

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	February 3-6, 2026	
Media Program:	Air	
Regulatory Program(s)	Clean Air Act (CAA) § 112(r) and 40 Code of Federal Regulations (C.F.R.) Part 68 Chemical Accident Risk Management Plan (RMP)	
Company Name:	Versum Materials US, LLC.	
Facility Name:	Versum Materials	
Facility Physical Location:	1115 West Keystone Avenue	
(city, state, zip code)	Catoosa, Oklahoma 74015	
Mailing address:	1115 West Keystone Avenue	
(city, state, zip code)	Catoosa, Oklahoma 74015	
County/Parish:	Rogers	
Facility Phone Number	(918) 789-3559	
Facility Contact:	Brian Myers	Site Director
	brian.myers@emdgroup.com	
FRS Number:	1100005033688	
Identification/Permit Number:	OK0000004013100027	
Media Identifier Number:	RMP 100000077506	
NAICS:	325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing	
SIC:	N/A	
Personnel participating in inspection:		
Julia Torres	EPA Region 6 ECDSC	RMP Inspector
Paul Sutherland	EMD Electronics	Site EHS Manager
Brian Myers	EMD Electronics	Site Director
Bobby Savedra	EMD Electronics	Operations Manager
John Baez	EMD Electronics	Plant Engineer
Greg Van Ommeren	EMD Electronics	Process Safety
Tom Avenoso	EMD Electronics	Corporate EHS Manager
Akash Bhatia	EMD Electronics	Process Engineer
EPA Lead Inspector Signature/Date	JULIA TORRES  Digitally signed by JULIA TORRES Date: 2026.03.25 14:20:29 -05'00'	
	Julia Torres	Date
Supervisor Signature/Date	KAYLA BUCHANAN  Digitally signed by KAYLA BUCHANAN Date: 2026.03.25 14:24:00 -05'00'	
	Kayla Buchanan	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

United States Environmental Protection Agency (“EPA”) Region 6, inspector Julia Torres (“I”) arrived at the Versum Materials US, LLC. (“Versum Materials”, “EMD Electronics”) facility in Catoosa, Oklahoma at 8:30 AM on February 3, 2026, for an announced inspection. I, Julia Torres, met with and presented credentials to Paul Sutherland (Site EHS Manager), Brian Myers (Site Director), and Greg Van Ommeren (Process Safety) at the opening conference and informed them that this was an EPA inspection to evaluate compliance with the requirements of the Chemical Accident Prevention Provisions of Title 40 of the Code of Federal Regulations (“C.F.R.”) Part 68 under Clean Air Act (“CAA”) § 112(r). An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 C.F.R. § 68.115, shall comply with the requirements of the CFR Part 68. Employee representatives were invited to participate in the inspection. The facility does not have union representation.

FACILITY DESCRIPTION

Versum Materials is located at 1115 West Keystone Avenue Catoosa, Oklahoma. The facility currently has twenty-five (25) full-time employees working two shifts, five days a week. Versum Materials reported one (1) Program Level 2 covered substance and two (2) Program Level 3 Substances subject to the requirements of EPA’s RMP regulations in its most recent RMP submission, dated January 22, 2026. Versum Materials has three (3) RMP covered processes at their facility. Versum Materials stores the substances titanium tetrachloride (“TiCl₄”), phosphorus trichloride (“POCl₃”) and tetramethylsilane (“4MS”). Versum Materials has a distillation and packaging process for POCl₃ and TiCl₄, commissioned in June of 2001 and April 2008, respectively, and a 4MS transfill process, commissioned in August of 2000. Versum Materials commissioned an expansion of the 4MS process in August of 2025.

TiCl₄ Distillation and Packaging

Versum Materials receives TiCl₄ as raw material in 30-gallon stainless steel Teflon-lined drums. The TiCl₄ system is located inside an exhausted hood that vents to an inorganic scrubber. Once received, TiCl₄ is then purified via batch distillation and pushed into a quartz reboiler where it is boiled and condensed by a quartz condenser and transferred into 100L stainless steel receivers. The product is stored in the receivers until it is packaged. The packaging and sampling station located in the first skip is used for filling, assay, and metals sampling. The station also contains a 38-gallon waste container for collection. The packaged TiCl₄ is then sent to customers.

Once the customer returns the emptied vessels, they are taken to a second skid and are rinsed with a HF/HNO₃ mixture that is flushed out with water and sent to a different facility for cleaning. There is a 50-gallon waste drum that collects the waste from this process and collects waste from the 38-gallon waste container from the distillation process.

POCl₃ Distillation and Packaging

Versum Materials receives POCl₃ as raw material in 50-gallon stainless steel Teflon-lined drums. The POCl₃ system is located inside a ventilated enclosure that vents to an inorganic scrubber. Once received, POCl₃ is then purified via batch distillation and pushed into a quartz reboiler where it is boiled and

condensed by a quartz condenser and transferred into three 100L quartz receivers. The product is stored in the receivers until it is packaged. The packaging and sampling station located in the first skip is used for filling, assay, and metals sampling. POCl_3 is filled in either quartz bubblers, stored in ammunition cans inside wooden crates, or 17 L Teflon-lined stainless-steel cans. There is a 50-gallon waste drum that collects the waste from this process and collects waste from the distillation process.

4MS Transfilling

Versum Materials receives 4MS as raw material in 454 L stainless steel Y-cylinders or 22,500 stainless ISO containers. Y- The cylinders and ISO containers are then connected to the fill station via a connection dependent on which container the 4MS arrived in. The connections are purged with pressurized nitrogen. Versum Materials performs a particle analysis before filling their 19 L and 3 L stainless steel containers. These containers are filled on a scale and are closed by an operator once the containers reach the desired weight. The connections to the cylinders are then purged before the cylinders are removed from the connections.

The returned cylinders are connected to the drain manifold, and any reclaimed material inside these cylinders is collected as another source for transfill. The residual product is collected in a collector cylinder, which is then transferred into 220 L containers that are used for transfill.

Section II - OBSERVATIONS

The documentation review began on Tuesday, February 3, 2026, with the Versum Materials personnel as listed on the sign in sheets, **see Appendix 1**.

On Thursday, February 5, 2026, I was accompanied by Paul Sutherland, Greg Van Ommeren, Akash Bhatia, and John Baez to conduct a tour of the facility. I observed the covered processes.

40 C.F.R. Part 68 – CHEMICAL ACCIDENT PREVENTION PROVISION

Subpart A – General

40 C.F.R. § 68.10 Applicability – Versum Materials has more than a threshold quantity of one (1) regulated toxic substances and one (1) regulated flammable substance as listed in 40 C.F.R. § 68.130 and is subject to the provisions of the Chemical Accident Prevention Program requirements. Versum Materials has a North American Industry Classification System (NAICS) code of 325998 - All Other Miscellaneous Chemical Product and Preparation Manufacturing. Versum Materials is subject to the Occupational Safety and Health Administration (OSHA) process safety management standard, 29 C.F.R. § 1910.119, and is an EPA RMP Program 3 facility.

40 C.F.R. § 68.12 General requirements – Versum Materials submitted their most recent 5-year Risk Management Plan submission on September 12, 2022, and submitted a corrected Risk Management Plan on January 22, 2026. The Risk Management Plan listed phosphorus trichloride (" POCl_3 ") as their RMP Program 3 regulated toxic substance, and tetramethylsilane ("Z4MS") as their RMP Program 3 regulated flammable substance present in processes with amounts greater than the threshold quantity, prescribed in the standard, and therefore classified as by rule. The Risk Management Plan also listed titanium tetrachloride (" TiCl_4 ") as their RMP Program 2 regulated toxic substance present in processes with amounts greater than the threshold quantity.

40 C.F.R. § 68.15 Management – Versum Materials has a management system to oversee the implementation of the RMP Program elements. I reviewed the organizational chart Versum Materials provided. Versum Materials failed to define the lines of authority for implementing individual requirements of this part to people other than the person defined with overall responsibility. [AOC 1 - §68.15(c)].

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – The owner or operator of a stationary source subject to this part shall prepare a worst-case release scenario analysis as provided in § 68.25 of this part and complete the five-year accident history as provided in § 68.42. I reviewed the worst-case release scenario analysis and the facility's five-year accident history in the RMP.

40 C.F.R. § 68.22 Off-Site Consequence Analysis ("OCA") Parameters – Versum Materials used parameters required in this part to calculate toxic worst-case and alternative release scenarios in their Offsite Consequence Analysis, completed April 2025. Versum Materials utilizes MARPLOT for modeling the release scenarios. For the worst-case and alternative case scenarios involving the toxic chemicals, the facility used the endpoints provided in Appendix A of 40 C.F.R. Part 68, appropriate wind speeds and stability classes, ambient temperatures and humidity values, values for height of the release, and surface roughness values for the release scenario analyses.

40 C.F.R. § 68.25 Worst-case Release Scenario (WCS) Analysis – I reviewed the WCS for a release of 4MS, the flammable substance stored. Versum Materials analyzed and reported in the RMP their worst-case release scenario for POCl₃, estimated to create the greatest distance to endpoint utilizing RMP*Comp™ and resulting from an accidental release of a regulated toxic substance from a covered process under worst-case conditions. Versum Materials identified the greatest amount held in a single vessel for their determination of the worst-case release quantity.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – I reviewed the alternative release scenarios for 4MS, POCl₃ and TiCl₄. Versum Materials analyzed and reported a flammable alternative release scenario for 4MS in the RMP, and one toxic alternative release scenario each for POCl₃ and TiCl₄ in the RMP. Versum Materials uses RMP*Comp™ to calculate the distance to endpoint.

40 C.F.R. § 68.30 Defining Offsite Impacts-Population – Versum Materials used the most current census bureau population data made available in the software used to calculate the population numbers reported in their RMP.

40 C.F.R. § 68.33 Defining Offsite Impacts -Environment – I reviewed the OCA document with associated maps. Versum Materials identified environmental receptors in the distance to the endpoint or in the vicinity of the facility, as appropriate, in the area maps used for the modeling.

40 C.F.R. § 68.36 Review and Update – Versum Materials' most recent OCAs were last reviewed and updated on January 27, 2026, after their last RMP correction. Prior to their 2026 submission, Versum Materials last submitted an OCA on September 12, 2022.

40 C.F.R. § 68.39 Documentation – Versum Materials operates one (1) RMP Program level 2 process and two (2) RMP Program level 3 processes subject to this subpart and is required to prepare a worst-case

release scenario analysis and complete the five-year accident history. I reviewed the worst-case and alternative-case scenarios provided. For the worst-case and alternate release scenarios, the substance selected as worst-case, and the rationale for selection was included. Versum Materials used RMP* Comp™ to verify the distance to endpoint for each scenario.

40 C.F.R. § 68.42 Five-year Accident History – I reviewed the five-year accident history for Versum Materials for 2021 – 2026. Versum Materials had no accidents to report in their five-year accident history.

Subpart C and D – Program 2 and Program 3 Prevention Program

40 C.F.R. § 68.48 and 68.65 Safety Information –

40 C.F.R. § 68.48 Program 2- Versum Materials maintains a variety of technical documents used to maintain safe operation of the TiCl_4 process. Chemical-specific information, including exposure hazards and emergency response/exposure treatment considerations, is provided in safety data sheets (SDSs). Versum Materials also provided documents which addressed chemical properties and associated hazards, limits for key process parameters and specific chemical inventories, and equipment design basis/configuration information. In addition, the facility documented safety-related limits for specific process parameters (e.g., temperature, level, composition), as well as the equipment specifications codes and standards used to operate the process.

40 C.F.R. § 68.65 Program 3- Versum Materials maintains a variety of technical documents used to maintain safe operation of the 4MS and POCl_3 processes. These documents address chemical properties and associated hazards, limits for key process parameters and specific chemical inventories, and equipment design basis/configuration information. Chemical-specific information, including exposure hazards and emergency response/exposure treatment considerations, is provided in safety data sheets (SDSs). In addition, the facility provided documentation that included a block flow diagram, process chemistry, maximum intended inventory, safe upper and lower limits for specific process parameters (e.g., temperature, level, composition), a reference to the consequences of deviation in a separate document that was also provided, as well as the equipment specifications codes and standards used to operate the process. I also reviewed the Piping and Instrumentation Diagram (P&ID) sheets for the 4MS and POCl_3 units onsite. During the facility walkthrough, facility staff and I searched for pressure safety valve (“PZV”) 1205 in the 4MS Expansion Room. We were unable to locate PZV 1205. Versum later determined the PZV was located on a panel that was not included on sheet 16 of P&ID DOC0000076915 – 4MS ISO and ISO Source Panel provided to me at the time of the inspection. **[AOC 2 -§68.65(d)(1)(ii)].**

40 C.F.R. § 68.50 (Program 2) and § 68.67 (Program 3) Hazard Review and Process Hazard Analysis (PHA)–

40 C.F.R. § 68.50 (Program 2) – I reviewed Versum Materials’ two most recent hazard reviews for TiCl_4 , conducted in 2017 and 2022. Versum Materials has a comprehensive Process Hazard Analysis (PHA) program to ensure that hazards associated with the various processes are identified and controlled. Versum Materials also shared a training PowerPoint to familiarize new members of the PHA team in the process for conducting a PHA onsite. Versum Materials does not keep documentation confirming the members on the team attended the training. Versum Materials used the hazard and operability (“HAZOP”) on the most recent PHAs to perform these evaluations. Versum Materials uses the program PHAWORKS-RA to document the entire scope of their PHAs, including recording attendance, the

different scenarios, recommendations, and tracking. The analyses conducted used a team of people who have operating, maintenance, and engineering expertise. The PHA team identified hazards of the process which included opportunities for equipment malfunctions or human errors. Versum Materials tracks their recommendation action items onsite and uploads them to the corporate OPHR database, which stores the Catoosa location as well as the action items for PHAs at other Versum Materials locations. During the inspection, I reviewed the 2022 Hazard Review tracking system that contained two (2) recommendations with associated action plans. These recommendations are closed.

40 C.F.R. § 68.67 (Program 3) –The PHAs for 4MS and POCl_3 are also conducted in PHAWORKS. The PHA evaluates the hazards of the process, incidents that had a likely potential for a catastrophic release, engineering and administrative controls, consequences of failure of these controls, stationary source siting, human factors, and calculate the risk of the different recommendations identified. I reviewed the PHA for 4MS, conducted in 2019 and 2024. The 2024 PHA for 4MS included 34 recommendations and their action items. Recommendations relating to documentation were given the same risk ranking as recommendations relating to testing of critical safety and detection equipment and a due date three (3) years from the date of the PHA, which did not demonstrate that Versum Materials established a system to promptly address the team’s findings and recommendations. Additionally, I reviewed the most recent PHA for POCl_3 , conducted in 2021. Four (4) of the findings in the 2021 PHA for POCl_3 were marked as “Completed” but did not list a completion date in the comments, and no further updates besides “Management of Change (“MOC) initiated”. I also reviewed the PHA action item tracker. Of the eight (8) recommendations on this tracker, recommendation 28 with a due date of May 15, 2022, remained open as of February 2026. The 2021 POCl_3 PHA included recommendations and action items that failed to document the resolution of various findings it had marked as complete, documenting MOC numbers to address these findings, and failing to provide a description of the MOCs and a closure date for the MOCs. [**AOC 3 -§68.67(e)**]. Versum Materials plans to conduct their five (5) year revalidation of the POCl_3 process in March of 2026.

40 C.F.R. § 68.52 (Program 2) and § 68.69 (Program 3) Operating Procedures – Versum Materials maintains written procedures that address various modes of operations, such as unit startup, normal operations, temporary operations, emergency shutdown, normal shutdown, and initial startup of a new process. The standard operating procedures (“SOPs”) contain safe operating conditions and limits for each production area as required which is consistent to process safety information. These SOPs can be used as a reference by experienced operators and provide a basis for consistent training of new operators. I reviewed various operating procedures and the annual certifications from the past five (5) years. The 2021 annual operating procedure certification did not identify which operating procedures had been certified nor did it specify which of the units these operating procedures belonged to. This finding was also identified in the 2022 compliance audit. Versum Materials annually certifies and identifies the operating procedures for the program 3 processes POCl_3 and 4MS.

40 C.F.R. § 68.54 (Program 2) and § 68.71 (Program 3) Training – Versum Materials provided me with their training policy. Versum Materials has implemented a training program for all employees involved in operating a process. All operations employees receive basic training for the facility operations. Operators must also demonstrate awareness of and competency through hands on training, written assessments, and online assessments, which are tracked on a Job Observation Criteria (“JOC) form. They are then reviewed by the board to demonstrate understanding of operating the process. Versum Materials uses “HR for You”(HR4 You), a web-based system, to track the training required for facility employees and track the days left to complete their training. I requested the training records of five (5) randomly selected operators associated with the RMP covered process for the past five (5) years.

Versum Materials was able to provide annual refresher training for the five (5) operators, who were up to date on their annual training.

40 C.F.R. § 68.56 (Program 2) and § 68.73 (Program 3) - Maintenance and Mechanical Integrity (MI) – I reviewed Versum Materials’ mechanical integrity policy for inspections and testing of their process equipment. Versum Materials states that they use Risk Based Inspections (RBI) to determine the inspection frequency of their process equipment. The policy includes developing written procedures, performing and documenting inspections and tests. The RBI policy includes the process of conducting an RBI and under which conditions an RBI will be conducted. The policy covers the workflow and timeline for creating a RBI team meeting, the assignment of risk to the equipment, and documentation of the RBI. A third-party vendor tests relief devices for the facility. Versum Materials requires completion of their maintenance check training program performed in HR4 You for onsite maintenance staff. Versum Materials also provided me with the RBI mechanical integrity (MI) equipment summaries for TiCl_4 , POCl_3 and 4MS.

40 C.F.R. § 68.56 (Program 2), - The Equipment summary for TiCl_4 failed to document the frequency of testing their TiCl_4 overpack drum, noting the recommended inspection and testing frequency as “Determine DOT testing requirement and follow”. There was no update regarding this action item. The May 10, 2024, incident identified a TiCl_4 overpack drum in service since 2010 as past its ten (10) year life cycle, with no inspection or testing records for this drum provided during 2010-2024. This incident is also referenced in **40 C.F.R. § 68.60 Incident Investigation. [AOC 4 -§68.56(d)]**.

40 C.F.R. § 68.73 Program 3– I reviewed the annual MI checklists for POCl_3 for the past five (5) years. I reviewed an APCI RBI Equipment Summary for POCl_3 for vessels that did not include justifications for the different components leading to the risk ranking value. A pressure safety valve on the Equipment Summary for POCl_3 did not list a frequency of inspection, nor did it have the risk ranking assigned. In this document, the failure potential of the polycarbonate duct inserts on the distillation system, with a justification stating “past performance dictates frequent maintenance on this line”, was given the same ranking of “1” as other line items with no history of failures. The piping diameter was missing from this form as well. I reviewed the master safety relief list provided, which did not list the last test date, or the next test date. I also reviewed the POCl_3 System Annual MI Checklists for 2021 to 2025 which identified vibration on the fan and corrosion in 2025. I also reviewed the 4MS RBI Study, which included the inspection frequencies of process equipment. The facility also provided a copy of their leak testing for two hundred and seven (207) Drain Flex Hoses, conducted on 12/17/2025, which failed to include the name of the person performing the inspection, and listed “pass/fail” as the only findings of the inspection. **[AOC 5 -§68.73(d)]**.

40 C.F.R. § 68.58 (Program 2) and 68.79 (Program 3) Compliance Audits – I reviewed Versum Materials’ most recent compliance audits, conducted on January 21-23, 2025, and January 11-13, 2022. The compliance audits provided were conducted by a third-party auditor. The 2022 Compliance Audit had eight (8) findings and listed eight (8) action items to address the findings. I reviewed the findings and their action items. Any documentation associated with the action items are tracked and kept on the “ManGo” software. The facility provided the certification for the 2025 compliance audit. Versum Materials was able to locate and provide the 2022 certification on February 11, 2026.

40 C.F.R. § 68.60 and § 68.81 Incident Investigation – Versum Materials had no accidents to report in the last five (5) years. I reviewed the corporate incident management policy and incident report form. Versum Materials did not define the timeline in the corporate policy. Versum Materials verbally

explained the procedure for incident investigation. When an incident occurs, it is recorded in the database Credit 360 (“cr360”) within twenty-four (24) hours, and the report is uploaded to cr360 within 48 hours. The investigation starts within ten (10) days as explained by Versum. The corrective actions that may result from the investigation are assigned to an owner with a due date. Near misses are discussed in the facility’s monthly safety meetings. If there are any trainings that result from the investigation, they are tracked and recorded in the associated MOC. I also reviewed eight (8) incidents that had occurred in the last five (5) years. Incident 596619, which occurred on 05/10/2024, identified a steel TiCl₄ overpack drum showing signs of corrosion. The report failed to document how and when the action items were completed. The report failed to identify the factors that contributed to the incident. The overpack drum involved in the overpack drum had been in service since 2005 and had reached its lifecycle of ten (10) years in 2015. This finding is also referenced under **40 C.F.R. § 68.56-Maintenance**. Additionally, the incident report for incident 596619 failed to include the recommendations resulting from the investigation. [AOC 6 -§68.60 (d) (4) & (5)].

40 C.F.R. § 68.75 Management of Change – I reviewed Versum Materials’ Management of Change (“MOC”) procedure, the procedure to enter an MOC in Intelix, and reviewed six (6) MOCs from the past five (5) years. Employees can propose a change or to elevate to management through discussion with a supervisor, address in a safety meeting, or bring up concerns after entering (“cr360”). The MOC initiator notifies the local change board, defined in the policy, who evaluates the proposed change and determines if it will be approved or rejected. The local change board will include the “semi change board” if the proposed change affects customers or more than one facility. Once both boards have approved the proposed change, it is entered into Intelix. Tasks determined by MOCs are assigned to a task owner and given a target date of completion. I reviewed various P&ID sheets while onsite for TiCl₄, POCl₄, and 4MS. Sheet 2 of P&ID DOC0000333394 for TiCl₄ had redlined MOCs that had not been included on the official sheet, as well as sheet SD1. During my facility walkthrough, we were unable to find the panel for PZV 1205, which was later confirmed to be a red line on the P&ID DOC0000076915 sheet 16, had failed to indicate the MOC for this red line after the August 2025 change in this process. [AOC 7 - § 68.75(d)].

40 C.F.R. § 68.77 Pre-startup Safety Review (PSSR) – I reviewed Versum Materials’ January 22, 2025, pre-startup safety review (PSSR) for the Catoosa 4MS Expansion Project. This was the only PSSR associated with an MOC in the past five (5) years. The Versum Materials policy addresses PSSRs as Operational Readiness Inspections (“ORIs”). This policy states in section 6.4.1 that “All ORI documents, (reports/checklists, etc.) shall receive a number” with a specific format dependent on whether the ORI resulted from a hazard review. However, the ORI Checklist for the 4MS Expansion Project did not have a number following the formats identified in section 6.4.1 in the Versum Materials policy. In addition, items in Sections 2 and 3 of the ORI, that were marked as completed, did not have a date of completion listed and there were closeout statements for items including, but not limited to, A17.01.02 A17.02.02, and A17.02.03 that indicated further actions were needed prior to the start of the change. [AOC 8 - § 68.77(b)]

40 C.F.R. § 68.83 Employee Participation – I reviewed the employee participation policy for Versum Materials. The written plan outlines how Versum Materials informs employees on the hazards in the facility and how they are included in the implementation of different requirements of the facility’s risk management program. The facility has a site-specific employee value/safety committee which meets with management at the beginning of their meetings. Employees can report the occurrence of incidents or near misses on the “Dent” system, a Sharepoint site, and share observations of bad safety practices on “MySite” for management to review once a month. The policy identifies how employees are involved

in different elements of the program. The Management of Change section of this plan was incomplete. **[AOC 9 -§68.83(a)].**

40 C.F.R. § 68.85 Hot Work Permits – I reviewed the corporate hot work policy, updated in April 2025. I also reviewed the hot work permits Versum Materials issued in 2024 and 2025. Safe work permit numbers A10429 identified an inspection frequency of 120 minutes to ensure the safe work permit conditions were maintained but listed only one inspection with no sign of more periodic inspections being performed between 10:10AM and 4:00PM. I also observed that safe work permit number A10223 identified an inspection frequency of 120 minutes but did not list the times that the periodic inspections had been performed. Safe work permit number A9773 identified hot work precautions but failed to identify “Hot Work” under the Job Safety Analysis Section. **[AOC 10-§68.85(b)].**

40 C.F.R. § 68.87 Contractors – I reviewed the Versum Materials contractor policy and I was presented the web service ISN Contractor Management Service (“ISN”), which Versum Materials uses to select contractors. If a contractor’s rating falls from an A or B rating to C through F rating, ISN notifies Versum once the facility has returned to an A or B rating. Once selected, contractors undergo a forty (40) minute contractor safety video and take a written safety test after the video. This test is valid and kept onsite for one (1) year. Once the contractor has passed the test with a score over 80%, they are entered in the visitor log, issued a badge, and a host or escort from the facility will meet them. Versum Materials has a compliance management task to evaluate contractors every six (6) months.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability – Versum Materials is designated as a responding stationary source in case of an accidental release of a regulated substance; therefore, the facility shall comply with the requirements of 40 C.F.R. § 68.93, 40 C.F.R. § 68.95, and 40 C.F.R. § 68.96.

40 C.F.R. § 68.93 Emergency Response Coordination – Versum Materials, along with other Port of Catoosa facilities coordinate response needs annually with the local emergency planning committee (“LEPC”). Versum Materials notified the LEPC of a coordination activity in 2024 and 2025, which the LEPC attended. The documentation provided did not list the names or contact information of the individuals involved in the coordination. Versum Materials failed to provide documentation of coordination with the LEPC for 2021-2023. **[AOC 11 -§68.93(a) & (c)].**

40 C.F.R. § 68.95 Emergency response program – I reviewed the emergency action plan Versum Materials provided. The action plan outlines the procedures on informing the neighboring facilities, as well as the local, state, and federal agencies of an accidental release. In the event of an accidental release at Versum Materials, the Port of Catoosa notifies facilities located in the Port of an accidental release via the Wireless Emergency Notification System (W.E.N.S.”). The facility does maintain a trained emergency response team (“ERT”) on site to respond to on-site releases. The ERT training includes annual HAZWOPER refresher training. I requested the training records for an additional six (6) members of their ERT. I identified two (2) members who were missing their 2021 HAZWOPER recertification, and four (4) members who were missing their 2025 HAZWOPER recertification. **[AOC 12 -§68.95(a)(3)].**

40 C.F.R. § 68.96 Emergency response exercises – I reviewed Versum Materials’ quarterly safety drills from 2021-2025. The 2023 Q1 safety drill for a Plant Tornado did not list the date of the drill. Versum Materials failed to provide documentation of coordination with local officials to participate in the

exercises performed in 2022. The coordination exercises for 2021, 2023, 2024, and 2025 included in their report notification of responders during the drills, but no documentation could be found for 2022. **[AOC 13 - §68.96(b)].**

Subpart G – Risk Management Plan

40 C.F.R. § 68.150 Submission – Versum Materials submitted their 5-year update to their RMP on September 12, 2022. The re-submission was within the 5-year timeframe as required by 40 C.F.R. § 68.150.

40 C.F.R. § 68.160 Registration – Versum Materials included in their RMP all regulated substances present at the site above their designated threshold quantity as required by 40 C.F.R. § 68.160.

40 C.F.R. § 68.190 Updates – Versum Materials' most recent RMP update was a correction submitted on January 22, 2026, stating that the update was due to the complete removal of the Arsine process in 2025. During the inspection, the facility verified that the Arsine process was officially removed from the facility in August 2024, which would have required an update to the RMP by February 2025. The 2022 RMP correction also states in their executive summary that the update is to lower the program level of TiCl_4 from program level 3 to program level 2. **[AOC 14 - 40 C.F.R. § 68.190(b)]**

SECTION III - AREAS OF CONCERN

AOC 1 – 40 C.F.R § 68.15(c) Management. *When responsibility for implementing individual requirements of this part is assigned to persons other than the person identified under paragraph (b) of this section, the names or positions of these people shall be documented and the lines of authority defined through an organization chart or similar document.*

Versum Materials provided an organizational chart for the individuals responsible for implementing the requirements of their Risk Management Plan. The organizational chart did not identify in the names and positions of the personnel involved and their authority defined for implementation of the plan their implementation of the plan. **See Appendix 2.**

AOC 2 – 40 C.F.R § 68.65(d)(1)(ii) Process Safety Information. *Information pertaining to the equipment in the process. Information pertaining to the equipment in the process shall include: Piping and instrument diagrams (P&ID's).*

Versum Materials failed to provide an up-to-date document for sheet 16 of P&ID DOC0000076915 for the 4MS ISO Panel. During the facility walkthrough, facility staff and I went into the ISO panel room, and searched for PZV 1205. Facility staff and I were unable to identify the location of PZV 1205. The facility was able to confirm there was a redline'd version of the P&ID that added the panel where PZV 1205 was located but had not updated the document with that information. **See Appendix 3.**

AOC 3 – 40 C.F.R §68.67(e) Process Hazard Analysis. *The owner or operator shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this part. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. The owner or operator shall determine and document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as*

extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. The process hazard analysis shall be conducted as soon as possible, but not later than June 21, 1999. Process hazards analyses completed to comply with 29 CFR 1910.119(e) are acceptable as initial process hazards analyses. These process hazard analyses shall be updated and revalidated, based on their completion date.

Versum materials failed to determine and document the priority order for conducting process hazard analyses based on a rationale which includes considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process.

AOC 3 – 40 C.F.R § 68.67(e) Process Hazard Analysis. *The owner or operator shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.*

Versum Materials failed to assure that recommendations identified in the PHA recommendation action item tracker had been resolved in a timely manner. Recommendation 28 had a due date of March 02, 2022, but remained open as of February 2026. The 2021 POCl₃ PHA included recommendations and action items that failed to document the resolution of various findings that were marked as complete, document MOC numbers to address these findings, and failed to provide a description of the MOCs and a closure date for the MOCs. The 2024 POCl₃ process hazard analysis were assigned the same risk ranking and due date, regardless of whether they were documentation or critical safety and detection equipment. equipment testing. **See Appendices 4 and 5.**

AOC 4 – 40 C.F.R § 68.56(d) Maintenance. *The owner or operator shall perform or cause to be performed inspections and tests on process equipment. Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations, industry standards or codes, good engineering practices, and prior operating experience.*

Versum Materials failed to perform inspections and tests on process equipment. Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. The May 10, 2024, incident involved a stainless-steel drum that had signs of corrosion. The container had not been tested according to DOT standards. Versum Materials identified in their RBI Mechanical Integrity Summary that they were to “determine the DOT testing requirement and follow” but failed to update their list to indicate their requirement for the drum. This drum had been in use for 19 years, with a life cycle of 10 years. **See Appendices 6 and 8.**

AOC 5– 40 C.F.R § 68.73(d) Mechanical Integrity - Inspection and testing. *(1) Inspections and tests shall be performed on process equipment. (2) Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. (3) The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience. (4) The owner or operator shall document each inspection and test that has been performed on process*

equipment. The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the test.

Versum Materials failed to provide inspection and testing dates on process equipment such as relief devices. The RBI equipment summary failed to identify the frequency of testing for a safety relief valve. The facility also provided a copy of their leak testing for two hundred and seven (207) Drain Flex Hoses, conducted on 12/17/2025, which failed to include the name of the person performing the inspection, and identified “pass/fail” as the only findings of the inspection. **See Appendix 7.**

AOC 6 – 40 C.F.R § 68.60(d) (4)&(5) Incident Investigation. *A report shall be prepared at the conclusion of the investigation which includes at a minimum: The factors that contributed to the incident; and, Any recommendations resulting from the investigation.*

Versum Materials failed to include the factors that contributed to the incident on May 10, 2024, in the incident report and recommendations generated from the incident. The report failed to include a description of Versum Materials’ determination of the life cycle of the stainless-steel container and the inspection frequencies for this container, which was later determined to be ten (10) years for this container. The report also failed to include the recommendations from the investigation. Versum Materials later provided a separate screenshot of action items that were being tracked but not mentioned in the report and did not list the completion dates of the action items. **See Appendix 8.**

AOC 7 – 40 C.F.R § 68.75(d) Management of Change. *If a change covered by this paragraph results in a change in the process safety information required by § 68.65 of this part, such information shall be updated accordingly.*

Versum Materials failed to update sheet 16 of P&ID DOC0000076915 prior to the August 2025 expansion of the 4MS process. During the facility walkthrough, we were unable to locate PZV 1205 on sheet 16 of the 4MS P&ID. The red line version of the hard copy P&ID that included the addition of the panel in which PZV 1205 is located on has not been updated in the original document. **See Appendix 9.**

AOC 8- 40 C.F.R § 68.77 (b) Pre-startup safety review *The pre-startup safety review shall confirm that prior to the introduction of regulated substances to a process: (1) Construction and equipment is in accordance with design specifications; (2) Safety, operating, maintenance, and emergency procedures are in place and are adequate; (3) For new stationary sources, a process hazard analysis has been performed and recommendations have been resolved or implemented before startup; and modified stationary sources meet the requirements contained in management of change, § 68.75. (4) Training of each employee involved in operating a process has been completed.*

Versum Materials failed to confirm items in Sections 2 and 3 of their 4MS Expansion ORI that had been resolved prior to startup. There were action items marked as completed that did not have a date of completion listed, and there were closeout statements for items including, but not limited to, items A17.01.02 A17.02.02 and A17.02.03 that indicated further actions were needed prior to the start of the change. **See Appendices 10 and 11.**

AOC 9 – 40 C.F.R § 68.83(a) Employee Participation. *The owner or operator shall develop a written plan of action regarding the implementation of the employee participation requirements required by this section.*

Versum Materials failed to develop their written employee participation plan. The employee participation plan was incomplete for the Management of Change section, which did not allow for a thorough review of how employees participate in this element. **See Appendix 12.**

AOC 10- 40 C.F.R. §68.85(a) Hot Work. *(a) The owner or operator shall issue a hot work permit for hot work operations conducted on or near a covered process. (b) The permit shall document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; it shall indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed.*

Versum Materials failed to ensure hot work permits documented the provisions in accordance with 29 CFR 1910.252(a). I reviewed the hot work permits issued in 2024 and 2025. Two (2) Safety Work Permits failed to record the times of the periodic inspections given their frequencies, and one (1) Safety Work Permit identified Hot Work precautions but failed to identify “Hot Work” under the Job Safety Analysis Section. **See Appendix 13.**

AOC 11 –40 C.F.R § 68.93 (a) and (c) Emergency Response Coordination. *Coordination shall occur at least annually, and more frequently, if necessary, to address changes: At the stationary source; in the stationary source's emergency response and/or emergency action plan; and/or in the community emergency response plan. The owner or operator shall document coordination with local authorities, including: The names of individuals involved and their contact information (phone number, email address, and organizational affiliations); dates of coordination activities; and nature of coordination activities.*

Versum Materials failed to provide documentation of annual coordination with the LEPC for 2021-2023. The documentation provided for 2024 and 2025 did not include the names of individuals involved and their contact information. **See Appendix 14.**

AOC 12 –40 C.F.R § 68.95 (a)(3) Emergency response program. *The owner or operator shall develop and implement an emergency response program for the purpose of protecting public health and the environment. Such program shall include the following elements: Training for all employees in relevant procedures.*

Versum failed to locate and provide the required records to verify that refresher training for members of the Emergency Response Team (“ERT”) were up to date. EPA reviewed the training records of ERT members. Two (2) members were missing their 2021 HAZWOPER recertification, and four (4) members were missing their 2025 HAZWOPER recertification. **See Appendix 15.**

AOC 13 –40 C.F.R § 68.96 (b) Emergency response exercises. *The owner or operator of a stationary source subject to the requirements of § 68.95 shall develop and implement an exercise program for its emergency response program, including the plan required under § 68.95(a)(1). Exercise shall involve facility emergency response personnel and, as appropriate, emergency response contractors. When planning emergency response field and tabletop exercises, the owner or operator shall coordinate with local public emergency response officials and invite them to participate in the exercise.*

Versum Materials failed to provide documentation of coordination with local officials to participate in the exercises performed in 2022. The field exercises for 2021, 2023, 2024, and 2025 included in their report notification of responders during the drills, but no documentation could be found for 2022. **See Appendix 16.**

AOC 14 – 40 C.F.R § 68.190 (b) Updates.

The owner or operator of a stationary source shall revise and update the RMP submitted under § 68.150 as follows: Within six months of a change that alters the Program level that applied to any covered process.

Versum Materials failed to update their RMP within six (6) months of a process change. The RMP was updated for the removal of the Arsine process. Versum Materials verified onsite that the process had been removed in 2024. Versum Materials also failed to remove in the 2022 re-registration RMP executive summary that the facility lowered the program level from 3 to program level 2 for the TiCl_4 process, which had occurred in 2019. **See Appendix 17.**

Section IV – FOLLOW UP

I requested supplemental documentation be downloaded to the EPA designated SharePoint site for review by February 12, 2026, which the facility provided on February 12, 2026.

Section V – LIST OF APPENDICES

The Appendices are not included in the online published inspection report. CBI Appendices include documents that are claimed CBI by the facility. Sensitive Appendices may include appendices that will not be posted but are not explicitly CBI. These could include Personally Identifiable Information (PII) or Homeland Security sensitive information.

Appendix 1. Sign-in sheets for opening and closing meetings

Appendix 2. Management organization chart (AOC 1)

Appendix 3. Sheet 7 of P&ID DOC0000076915 (AOC 2)

Appendix 4. 2024 4MS PHA Recommendations (AOC 3)

Appendix 5. 2021 POCl_3 PHA Recommendations (AOC 3)

Appendix 6. RBI MI Equipment Checklist TiCl_4 (AOC 4)

Appendix 7. RBI MI Equipment Checklist POCl_3 and 4MS RBI equipment study (AOC 5)

Appendix 8. Incident 596619 (AOC 6)

Appendix 9. Sheet 16 of P&ID DOC0000076915 (AOC 7)

Appendix 10. Catoosa PSSR (ORI) Procedure (AOC 8)

Appendix 11. Catoosa 4MS Expansion Project PSSR Checklist (AOC 8)

Appendix 12. Employee Participation Plan (AOC 9)

Appendix 13. Hot Work Permits (AOC 10)

Appendix 14. LEPC Documentation, 2024 and 2025 (AOC 11)

Appendix 15. HAZWOPER Certifications (AOC 12)

Appendix 16. Versum Materials Exercises 2021-2025 (AOC 13)

Appendix 17. 2026 RMP Re-registration (AOC 14)