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

A356963329

FACILITY: Axalta Coating Systems USA LLC		**SRN / ID:** A3569
LOCATION: 400 Groesbeck Hwy, MOUNT CLEMENS		**DISTRICT:** Warren
CITY: MOUNT CLEMENS		**COUNTY:** MACOMB
CONTACT: Anthony Kashat , EHS Specialist		**ACTIVITY DATE:** 04/05/2022
STAFF: Adam Bognar	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Tuesday, April 5, 2022, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff Adam Bognar & Mark Dziadodz 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 CCCCCCC – 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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Contact: Stephen Zervas, Consultant
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Mark Dziadosz and I arrived at Axalta at around 9 am. We met with Anthony (Tony) Kashat, EHS&S Manager. Tony escorted me to a conference room where we met with Stephen Zervas, Consultant. I identified myself 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 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 February 2, 2022, I requested Axalta provide me the required records digitally or via mail. AQD received these records via email on March 31, 2022. The email 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, 2021 through December 31, 2021.

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 Marecic 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.

On December 17, 2020, Axalta submitted a letter to AQD to formally withdraw their PTI application. In this letter, Axalta stated that after discussions with AQD, they believe the project could claim PTI exempt status pursuant to Rule 284 and Rule 290.

During this inspection, Axalta staff stated that Project Tiger is under construction. I observed an area with re-purposed equipment that will be used for this project. The equipment included piping, mixing vessels, and process controls.

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. Due to information and issues uncovered during this inspection, Axalta is in the process of modifying the emission unit description on emission units in the ROP. Several of the dispersion mills have been replaced with more modern units. The emission unit description needs to be updated in those cases.

Additionally, Axalta is considering making changes to the units operating under Rule 290. Axalta stated that demonstrating compliance with Rule 290 is very time consuming. Axalta may attempt to demonstrate compliance with Rule 291 or apply for a permit to install rather than demonstrate compliance with Rule 290. I informed Axalta that I need this decision made quickly because I am not going to continue processing the ROP without more clarity on how Axalta will move forward. Axalta stated that they will indicate how they will move forward with these issues by June 3, 2022. Depending on how they move forward and the associated timeline, I will attempt to incorporate all necessary changes into this ROP renewal. If some of these issues are expected to take a significantly long time, then AQD may need to process the ROP renewal and incorporate these changes as modifications.

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, and 30 tpy for metal parts. 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. Total VOC emissions from FG-R&D Booths was reported highest during the 12-month period ending in December 2021 at 8.08 tons.

Facility-wide aggregate HAP emissions were reported highest during the 12-month period ending in May 2021 at 4.58 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. These analyses are performed. I reviewed records of these analyses for several higher use coatings. 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. I did not request individual HAP emissions on a 12-month rolling basis because aggregate HAP emissions are less than 9 tpy.

IP-21

Process data at Axalta is tracked using a software called "IP-21". Axalta has all of their 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.

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 January 2021 at 0.619 tons. The highest reported VOC/batch was 0.21 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. I observed the J-Tube device during a previous recent inspection. Mr. Kashat 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 organic solvent manufacturing equipment/containers. According to Mr. Kashat, equipment is kept sealed during cleaning to minimize emissions. I did not observe the equipment cleaning process during this inspection. Observing the equipment cleaning process may be a good thing to look at in future inspections. 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 cold cleaners at the facility. Th solvent consists of 100% VOC and 2% HAPs (approximately 1% cumene

and 1% xylene). 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. 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 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 December 2021 at 0.778 tons. The highest reported VOC/batch was 0.155 lbs VOC per 1000 lbs completed resin in April 2021.

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. Mr. Kashat 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. 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. 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 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 and collected 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 and 6695 lbs per year. Based on the records I reviewed Axalta meets these emission limits. The highest reported VOC emissions were 1.361 tons in the 12-month rolling period ending in August 2021. The highest reported VOC/batch was 0.46 lbs VOC per 1000 lbs completed resin in November 2021.

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. Total usage for 2021 was 6,523 lbs. Axalta's emission factor calculation indicates a T-butyl peroxyacetate emission factor of 0.1228 lb/1000 lb produced. The month with the highest reported T-butyl peroxyacetate emissions was February 2021 at 0.08 lbs. Total T-butyl peroxyacetate emissions for 2021 is reported at 0.8 lbs.

Section II – S.C. 1. Usage of t-butyl peroxyacetate is limited to 6,694 lbs per 12-month rolling time period. Based on the records I reviewed Axalta has exceeded this emission limit in September 2021 at 6,802.35 lbs. A violation notice was sent to Axalta for this non-compliance.

On March 31, 2022, Axalta submitted records of t-butyl peroxyacetate usage in terms of total usage in 2021. These "original" records showed 6,523 lbs of t-butyl peroxyacetate used during the 2021 calendar year; however, Axalta did not submit 12-month rolling records calculated at the end of each month at this time.

On August 9, 2022, I requested 12-month rolling records for t-butyl peroxyacetate usage calculated at the end of for each month for all of 2021. Axalta provided this data on August 25, 2022. This new data shows lower monthly and calendar year emissions than the original submittal. The new data shows t-butyl peroxyacetate usage at 6,088 lbs for all of 2021 (435 lbs less than in the original

submittal). Axalta did not mention that the usage was changed and did not offer any explanation for this discrepancy after submitting the new data.

I used the original 2021 monthly usage data and combined it with the 2020 t-butyl peroxyacetate monthly usage data. I found that when using the original monthly usage data Axalta exceeded their t-butyl peroxyacetate emission limit for the 12-month period ending September 2021 at 6,802.35 lbs.

The table below illustrates the differences between the two record submittals:

	Original Monthly T-Butyl Peroxyacetate usage (lbs)	New Monthly T-Butyl Peroxyacetate usage (lbs)	**12-month rolling T-Butyl Peroxyacetate usage (lbs) calculated using original data**	**12-month rolling T-Butyl Peroxyacetate usage (lbs) submitted Aug. 25, 2022**
Jan-21	603	563	4672.2	4631.9
Feb-21	632	590	4973.85	4891.4
Mar-21	581	542	5293.3	5171.9
Apr-21	609	569	5753.1	5591.4
May-21	612	572	6290	6087.8
Jun-21	506	472	6424.2	6188.2
Jul-21	473	442	6586.95	6319.3
Aug-21	556	519	6623.3	6318.7
Sep-21	502	468	6802.35	6464.2
Oct-21	568	530	6637.1	6261.1
Nov-21	350	326	6584.8	6185.3
Dec-21	532	496	6522.75	6087.9
Total	6523	6088		

Axalta has submitted incorrect records on several occasions over multiple inspections. This is a serious and chronic issue at this facility.

The records provided by Axalta were un-editable PDFs and do not include calculations. Current AQD ROP and PTI templates include a requirement that states the permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. This requirement will be incorporated into each emission unit and flexible group table in Axalta's ROP during the current renewal. The AQD District Supervisor, Joyce Zhu, stated that PDF/hardcopies are not an acceptable format because they do not include calculations and, therefore, the accuracy of the records cannot be verified. Electronic Excel spreadsheets showing all formulas used is the format acceptable to the AQD District Supervisor and will be required going forward.

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. Mr. Kashat 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. 1,2,3,4: 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.

As discussed above under EU-RESIN-REACT-6 Section II – Special Condition 1, Axalta submitted inconsistent records of t-butyl peroxyacetate usage. Axalta did not mention and did not provide an explanation for this discrepancy. This is a violation of Section VI – Special Condition 4. A violation notice will be sent to Axalta for this issue.

I verified that all other records under EU-RESIN-REACT-6 were 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 July 2021 at 0.805 tons. The highest reported VOC/batch was 0.31 lbs VOC per 1000 lbs completed resin in November 2021.

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 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. 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. Wash solvent is stored in sealed totes.

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 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 on the shared drive at the facility and collected digital 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 December 2021 at 2.48

tons. The highest reported VOC/batch was 0.1141 lbs VOC per 1000 lbs completed resin in September 2021.

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 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. 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 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. 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 January 2021 at 1.265 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 1,634,916 gallons during the 12-month rolling time period ending in June 2021.

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. 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. Tanks 10 and 14 are being repurposed as part of Project Tiger. 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 during their 2021 MAERS 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 May 2021 at 0.0134 tons (27 lbs). Other 12-month rolling periods show similar emissions.

Hourly formaldehyde emissions remain consistent at 0.088 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 304 hours during the 12 month period ending in June 2021 (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. These records are maintained.

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 tons per 12-month rolling time period. VOC emissions were highest during the 12-month period ending in December 2021 at 4.52 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 57,844 gallons in January 2021.

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 the facilities records for April 2021. 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 14 was 120°F and mill 28 was 93°F. The other two media mills were off.

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. 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 January 2021 at 0.005 tons.

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 14,143 gallons in June 2021.

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 maintained.

Section IX – S.C. 1: States that Axalta shall comply with all provisions of 40 CFR Part 63 Subparts A and CCCCCCC, National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing. I did not verify compliance with this requirement. During my previous inspection, I verified that Axalta maintains a document which lists the applicable Subpart CCCCCCC requirement and the corresponding method that Axalta uses to comply with the requirement. Axalta submitted a Subpart CCCCCCC compliance certification report on February 11, 2021. AQD has not received a Subpart CCCCCCC compliance certification in 2022. 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 CCCCCCC 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. According to the records submitted by Axalta, TDI was not used in 2021. 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. 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 42°F and flow of 45 gallons per minute. Only Dynalene condenser 28 was operating during this inspection. Dynalene condenser 29 was in a defrost cycle. In condenser 28, dynalene temperature was -33°F during this inspection. Exhaust gas temperatures were -5°F for condenser 28 (in operation) and 90°F for condenser 29 (defrost cycle). Pressure drop between inlet and outlet of condenser 28 (active) was 0.43 inches of water. Pressure drop across condenser 29 (defrosting) was 0.8 inches of water. These readings were not necessarily taken at the same time.

Based on my inspection, the continuous condenser exhaust temperature data I reviewed, and the other condenser parameters I evaluated, 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 2021. 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. Tony stated that 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. Axalta provided me with a copy of the updated 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 exhaust temperature monitor for both MACT condensers was calibrated in September 2021 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 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. Emissions were highest during the 12-month period ending in February 2021 at 0.437 tons.

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 is being operated properly. 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 1.5” of water (observed on analog meter near DC-8).

Section VI – S.C. 1,2: Requires Axalta to install, calibrate, maintain and operate a pressure drop monitoring/recording device on DC-8 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 select dates in January 2021 and April 2021. I did not notice any recorded values below 0.3" of water or above 5.5" of water.

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 (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 demonstration data for all 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-CGM1000M(22), EU-CGM1000S(8), EU-CGM2500(5), EU-CGM250(4), EU-CGM3500(5), EU-CGM1500(1), EU-CGM5000(4), EU-CGM500(9), EU-SOLV-RECOVERY, EU-QA-ECOAT, EU-SBI(1-11), EU-MBFPT(1-22), EU-LMZ-5, EU-STORAGE-SOLV(TF-08), and EU-STORAGE-SOLV(TF-13). 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.

These tables show an exceedance of formaldehyde emissions in EU-CGM3500S for the months of January 2021, March 2021, and April 2021. Formaldehyde emissions are limited to 20 lb/month per Rule 290. Emissions for January 2021, March 2021, and April 2021 were 23.77 lbs, 25.22 lbs, and 20.92 lbs, respectively.

After I informed Axalta of this exceedance, Axalta sent an additional document showing that if all inert (solid) components are included in the emission calculation, this reduces the stated concentrations of formalehyde, thus reducing emissions of formaldehyde. Axalta's modified approach gives formaldehyde emissions of 16.01 lbs, 16.99 lbs, and 14.1 lbs for January 2021, March 2021, and April 2021, respectively. I will make a determination on the accuracy of the new records after the official violation notice response is received by AQD.

A violation notice was sent to Axalta for the formaldehyde exceedances based on the records initially received.

Axalta has submitted incorrect and inconsistent records on several occasions over multiple inspections. This is a serious and chronic issue at this facility. For this inspection, and going forward, compliance will be evaluated based on the records initially received for the inspection. Axalta will be required to address inaccuracies or non-compliance discovered during review of the records in a violation notice response.

Based on my review of these records, all other emission units are operating in compliance with Rule 290.

The following Rule 290 emission units have emission controls:

EU-Resin-React-1: MACT condenser system is used to control emissions during production.
EU-LMZ 1,3,4: Dust filters LMZREDHP and LMZBLKHP are used to control emissions during powder loading.
EU-TSM: Dust collector (DC-06) is used to control emissions during powder loading.
EU-SBI (1-11): Dust collector (DC-06) is used to control emissions during powder loading.
EU-Storage-Solv (TF-08): An activated carbon adsorber is used to control thermal out breathing of the storage tank.
EU-Storage-Solv (TF-13): An activated carbon adsorber is used to control thermal out breathing of the storage tank.

EU-SOLV-RECOVERY – I observed this emission unit during my inspection. 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. I reviewed condenser temperature data from January 1, 2022 through April 6, 2022. These records show that the temperature is always maintained below 45°F. The records I reviewed showed 1 datapoint per day. According to facility staff, the temperature reading on the control panel near the unit did not display the correct condenser temperature during this inspection. The temperature on the control panel near the distillation unit displays the temperature of the condensate.

The monthly VOC emission limit under Rule 290 is 500 lbs since this unit is controlled by a condenser. The records submitted by Axalta show a 1000 lb/month limit. I informed Axalta that all controlled Rule 290 emission units have different requirements than the uncontrolled units. Monthly VOC emissions from EU-SOLV-RECOVERY were reported highest during January 2021 at 223.53 lbs. Total VOC emissions from EU-SOLV-RECOVERY are reported at 0.73 tons for all of 2021.

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. 1,2,3: 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. VOC emissions from EU-DISP-TANK were reported highest during the 12-month period

ending in December 2021 at 4.763 tons. VOC emissions from EU-ECOATSUP were reported highest during the 12-month period ending in January 2021 at 0.031 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 1.7" water column (on digital gauge). The pressure drop records provided by Axalta that I reviewed show that pressures are maintained between these levels. I reviewed each 15-minute period in July 2021 and November 2021. I did not review pressure drop data for DC-06 for other periods in 2021.

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. 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. 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 highest during the 12-month period ending in January 2021 at 1.073 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 1462°F on the gauge near the oxidizer and 1527°F on the IP-21 database. These two readings were not taken at the same time. Axalta uses the IP-21 connected thermocouple for process control. Both thermocouples are located inside the flame area of the oxidizer.

I reviewed each 3-hour data point from March 2021 to December 2021. Continuous temperature records show that the 3-hour average temperature does not fall below 1500°F during normal operation; however, there are periods where the 3-hour average falls below 1500°F. For each instance where the 3-hour average fell below 1500°F, Axalta provided an explanation for the anomaly. There were 5 instances of a "power-bump" and 7 instances of oxidizer malfunction.

According to Axalta environmental staff, Axalta cannot control these occasional power drawdowns (power bump). There are no emergency generators at Axalta. There are two sources of electricity going to Axalta. Occasionally, one of the sources will not be able to supply enough electricity to meet all of Axalta's needs and the facility will have a relatively short period of reduced power while operators switch the main electrical power line.

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. Axalta provided records showing that the interlocking system was activated during each of the 12 cases 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.

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.

Oxidizer malfunctions include a damaged temperature probe, planned shutdowns, a damaged thermal well, and a controller shorting out.

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 April 25, 2022. The calibration records show that the thermocouples are within + or - 1% accuracy compared to the standard. Axalta stated that there is an interlock system installed pursuant to this condition and submitted records showing when the interlock system was activated.

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, 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. The most recent calibration of the temperature monitoring device was in October 2021.

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.

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. There are 10 total cold cleaners with 8 active and 2 not in service.

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.

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 at 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 December 2021 at 8.08 tons.

VOC emissions for metal parts only is limited to 2,000 lbs/month/booth. There was only 1 month during the period I reviewed where VOC emissions were greater than 2,000 lbs. 5101.94 lbs of VOC was reported in November 2021. I requested individual booth data for this month to verify compliance with the 2,000 lbs/month/booth limit for metal parts.

Axalta responded with an email stating that the November 2021 paint booth emissions were reported in error. Axalta stated that an employee accidently entered 375 cartridges instead of 375 grams in spray booth QA-15. Axalta provided both the original and modified November 2021 emission records for this booth. The original emission record shows that 3,644 lbs of VOC were emitted in booth QA-15 in November 2021 for metal parts spraying. Axalta did not provide any reference to grams or cartridges in the emissions records (only gallons used), so I cannot verify these claims. Additionally, Axalta provided this document as an un-editable PDF, making review of this data difficult. This is a violation of FG-R&Dbooths Section A, Special Condition 3, which limits VOC emissions for metal parts spraying to 2000 lbs/month/booth. A violation notice was sent to Axalta to address this non-compliance.

Axalta's modified emission record for November 2021 shows 107.45 lbs of VOC emitted for metal parts spraying.

Axalta has submitted incorrect and inconsistent records on several occasions over multiple inspections. This is a serious and chronic issue at this facility. For this inspection, and going forward, compliance will be evaluated based on the records initially received for the inspection.

Axalta will be required to address, in a violation notice response, any inaccuracies or non-compliance discovered during review of the records.

Acetone emissions are limited to 32 tons per year. Acetone emissions were reported highest during the 12-month period ending in December 2021 at 10.2 tons.

Cumene emissions are limited to 0.6 tons per year. Cumene emissions were reported highest during the 12-month rolling period ending in December 2021 at 0.051 tons.

Ethyl Benzene emissions are limited to 2.4 tons per year. Ethyl Benzene emissions were reported highest during the 12-month rolling period ending in December 2021 at 0.18 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 December 2021 at 0.234 tons.

Naphthalene emissions are limited to 0.5 tons per year. Naphthalene emissions were reported highest during the 12-month period ending in December 2021 at 0.012 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 April 2021 at 0.033 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. Filters appeared to be in place in four of the booths, but I could not observe all of the booths without putting on coveralls. Tony stated that Axalta uses HVLP applicator technology in all booths. I did not verify the applicator type during this inspection. I did not verify if pressure caps were available during this inspection.

Section V – S.C. 1: Requires Axalta to perform EPA Method 24 analyses on any coating as applied and as received. I verified that these analyses are performed and collected copies of these analyses.

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. Each engine was operated for approximately 20 hours during 2021 for maintenance purposes. 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: 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.

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 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. 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. In 2021, Axalta submitted both semi-annual ROP certifications, a 2020 annual ROP certification, and MAERS. In their first submission of the ROP certifications, Axalta submitted the reports without noting the violations/deviations that AQD cited them for in 2021. Per my direction, On May 20, 2022, Axalta re-submitted these reports showing the violations from 2021. On February 11, 2021, Axalta submitted their MACT CCCCCCC certification.

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 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 EU-SBI. Axalta provided this calculation with the excel formulas intact. I reviewed the calculation and found it to be accurate. Axalta utilizes EPA EIIP Chapter 8 – Paint, Ink, and Other Coating Manufacturing Equations 8.4-1 and 8.4-10. Axalta's emission calculation takes into account VOC emissions from reactor loading, heat up of materials, nitrogen sweeps, transfer to thin tank, and final product loading into vessels.

Axalta does not base their emissions on a worst-case scenario. Instead, Axalta used the top 3 most produced formulations, calculated a separate emission factor for all three formulations, and averaged the emission factors together to obtain a weighted average emission factor. The top three formulations account for 67% of the total usage in EU-SBI. The weighted average emission factor is calculated to be 6.55 lb/1000 gallon.

The table below shows the VOC emission factor from each of these operations when manufacturing VMS-46561 19 UVA SCREENER/HALS SOLUTION:

EU-SBI Operation	Emissions per Add: lb/1,000 gal
Material additions	0.364

Heat up	1.26
Nitrogen sweep	3.340
Transfer to thin tank	0.364
Product loadout	0.364
Total	5.690

The nitrogen sweep accounts for over half the emissions. In EU-SBI, the nitrogen sweep is done using "neutronics" which is a high flow & short duration method of nitrogen purging. The neutronics is used when manufacturing dispersions because it helps keep some of the solid additives from leaving the tanks. Traditional nitrogen sweeps are used in other processes at the facility. Axalta uses a separate emission calculation depending on the type of nitrogen sweep. The difference in emissions arises from the total volume of nitrogen used.

Based on my review of this calculation, Axalta is correctly utilizing EIIP Chapter 8 – Paint, Ink, and Other Coating Manufacturing Equations 8.4-1 and 8.4-10.

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. At the moment, not every emission factor has been calculated by Trinity Consultants.

Axalta is using the emission factors calculated by Trinity for EU-SBI and most other emission units. Other emission units, most notably the reactors, are calculated using emission factors from 2018. The 2018 emission factors were generated by "Emission Master", a software program that uses EIIP Chapter 8 to calculate emissions from coating manufacturing. Steve and Tony explained that the reason for this is mainly the timeline of this inspection. They explained that Axalta has employed Steve and a team of consultants at Trinity Consultants to work full time aggregating batch data and calculating these emission factors. I had Axalta walk me through the emission master calculation for Reactor 8. The calculation appears to consider each material addition, transfer, and nitrogen sweeps. These emission factors were accepted by AQD during that time. I did not evaluate the Emission Master calculations in detail.

Steve and Tony stated that they are going to re-calculate everything in Emission Master going forward. This should streamline a lot of the calculation process. All formulation data will be automatically integrated into Emission Master so that Axalta can calculate the emissions on a batch by batch basis rather than a worst-case scenario. I explained that in future inspections, I will expect all emission factors to be in the same format. If emission factors are not up to date in future inspections, a violation notice will be issued.

Follow up Inspection on April 26, 2022

I conducted a follow up inspection at Axalta on April 26, 2022. The purpose of this inspection was to verify that the emission units stated in the permit match the equipment on the factory floor. This was difficult to do during the initial inspection because Axalta environmental staff was not sure of the location of certain equipment.

In this follow up inspection, Axalta provided me with a map of the facility showing what each piece of equipment was. Additionally, Axalta had the experts in each area of the plant explain what each piece of equipment was doing. I did not verify each piece of equipment at this facility due to the large size of this facility. I will verify the rest of the equipment matches the permit in future inspections. During this inspection, we looked at EU-S-MEDIA-MILLS (1-4), EU-LMZ (1,3,4), EU-DISP-TANK (1-11), EU-LMZ5, EU-TSM (100,200,300,400), FG-THERMOX-MIX-TANKS (1-29), and EU-SBI (1-11).

EU-S-MEDIA-MILLS (1-4) – This includes units 13, 14, 9, and 28. Units 13 and 14 are located downstairs (ground floor). Units 9 and 28 are located upstairs. Unit 9 was a tandem schold mill recently replaced with an LMZ mill. The LMZ mill has not been fully hooked up yet. Both tandem schold mills and LMZ mills are used to create dispersions by sheering pigment particles in a tank using high speed agitators. The tandem schold mill tends to have higher emissions because it requires that the dispersion be switched between two tandem vertical tanks during the pigment sheering process (and thus displacing VOC laden air twice). The LMZ mills allows the pigment sheering to take place in one horizontal tank. This change does not meet the definition of a modification since it does not increase the amount of emissions from the process. The change does not meet the definition of a relocation since the new LMZ mills are located in the same spot as the old tandem mills. The replacement does not meet the definition of a reconstruction since the entire emission unit was replaced.

Each mill should be considered it's own emission unit. The way the ROP is written, it implies that EU-S-MEDIA-MILLS (1-4) is a single emission unit, when it is actually four emission units. In future ROP renewals, EU-S-MEDIA-MILLS (1-4) and other grouped emission units will likely be split into individual emission units.

EU-LMZ (1,3,4) – LMZ 1, 3, & 4 are located in a separate room from other dispersion mills. LMZ 1 & 3 are loaded from a catwalk above these mills through a vacuum loading system. The vacuum loading system is equipped with furnace-type dust collectors which are equipped with a magnehelic pressure gauge. These filters are exhausted outdoors to the ambient air. Axalta provided records showing that the filters are in place when these loading stations are operated. LMZ 4 is not vacuum loaded but is located in the same area.

EU-DISP-TANK (1-11) – I verified that there are 11 of these dispersion tanks (schold mills). Tanks 4 & 5 are currently out of service. The mill is not used on tank 1. Tank 1 is used as a mix tank for dispersions that require less milling. One of these dispersion mills was replaced with a newer LMZ mill.

EU-LMZ 5 – This unit is located upstairs in a stand-alone area.

EU-TSM (100, 200, 300, & 400) – I verified that there are four of these mills. All four are located upstairs. TSM stands for Tandem Schold Mill. TSM 100 is not being used anymore and will likely be replaced by a newer LMZ dispersion unit. TSM 200 was replaced in 2022 with an LMZ dispersion unit. TSM 300 was replaced with a newer LMZ dispersion unit. TSM 400 is an operational tandem schold mill used to make blue colored coatings.

On December 17, 2020, Axalta submitted a letter to AQD to formally withdraw their PTI application that included these mill replacements. In this letter, Axalta stated that after discussions with AQD, they believe the project could claim PTI exempt status pursuant to Rule 284 and Rule 290.

Rule 284(2)(i) states that the requirement of R336.1201(1) to obtain a permit to install does not apply to containers, reservoirs, or tanks used exclusively for Storage, mixing, blending, or transfer operations of volatile organic compounds or noncarcinogenic liquids in a vessel that has a capacity of not more than 40,000 gallons where the contents have a true vapor pressure of not more than 1.5 psia at the actual storage conditions. All associated tanks in EU-S-MEDIA-MILLS are smaller than 40,000 gallons. I did not verify that contents of these vessels have a true vapor pressure less than 1.5 psia.

FG-THERMOX-MIX-TANKS (1-29) – I verified that there are 29 tanks vented to the thermal oxidizer. Each tank is labeled as being ducted to the thermal oxidizer. The engineer that works on these tanks explained that there are two interlock systems for these tanks. One of the interlock systems will shut down the mix tanks if the thermal oxidizer temperature gets too high or falls below the permitted limits. The other interlock system will shut down the mix tanks if the knockout drum liquid level gets too high, which indicates that a mix tank may be overflowing. The mix tanks are all located on the upper level. The knockout drum is located on the ground floor level, underneath the mix tanks. 22 of these tanks are used for solvent based production and 7 are used for water based production. Two of the water based tanks are currently used as flow through tanks (essentially storage) instead of mix tanks.

EU-SBI – I verified that there are 11 of these tanks. They are labeled 17A, 17B, ET16, ET15, FT41, FT43, FT44, FT45, FT46, FT47, and FT51. FT51 is currently out of commission. ET16 has its mill located downstairs. The other 10 tanks are located upstairs.

Violation notice dated October 19, 2021

Axalta submitted a timely response to this violation notice. Axalta was cited for reporting inaccurate throughputs in FG-DISP-TANKS, misusing EIIP Chapter 8 – Paint, Ink, and Other Coating Manufacturing Equation 8.4-1, and not providing acceptable emission records to AQD. Based on this inspection and record review, Axalta has resolved these violations based on the information I collected during this inspection. The violation notice dated October 19, 2021 was resolved as a result of this inspection.

Compliance Determination

Axalta exceeded their Rule 290 emission limits for formaldehyde in EU-CGM3500S. Axalta also exceeded their 2000 lb/month/booth VOC emission limit for metal parts spraying in FG-R&Dbooths, Section A, Special Condition 3. Additionally, Axalta stated they submitted incorrect information in FG-R&Dbooths due to operator error. A violation notice was sent to Axalta to address these instances of noncompliance.

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 CCCCCCC – 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 Bognar DATE 9/30/2022 SUPERVISOR K. Kelly