33 hours in all of 2023. The west pump house diesel pump 2 was operated for 24 hours in all of 2023. I verified that Axalta keeps records of periodic inspections of the oil filter, air filter, hoses, and belts. No pollution control equipment is utilized.

Section IV – S.C. 1: Based on what I have seen in my previous inspections, all three engines are equipped with a non-resettable hour meter pursuant to this condition. I did not look at these engines during this inspection.

Section V – S.C. 1: Not applicable. Axalta changes the oil annually in accordance with 40 CFR Part 63, Subpart ZZZZ.

Section VI – S.C. 1,2,3,4,5,6,7,8: Specifies recordkeeping requirements for FG-EMER-CI-RICE<500HP. Axalta is in compliance with these requirements based on the records I reviewed.

**FG-NSPS-4I:** This flexible group includes two diesel fueled fire pump engines manufactured (ordered) after July 1, 2006. Both are subject to NESHAP Subpart ZZZZ and NSPS Subpart IIII. Requirements of Subpart ZZZZ are met by complying with Subpart IIII. Both engines, EU-RESINFOAMPUMP and EU-FMF-FOAMPUMP, are used to pump firefighting foam in case of a chemical fire.

The safety data sheet for the firefighting foam does not list any Poly/per fluoroalkyl substances (PFAS) on the ingredient list. This is the foam that has been used for the past five years. Axalta does not use firefighting foam in fire drills.

Section I – S.C. 1,2,3: Establish emission limits for Non-methane hydrocarbons, NOx, CO, and PM. Based on the manufacturer’s certification for these engines, these emission limits should be achieved.

Section II – S.C. 1: States that Axalta shall only burn diesel fuel with a maximum sulfur content of 15 ppm by weight. The diesel fuel Axalta uses in these engines complies with this limit based on the records I reviewed.

Section III – S.C. 1,2,3,4,5,6,7,8: Requires Axalta to operate and maintain their certified engines according to the manufacturers related written instructions. Also, operation of these engines is limited to 100 hours per calendar year for maintenance purposes. Axalta operates the engines in this manner based on the records I reviewed.

Section IV – S.C. 1: Requires that each engine of FGNSPS4I is equipped with a non-resettable hour meter. These engines are equipped with a non-resettable hour meter.

Section V – S.C. 1: Requires performance testing for non-certified engines. I verified that both engines are certified for conformity with respect to the Clean Air Act.

Section VI – S.C. 1,2,3: Specifies recordkeeping requirements for FG-NSPS-4I. Axalta must keep records of the engine emission certification documents, the hours of operation in emergency and non-emergency service, and records demonstrating that the fuel used is compliant diesel. Axalta maintains these records.

**Reporting Requirements** – Axalta appears to be in compliance with the reporting requirements of the ROP. Axalta submitted both semi-annual ROP certifications for calendar year 2023, a 2023 annual ROP certification, and their 2023 annual emissions report. Axalta also notified AQD on November 17, 2023 that their responsible official has changed to Justin Chambers.

**Stack Requirements** – I did not verify stack dimensions during this inspection. During my last inspection, I verified the height of two stacks. These stacks were labeled as “EF-3-LMZ” and “EF-5-LMZ”. These stacks are exhausts for two of the LMZ mills. The rangefinder showed that these two stacks are approximately 72’ tall. There are no stack requirements for these stacks; however, all of the stacks at Axalta appear to have a height that is within around 10 feet of one another. It can be reasonably assumed that all stacks at Axalta are of similar height to these two stacks. FG-THERMOX-MIXTANKS has the highest stack requirement at 72’.

### **Calculations:**

Axalta does not generally provide digital emission calculation records to AQD because Axalta maintains confidential information on many of their emission calculation data sheets. I requested this detailed calculation data for one of the dispersion formulations in EU-DISP-TANK. Axalta provided this calculation with the excel formulas intact. In order to maintain the confidentiality of the formulation data, Axalta provided this calculation sheet to AQD without revealing the concentrations of inert (solid, not emitted to air) components in the formulation. This allows AQD to review the emission factor calculation without Axalta revealing their precise formulation.

I reviewed the calculation and found it to be accurate. Axalta utilizes equations from “EPA EIIP Chapter 8 – Paint, Ink, and Other Coating Manufacturing Equations” to perform this calculation. Axalta’s emission factor calculation takes into account VOC emissions from reactor loading, heat up of materials, nitrogen sweeps, the screening process, and final product loading into vessels.

The table below shows the VOC emission factor from each of these unit operations when manufacturing the dispersion formulation reviewed.

EU-DISP Tank Operation	Emissions per Add: lb/1,000 gal
Material additions	0.34
Nitrogen sweep (neutronics)	4.9
Heat up	0.01
Screening	1.57
Load into drums	3.18
Total	10

The calculation Axalta provided is for one particular formulation. There are several formulations produced in this mill on an on-going basis. To get the overall emission factor in a given month, Axalta calculates the emission factor for each formulation and multiplies it by the amount of that formulation produced. I did not review the emission factor calculations for each formulation produced.

Based on my review of this calculation, Axalta is correctly utilizing the appropriate equations from EIIP Chapter 8 – Paint, Ink, and Other Coating Manufacturing.

I did not review the detailed calculations for other emission units at Axalta. Future inspections should focus on reviewing calculations for other emission units which have relatively high emissions and have not yet been evaluated.

### **Violation Notice dated August 17, 2023**

On August 17, 2023, Axalta was issued a violation notice for the following reasons:

- In EU-RESIN-REACT-4, EU-RESIN-REACT-5, and EU-RESIN-REACT-6, Axalta submitted inaccurate VOC emission records. Axalta stated this was due to copy/pasting incorrect emission factors into the spreadsheets.
- In EU-RESIN-REACT-1, Axalta submitted inaccurate emission records. Axalta submitted three separate datasets (Rule 290 PDF, excel spreadsheet, and MAERS) for EU-RESIN-REACT-1 which show very different emissions for this emission unit. Additionally, a Rule 201 violation notice was issued because Axalta could not demonstrate compliance with Rule 290 due to issues with the submitted records.
- In EU-WBSB, Axalta submitted 2021 VOC emission records which are not consistent with the 2021 emission factors submitted during a previous AQD inspection. Axalta

stated that this was due to the previous emission factor being incorrect.

- Also in EU-WBSB, Material throughputs were not submitted in a satisfactory manner. Axalta submitted 2 emissions spreadsheets to AQD, one in PDF and one in Excel which show two different throughputs for this emission unit in 2021/2022. In some cases, throughputs nearly doubled in the Excel submittal when compared to the PDF submittal. No explanation was provided by Axalta.
- In FG-THERMOX-MIXTANKS, Axalta submitted inaccurate VOC emission records. The 2021 emission factor for the waterborne products was reported at 0.345 lbs VOC/1000 gallons product in Axalta's May 2022 record submittal. In the record submittal submitted as part of this inspection, the 2021 emission factor is reported at 0.043 lbs VOC/1000 gallons product. Emissions are also much lower in the new submittal.
- In EU-SOLV-RECOVERY, Axalta submitted inaccurate Rule 290 and Rule 291 emission records. Axalta submitted updated emission records to AQD on June 20, 2023. As a result, a Rule 201 violation notice was issued because Axalta could not demonstrate compliance with Rule 290 due to issues with the submitted records.
- In the Source-Wide Conditions, Axalta failed to maintain accurate HAP emission records. This is due to the inaccurate VOC emissions records Axalta submitted which are used to calculate HAP emissions.
- Also in FG-RESIN-CATHODIC, Axalta failed to maintain accurate HAP emission records for the resin reactors connected to FG-RESIN-CATHODIC. This is due to the inaccurate VOC emissions records Axalta submitted which are used to calculate HAP emissions.

All violations in the bulleted list above will be addressed as part of an administrative consent order. The two bullets below are also violations noted in the August 17, 2023 violation notice which are unrelated to the consent order. These two violations below may be resolved separately.
- In FG-RESIN-CATHODIC, Axalta exceeded the maximum exhaust temperature specified in the MAP for one 15-minute period during March 2023.
  - Axalta had the same issue during this inspection. This violation has not been resolved.
- In FG-COLDCLEANERS, Axalta operated one cold cleaner in the resin reactor area that was not equipped with a rack to drain parts.
  - I verified that this cold cleaner has now been equipped with a rack to drain parts. This violation has been resolved.

### Consent Order

AQD is currently drafting a consent order agreement for Axalta Coating Systems, LLC due to the recordkeeping violations AQD discovered during inspections in 2021, 2022, and again in 2023.

During all three of these inspections, Axalta provided inaccurate compliance records to AQD. I did not notice any inaccuracies in the records submitted during this inspection.

### **Compliance Determination**

As a result of this inspection, Axalta was issued a violation notice for failing to operate DC-08 while operating FG-RESIN-DC8. This is a violation of Rule 910 and MI-ROP-A3569-2017a, FG-RESIN-DC8, Section I, Special Condition 1. See discussion in this report under FG-RESIN-DC8.

Based on the information collected during my inspection and record review, Axalta is operating in compliance with all other requirements of 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; 40 CFR Part 63, Subpart CCCCCC – National Emission Standards for Area Sources: Paints and Allied Products Manufacturing; 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Stationary Reciprocating Internal Combustion Engines; 40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; and ROP No. MI-ROP-A3569-2017a.

NAME Adam Bogner

DATE 7/18/2024

SUPERVISOR Joyce