

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

A356960083

FACILITY: Axalta Coating Systems U.S.A., LLC		SRN / ID: A3569
LOCATION: 400 Groesbeck Hwy, MOUNT CLEMENS		DISTRICT: Warren
CITY: MOUNT CLEMENS		COUNTY: MACOMB
CONTACT: Joseph Marecic , Environmental Health and Safety Manager		ACTIVITY DATE: 02/09/2021
STAFF: Adam Bognar	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Tuesday, February 9, 2021, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar, 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 non-attainment for ozone. Macomb County is designated as attainment for CO, lead, NOx, and PM. The facility is adjacent to a number of commercial businesses and residential properties.

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I arrived at Axalta at around 1 pm. I met with Mr. Joseph Marecic, EHS&S Manager.

Mr. Maier escorted me to a conference room where I met with Mr. Eric Sturm, Consultant

(eric@airregconsulting.com, 402-817-7887). I identified myself, provided credentials, and stated the purpose of the inspection. We held a pre-inspection meeting where we discussed current facility operations and introduced ourselves. After the pre-inspection meeting, Axalta staff led me 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 525-550 employees that operate this plant 24/7 over three shifts. Axalta reduced their operations for a limited period in 2020 due to state-wide lockdown measures in response to the Covid-19 pandemic. During this period only “essential” coatings were produced. A limited number of workers were furloughed during this period. These workers have since been hired back. Axalta stated that there have been no major operational changes due to the Covid-19 pandemic.

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

Due to the on-going Covid-19 Pandemic I did not review any records while on site. Instead, on February 2, 2021, I requested Axalta provide me these records digitally or via mail. AQD received these records in the form of a physical binder on March 18, 2021. The binder includes each section of the ROP, the compliance method for each section, and copies of the records required in each section. The recordkeeping discussions in this report are, in general, referring to records created/kept after January 1, 2020 until December 31, 2020.

Project Tiger

On December 7, 2020 AQD received a Permit to Install (PTI) application from Axalta. The permit application was sent to formally notify EGLE that Axalta plans to modify and replace certain emission units as part of a new venture called "Project Tiger". Project Tiger involves repurposing existing blend tanks, automating pumping/dosing from bulk tanks to process, and replacing existing mills. There are no new raw materials, emission units, or emission points involved with this project. Modified and replaced units will retain existing controls and adhere to all existing permit conditions within the ROP. Axalta believes this project will be a net emission reduction.

AQD staff Joyce Zhu, Paul Schleusener, and Adam Bognar held a meeting with Axalta staff Joseph Marcic and Jim Sears to discuss whether or not Project Tiger could be PTI exempt. Consultant Eric Sturm was also in attendance. Ultimately, Axalta decided to withdraw their PTI application. AQD explained that Axalta is responsible for determining whether it wishes to rely on an exemption for any particular action and, if so, to meet all the requirements of the exemption. AQD further explained that AQD district staff review exemptions in more detail during inspections and will provide more feedback on Axalta's exemption determinations based on those inspections.

During this inspection Eric Sturm mentioned that Project Tiger has not begun yet. Axalta anticipates a 2-year implementation schedule for this project.

ROP No. MI-ROP-A3569-2017a

Source Wide Conditions: Axalta has source-wide conditions limiting each individual HAP to less than 9 tpy and aggregate HAPs to less than 22.5 tpy. VOC emissions from coating lines (spray booths) are limited to 30 tpy for plastic parts, and 30 tpy for metal parts. Total VOC emissions from coating booths are reported at 2.69 tons for all of 2020.

Axalta reported total facility-wide HAP emissions of 2.57 tons in all of 2020; however, several emission factors at this facility are not calculated correctly. See discussion near end of report with the header "Calculations". Total facility-wide HAP emissions are likely higher than stated here.

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.

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. These analyses are performed. See binder under R&D booths for Method 24 results. Safety data sheets are maintained by Axalta for each chemical used on site. Axalta appears to comply with 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. These records are maintained.

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. The highest reported VOC emissions were in the 12-month period ending in February 2020 at 0.922 tons. The highest reported VOC/batch was 0.28 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 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. Equipment is kept sealed during cleaning to minimize emissions. 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 cold cleaners at the facility. The solvent consists of 100% VOC and 1% HAPs (Cumene). Emissions from equipment cleaning is currently accounted for as fugitive emissions in MAERS.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. 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 4. 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-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. The highest reported VOC emissions were in the 12-month period ending in February 2020 at 0.053 tons. The highest reported VOC/batch was 0.01 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.

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. Equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. 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. All of these tanks appeared to be vented to the condenser system.

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 keep records of the VOC emission factor used, the amount of resins produced per calendar month, and the 12-month rolling VOC emission rate. These records are kept on the shared drive at the facility. See associated binder for copies.

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. Based on the records I reviewed Axalta meets these emission limits. The highest reported VOC emissions were 1.035 tons in the 12-month rolling period ending in January 2020. The highest reported VOC/batch was 0.28 lbs VOC per 1000 lbs completed resin.

Section II – S.C. 1. Usage of t-butyl peroxyacetate is limited to 6694 lbs per 12-month rolling time period. Based on the records I reviewed Axalta meets these emission limits. The last time T-butyl peroxyacetate was used was in September 2019 (1015 lbs used). This chemical has not been used in the past year.

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.

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. Equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: Requires wash solvent to be stored in closed containers. 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. 1,2,3,4: Specifies recordkeeping requirements for Reactor 6. Axalta must keep records of the VOC emission factor used, the amount of resins produced per calendar month, the 12-month rolling VOC emission rate, and the t-butyl peroxyacetate usage on a 12-month rolling basis. These records are kept on the shared drive at the facility. See associated binder for copies.

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 January 2020 at 0.880 tons. The highest reported VOC/batch was 0.11 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.

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. Equipment is kept sealed during cleaning to minimize emissions.

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

Section III – S.C. 4: States that Axalta shall not operate Reactor 7, the three weight 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. 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 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. These records are kept on the shared drive at the facility. See associated binder for copies.

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 2020 at 0.014 tons. The highest reported VOC/batch was 0.001 lbs VOC per 1000 lbs completed resin.

Axalta submitted their detailed emission factor calculation methodology for EU-RESIN-REACT-8. This was shared with AQD via a confidential flash drive, to protect formulation data. Based on my review, the emission factor calculations appear to follow the prescribed calculation methodology from Appendix 7 of the ROP. Reactor 8 emission factor calculations appear to be accurate. Emissions are relatively low because much of the emissions are controlled by the MACT condenser which has been assessed by the AQD to have a 90% control efficiency. I spoke with District Supervisor Ms. Joyce Zhu about this assessed control efficiency. AQD will accept this 90% control efficiency during this inspection on the grounds that it has been previously accepted by AQD. 90% VOC reduction appears to be a reasonable assessment for this type of control technology. The condenser is operated correctly based on my inspection and record review. AQD will be working with Axalta during the next ROP renewal (in 2022) to determine what the proper condenser control efficiency should be.

The “L2” factor (emissions from thermal expansion) in the reactor calculations is neglected, as allowed by Appendix 7 if it is much smaller than “L1”. AQD will allow this during this inspection on the grounds that it has been historically accepted by AQD. Axalta stated that they have tried to calculate this number before, and it typically results in a negative number. AQD will be working with Axalta during the next ROP renewal (in 2022) to verify that the “L2” emissions are negligible. This is the case for reactors 1, 5, 7, & 8.

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. Equipment is kept sealed during cleaning to minimize emissions.

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

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. 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. 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. Axalta utilized a VOC emission factor for this emission unit that may not be correct. See discussion near end of report with the header “Calculations” and the Compliance Determination discussion at the end of the report. Compliance with this condition is currently unknown.

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 2,121,499 gallons during the 12-month rolling time period ending in January 2020.

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. Axalta provided these records; however, AQD was not able to verify if they are accurate due to potential errors in the emission factor calculation. A violation notice was sent to Axalta for failing to submit accurate VOC emission records to the AQD in a timely manner. See discussion near end of report with the header “Calculations” and the Compliance Determination discussion at the end of the report.

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. This system reduces emissions because as one tank fills, others simultaneously empty. This allows VOC laden vapors leaving the tank being filled to enter the tanks being emptied via a common vent manifold. For emergency release purposes, there is a valve that opens if the manifold over fills/pressurizes. The actual emission calculations for EU-IMP do not factor in any control efficiency from this manifold system.

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. Tanks 10 and 14 will likely be repurposed as part of Project Tiger.

Section I – Limits the VOC emitted from EU-IMP to 30 tons per 12-month rolling time period. Axalta is in compliance with this limit based on the records I reviewed. The highest reported VOC emissions were 1.74 tons during the 12-month period ending in January 2020.

Section II – Limits the amount of product produced in EU-IMP to 2,400,000 gallons per 12-month rolling time period. Based on the records I reviewed Axalta is in compliance with this limit. The highest reported production in EU-IMP was 435,797 gallons during the 12-month rolling period ending in January 2020.

Section III – S.C. 1: States that Axalta shall not operate EU-IMP unless the manifold venting system is installed, maintained and operated in a satisfactory manner. During my previous inspection I verified that the IMP manifold appeared to be installed, maintained, and operated in a satisfactory manner. EU-IMP is no longer operating.

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. Equipment is kept sealed during cleaning to minimize emissions.

Section III – S.C. 3: 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 tanks.

Section III – S.C. 4: Requires Axalta to perform an annual inspection of the manifold venting system. Preventative maintenance (PM) activities are conducted on EU-IMP on a regular basis (at least annually). I verified that these inspections were done during my last inspection. EU-IMP is no longer operating.

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. 1,2,3,4,5: Specifies recordkeeping requirements for EU-IMP. Axalta must keep monthly and 12-month rolling records of gallons of product produced and calculations of VOC emission rates from EU-IMP. Additionally, one time only, Axalta must monitor the VOC concentration before and after the manifold venting system via Tedlar bag sampling and maintain the results of this sampling on file. This testing was performed in 2007; although only a summary of the results of this test exists in the AQD file. It is unclear in the summary if Tedlar bags were utilized in the test; however, the inlet and outlet concentrations were tested for VOC content. Axalta appears to comply with the recordkeeping conditions of EU-IMP.

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 45 pounds (0.0225 tons) in all of 2020, down from 55 pounds (0.0275 tons) in 2019. Other 12-month rolling periods show similar emissions. The hourly formaldehyde emission rate is calculated to be 0.088 lbs/hour.

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 320 hours in 2019 and 266 hours in 2020.

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. These records are maintained. 133 tank wagons were unloaded in 2020, down from 160 wagons in 2019.

EU-S-MEDIA-MILLS (1-4): This emission unit is comprised of four “small media mills”. Dispersions are manufactured in this equipment. 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 tpy. Axalta utilized a VOC emission factor for this emission unit that may not be correct. See discussion near end of report with the header “Calculations” and the Compliance Determination discussion at the end of the report. Compliance with this condition is currently unknown.

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 87,512 gallons in October 2020.

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. Used solvent rags are kept in closed bins located throughout the plant. 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 the facilities records for January 2020. The temperatures are recorded every 15 minutes. Reported temperatures do not exceed 150°F. The highest reported temperature is approximately 120° F. During this inspection the temperature of mill 13 was 69°F. The other three media mills were off. The set point for Mill 13 was 100°F.

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. These records are maintained on-site. See binder for copies of these records.

Additionally, Axalta must keep records of the monthly and 12-month rolling VOC emission rate for EU-S-MEDIA-MILLS. Axalta provided these records; however, AQD was not able to verify if they are accurate due to potential errors in the emission factor calculation. A violation notice was sent to Axalta for failing to submit accurate VOC emission records to the AQD in a timely manner. See discussion near end of report with the header "Calculations" and the Compliance Determination discussion at the end of the report.

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 tpy. Axalta utilized a VOC emission factor for this emission unit that may not be correct. See discussion near end of report with the header "Calculations" and the Compliance Determination discussion at the end of the report. Compliance with this condition is currently unknown. Section II – S.C. 1: Limits the material produced in EU-WBSB to 58,333 gallons per month. The highest reported monthly production for the period I reviewed was 47,753 gallons in August 2020.

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. Used solvent rags are kept in closed bins located throughout the plant. 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. Axalta provided these records; however, AQD was not able to verify if they are accurate due to potential errors in the emission factor calculation. A violation notice was sent to Axalta for failing to submit accurate VOC emission records to the AQD in a timely manner. See discussion near end of report with the header "Calculations" and the Compliance Determination discussion at the end of the report.

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. Based on the records I reviewed, Axalta is in compliance with these regulations. Axalta maintains a document that lists the applicable Subpart CCCCCC requirement and the corresponding method that Axalta uses to comply with the requirement.

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. According to the records submitted by Axalta, TDI emissions were highest in January 2020 at 0.000750 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 (see binder under RESIN CATHODIC). The MAP states that the normal operating range is 41°F-46.4°F for the water-cooled pre-condenser and -18°F for the Dynalene cooled 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 43°F and flow of 53 gallons per minute. Only Dynalene condenser 28 was operating during this inspection. Dynalene condenser 29 was in a defrost cycle. Dynalene temperature was -34°F and the flow rate was 21.3 gallons per minute during this inspection. Exhaust gas temperatures were -14°F for condenser 28 (in operation) and 66°F for condenser 29 (defrost cycle). Pressure drop between inlet and outlet of condenser 28 (active) was 0.2 inches of water. Pressure drop across condenser 29 (defrosting) was 0 inches of water. These readings were not necessarily taken at the same time.

Based on my inspection and the continuous temperature data I reviewed, the MACT condenser 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. TDI was not used in Reactor 5 in 2020. TDI may be used again based on customer demand. Operators are aware of the requirement to use TDI in only reactor 5 or 7 and not both at the same time. Axalta does not use TDI in reactors 1 or 8. Axalta appears to comply with this condition.

Section IV – S.C. 1: States that Axalta shall not operate FG-RESIN-CATHODIC unless a MAP is implemented and maintained. Based on my inspection and the continuous temperature data I reviewed, the MACT condenser appears to be operating in compliance with the MAP.

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. This device reports to software that records and displays the temperature data on a continuous basis.

The temperature monitor for both MACT condensers was calibrated on September 24, 2020 based on the records I reviewed. These monitors have been calibrated twice per year since at least 2015 based on the records I reviewed. I did not review data earlier than 2015.

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 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. 1,2,3,4,5,6,7: Specifies recordkeeping requirements for FG-RESIN-CATHODIC. Axalta must keep records of the exhaust gas temperature of the condenser system on a continuous basis, which is defined in this condition as one reading every 15 minutes. Axalta must also keep records of any bypass events and/or exceedances of the maximum allowed condenser exhaust temperature. I observed during my inspection that this continuous monitoring system is in place and appeared to be functioning correctly. No bypass events or exceedances have been reported.

Axalta must calculate emissions from FG-RESIN-CATHODIC based on Appendix 7. No TDI is currently being used at the facility, therefore the TDI stack test information is not used to calculate emissions. Emissions from the condenser are calculated by summing the emissions from each reactor connected to the condenser. Summed reactor emissions are multiplied by the minimum control efficiency specified in the condenser MAP (90%) to calculate emissions. These records are kept. See binder for copies of reactor emission calculations.

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 dust collector appeared to be 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. 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 on February 9, 2021 was approximately 0.5" of water (observed on analog meter near DC-8). The digital pressure drop reading showed 0.4" of water (these readings were taken at separate times during this date).

The records Axalta provided me show that the pressure drop is normally maintained between 2" of water and 5" of water. I am not sure why the pressure drop was 0.5" of water during this inspection. This should be examined in greater detail during future inspections.

Section VI – S.C. 1,2: Requires Axalta to install, calibrate, maintain and operate a pressure drop monitoring device on DC-8 on a continuous basis. DC-8 is equipped with a pressure drop monitoring device. 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 is maintained. Visible emissions readings are taken monthly by a certified reader (Lance Denny) on both DC-08 and DC-06. See binder for copies of these records.

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. Included in the binder submitted by Axalta is a report that details the total emissions of all air contaminants (including toxic air contaminants (TAC)) and demonstrates that Rule 290 emission units comply with the initial threshold screening level and initial risk screening level emission limits of Rule 290; however, AQD still needs to verify that the emission factors were calculated correctly for many of these emission units (see discussion at end of report under heading “Calculations”).

AQD is requiring Axalta to recalculate the emission factors for the following Rule 290 emission units: EU-FSO, EU-BT, EU-LMZ, EU-TSM, EU-SBI, EU-ECOATSUP, EU-MBFPT, EU-AQ-ECOAT, EU-LMZ5. It is possible that other emission units in FG-RULE290 will need to be recalculated if they use EPA equation 8-4.1 to calculate the emission factor. A violation notice will be sent to Axalta for failing to provide emission records for Rule-290 emission units (FG-RULE 290 Section VI - Special Condition 1.e & 1.f). Compliance with Rule 290 emission limits is currently unknown. See discussion near the end of the report titled “Calculations” for more information about these violations.

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.

Section I – S.C. 1,2,3: Establishes emission limits for FG-DISP-TANKS. PM emissions are limited to 0.10 lb/1000 lbs exhaust gases. The PM emission limit should be achieved through proper operation of the dust collector, DC-06. Based on my inspection and record review, DC-06 is maintained and operated correctly (see FG-DISP-TANKS Section IV – S.C. 1,2,3).

Section I – SC 2,3: VOC emissions from EU-DISP-TANK (1-11) are limited 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. Axalta utilized a VOC emission factor for this emission unit that may not be correct. See discussion near end of report with the header “Calculations” and the Compliance Determination discussion at the end of the report. Compliance with these conditions is currently unknown.

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 2.3” water column (on digital gauge). The pressure drop records provided by Axalta show that pressures are maintained between these levels. Occasionally, there is a short lasting spike above the recommended pressure during “pulse” events when dust is cleaned off of bags.

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 is 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. VOC records for EU-DISP TANK (and possibly EU-ECOATSUP) were submitted with an inaccurate emission factor and throughput. A violation notice was sent to Axalta for failing to provide accurate emission records in a timely manner. See discussion near end of report with the header “Calculations” and the Compliance Determination discussion at the end of the report.

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. 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 for 2020 are reported at 0.737 tons.

Section III – S.C. 1: Requires the thermal oxidizer to be installed, maintained, and operated in a satisfactory manner. 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 from December 2020, Axalta complies with these temperature requirements. During this inspection the thermal oxidizer temperature was 1584°F on the gauge near the oxidizer and 1523°F on the IP-21 database. These two readings were not taken at the same time. Records from December 2020 show that the temperature is generally around 1528°F.

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.

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. Personnel at Axalta stated that there is an interlock system installed 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, at the owners expense every five years. 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%. The next stack test must be completed by November 21, 2022.

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, ect.) 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. Axalta maintains these records. There have been no reported malfunctions in the time period I evaluated. The most recent calibration of the temperature monitoring device was in October 2020.

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. Axalta maintains these records. See binder for copies.

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).

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.

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. Axalta appears to comply with these requirements. 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. Cold cleaners are equipped with a device for draining parts according to S.C. IV.2. All cold cleaners I observed were equipped with mechanically assisted covers that were closed during my inspection according to 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) according to S.C. 5a.

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. All waste solvent is stored in closed containers therefore S.C. VI.4 does not apply. See binder for a list of cold cleaners and compliance data.

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.

Section A: Establishes emission limits for FG-R&DBooths. Axalta appears to comply with these limits based on the records submitted and Axalta's 2018 MAERS submittal. See binder under R&D booths for copies of records.

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. Waste coatings/filters are sent off-site for disposal. Axalta appears to comply with these conditions, although I did not enter the booths to verify these conditions.

Section IV – S.C. 1,2: Requires that booths are equipped with dry exhaust filters and HVLP applicators. Filters appeared to be in place in four of the booths, but I could not observe all of the booths without putting on coveralls. Axalta uses HVLP applicator technology in all booths. I did not verify if pressure caps were available during this inspection. This should be checked in future inspections.

Section V – S.C. 1: Requires Axalta to perform EPA Method 24 analyses on any coating as applied and as received. These analyses are performed. See binder under R&D booths for Method 24 results.

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. These records are kept. See binder for copies.

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. See binder for copies of this certification.

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. Each engine was operated for 24 hours during 2020 for maintenance purposes. Axalta keeps records of periodic inspections of the oil filter, air filter, hoses, and belts. No pollution control equipment is utilized. See binder for copies of these records.

Section IV – S.C. 1: All three engines are equipped with a non-resettable hour meter pursuant to this condition.

Section V – S.C. 1: Not applicable. Axalta changes the oil annually according to 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 appears to comply with these requirements. See binder for copies of records.

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 fire fighting foam in case of a chemical fire.

The safety data sheet for the fire fighting foam is in the binder under the "NSPS 4I" tab. This is the foam that has been used for the past five years. The safety data sheet does not list any Poly/per fluoroalkyl substances (PFAS) on the ingredient list. Axalta does not use fire fighting foam in fire drills.

Section I – S.C. 1,2,3: Establish emission limits for Non-methane hydrocarbons, NO_x, CO, and PM. Based on the EPA Clean Air Act certification for these engines, these emission limits should be achieved. See binder for copies of these certificates.

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. See binder for a fuel oil supplier certification.

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 appears to operate the engines in this manner.

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. 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. See binder for copies.

Reporting Requirements – Axalta appears to be in compliance with the reporting requirements of the ROP. In 2020, Axalta submitted both semi-annual ROP certifications, a 2019 annual ROP certification, and MAERS. On February 11, 2021, Axalta submitted their MACT CCCCCC certification. No deviations were reported on any of these submissions.

Stack Requirements – I did not verify stack parameters during my inspection. The stacks I observed appeared to be discharged vertically unobstructed.

Calculations:

Axalta does not generally provide digital records to AQD because Axalta maintains confidential information on many of their record sheets. I received the original binder of confidential records from Axalta on March 18, 2021. While reviewing the records, I noticed that the Dispersion tank calculation calculated the 12-month rolling totals incorrectly. Specifically, each 12-month rolling period had the exact same reported VOC emissions; however, the throughputs varied significantly during these periods.

I also noticed a discrepancy in the EU-WBSB calculation. In the original records submitted on March 18, 2021, EU-WBSB showed that the 58,333 gallons/month material limit was exceeded in January, February, August, September, and October 2020. I also noticed that the reported emissions were exactly the same as what was submitted in the 2018 record submittal (my last inspection), despite having differing throughputs. Also, in contrast to the 2018 submittal, a different emission factor was calculated each month in these records.

Additionally, emissions were calculated incorrectly in EU-RESIN-REACT-8 and EU-RESIN-REACT 5. Multiplying throughputs by the stated emission factor did not yield the reported emissions as expected.

Axalta provided me with updated EU-DISP-TANK and EU-WBSB, EU-RESIN-REACT-5, and EU-RESIN-REACT-8 records on June 23, 2021. Mr. Sturm and Mr. Marecic explained during a meeting on April 28, 2021 that the calculation discrepancies were essentially due to clerical errors. Axalta also provided more significant figures on their emission factors, allowing for more accurate calculations.

I reviewed the emission factor calculations for EU-RESIN-REACT-8 and found them to be accurate. I did not review the emission factor calculation for any other reactor.

While reviewing the new records, I noticed that the emission factor for EU-DISP-TANK has decreased from 0.017 lb VOC/gallon product in 2018 to 0.000175 lb VOC/gallon product in 2020, an approximately 99% reduction. There are significant emission factor decreases in several other emission units also, such as EU-S-MEDIA-MILLS (1-4), EU-ECOATSUP, and other Rule290 exempt units. Axalta stated that these decreases are due to Axalta using weighted average VOC content of materials used in the calculation rather than the worst-case scenario. Using volume weighted average appears to be an acceptable method to estimate VOC content of throughputs. Due to the large change in emission factor, I asked Axalta to provide me with the excel document, with formulas intact, used to calculate this emission factor. Axalta provided me with this document on July 15, 2021.

While reviewing this document I identified errors in Axalta's calculation. Axalta and AQD held several discussions attempting to accurately calculate the emission factor as prescribed in EIIP Volume 2, Chapter 8 Equation 8.4-1. I explained that this same calculation is used to calculate emission factors for many emission units at Axalta including EU-BT, RG-CGM-PAINT, EU-DISP TANK, EU-FUGITIVES, EU-LMZ, EU-TSM, EU-SBI, EU-WBI, EU-S-MEDIA-MILLS (1-4), EU-ECOATSUP, EU-MBFPT, EU-AQ-ECOAT (Quality testing of electrocoat primer), EU-WBSB, and EU-LMZ5. I have not verified if the emission factors of these other emission units were calculated correctly because I have not received the calculation data sheets from Axalta at this time. I explained that if the emission factor calculations for these emission units are not calculated as prescribed in equation 8.4-1, then all of these emission factors will need to be recalculated. Additionally, I explained that Axalta will need to edit their 2020 MAERS report to reflect these changes.

AQD held a meeting with Axalta on July 30, 2021. AQD District Supervisor Ms. Joyce Zhu was present at the meeting. During this meeting we discussed the problems I have with their dispersion tank calculations. I also explained that, due to the incorrect dispersion tank emission factor calculation, there are several other emission units which utilize the same equation that need to be verified by AQD. I told Axalta to send updated dispersion tank calculations along with all of the other emission units which utilize equation 8.4-1 by August 13, 2021. I did not receive any updated emission calculations by this date.

On August 5, 2021, Axalta staff Joseph Marecic, Anthony Kashat, and Consultant Eric Sturm informed the AQD via email that, rather than recalculate the emission factor, they may request to go back to a previously approved emission factor, using a material balance, or performing emissions testing. I explained that even if they return to a previously approved emission factor, I will need to verify that the emission factor was calculated correctly. I explained that AQD will correct any regulatory mistake regardless of whether that mistake was made by AQD or Axalta. I informed Axalta that emissions testing is an option.

In this same email, Axalta explained that the throughput data they sent me for the dispersion tanks was double counted. Axalta stated that they accidentally counted both materials received and materials delivered as the throughput due to having the wrong boxes checked on their "pivot table". I told Axalta that the double counted throughputs is a red flag. During the meeting on July 30, 2021, Axalta showed AQD the "pivot table" and how an additional box was checked, causing double counted emissions. I requested that Axalta provide AQD with a document showing this pivot table and explaining how the emissions double counting took place so that I can understand this mistake better and so that AQD has something on file. This information will also be used by AQD to compare with the previously reported throughputs in EU-DISP-TANK. Records Axalta provided did not indicate the amount of materials received or delivered. I have not received this information yet. AQD needs to ensure that this is an isolated event.

Double counted emissions in EU-DISP-TANK puts into question the legitimacy of other records at Axalta. I informed Axalta that they may need to implement a procedure to ensure that this never happens again. On August 20, 2021, Axalta staff Anthony Kashat sent an email to me confirming a deliverables (requested records) schedule with AQD. Mr. Kashat stated that by August 30, 2021, Axalta will provide documentation/explanation of the double counted emissions, updated EU-DISP-TANK emission calculations, and calculations for all other emission units utilizing equation 8.4-1. Additionally, Axalta stated that they would have their MAERS updated and resubmitted by September 13, 2021.

I have received an updated EU-DISP-TANK calculation. I have not received an explanation of the double counted emissions nor calculations for all other emission units utilizing equation 8.4-1. In the updated EU-DISP-TANK calculation, ARC used a calculation method that I was not familiar with and could not verify the validity of. AQD still did not agree with Axalta's calculation methodology on the EU-DISP-TANK emission factor calculation. I have not received updated 2020 MAERS data at this time. After working with ARC to recalculate the EU-DISP-TANK emission factor, Axalta did not feel that the calculation was accurate. Axalta hired Mr. Steven Zarvas of Trinity Consultants to help them work through this calculation. On September 21, 2021, Mr. Zarvas presented an updated calculation methodology to me that appeared to be acceptable based on a PowerPoint presentation created by Mr. Zarvas. The emission factor presented by Mr. Zarvas is also approximately 99% less than the 2018 emission factor. AQD has not received a copy of this calculation at this time. This emission factor calculation will be audited once it is received.

The 2018 emission factor was based on "worst case" scenario whereas Mr. Zarvas's calculated emission factor is based on actual production data. I explained to Axalta that if using actual production data, and if formulations change between 12-month periods, then a new emission factor will need to be calculated for each 12-month rolling period based on the production during that period.

Compliance Determination

A violation notice will be sent to Axalta for the following reasons:

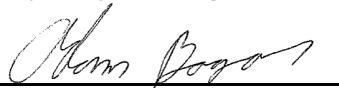
- Axalta submitted inaccurate throughput records. I am unable to verify whether throughputs at Axalta were double counted and, if so, how. I requested more detailed documentation that could better tell the story of how this happened. I have not received this information from Axalta at this time. Furthermore, throughputs are inconsistent between the 2020 emission factor calculation (7,331 tons), the updated emission factor calculation (3,237 tons), and the 2020 calendar year 12-month rolling records (4,760 tons). I requested further explanation from Axalta about why this happened. I have not received this information from Axalta at this time. This is a violation of *MI-ROP-A3569 FG-DISP-TANKS Section VI – Special Condition 5*.
- Axalta misused EPA Vol 2 Chapter 8 Equation 8.4-1 when calculating the emission factor for EU-DISP-TANK. This is a violation of *MI-ROP-A3569 FG-DISP-TANKS Section VI – Special Conditions 4 & 5*.
- At my request, Axalta only provided emission calculations for FG-DISP-TANKS; however, the inaccuracies in the FG-DISP-TANKS calculation bring to question the legitimacy of other emission unit calculations which utilize the same calculation methodology. For this reason, AQD requested that Axalta provide excel documents detailing emission factor calculations for all emission units which utilize this calculation methodology by August 13, 2021, otherwise a violation notice will be issued for failing to provide acceptable records. These additional emission units are EU-FSO, EU-BT, RG-CGM-PAINT, EU-FUGITIVES, EU-LMZ, EU-TSM, EU-SBI, EU-WBI, EU-S-MEDIA-MILLS(1-4), EU-ECOATSUP, EU-MBFPT, EU-QA-ECOAT, EU-WBSB, and EU-LMZ5. Axalta did not provide updated emission factor calculations for these emission units by August 13, 2021. This is a violation of *MI-ROP-A3569 EU-WBI Section VI – Special Conditions 1 & 3*, *EU-S-MEDIA-MILLS(1-4) Section VI – Special Conditions 2 & 5*, *EU-WBSB Section VI – Special Conditions 1 & 2*, and *FG-RULE290 Section VI – Special Conditions 1.e & 1.f*.

Additionally, AQD is requiring Axalta to re-submit their 2020 MAERS report based on emission calculations acceptable to AQD. Axalta will need to re-submit rolling 12-month emission records to AQD for all emission units for which the emission factor is not calculated correctly (EU-DISP-TANK at a minimum).

Compliance with VOC emission limits is currently unknown for any emission unit which utilizes equation 8.4-1 to calculate the VOC emission factor. This includes EU-WBI Special Condition I.1, EU-S-MEDIA-MILLS(1-4) Special Condition I.1, EU-WBSB Special Condition I.1, FG-RULE290 Special Condition 1, and FG-DISP-TANKS Special Conditions I.2 & I.3. No compliance determination was made for these conditions.

Axalta appears to be in compliance with all other requirements of 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; 40 CFR Part 63, Subpart CCCCC – National Emission Standards for Area Sources (HAPS): 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


DATE 9/24/21

SUPERVISOR

