UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
PHILADELPHIA, PENNSYLVANIA 19103-2852

In the Matter of: AdvanSix Resins & Chemicals LLC 300 Kimball Drive, Suite 101 Parsippany, New Jersey 07054, Respondent. Hopewell Plant 905 East Randolph Road Hopewell, Virginia 23860 Facility.	EPA Docket No. CAA-03-2023-0068DA Administrative Compliance Order on Consent

ADMINISTRATIVE COMPLIANCE ORDER ON CONSENT

A. PRELIMINARY STATEMENT

1. This Administrative Compliance Order on Consent ("Order") is issued under the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 113(a)(3)(B) of the Clean Air Act, as amended ("CAA" or "the Act"), 42 U.S.C. § 7413(a)(3)(B). Under Section 113(a)(3)(B) of the Act, the Administrator of EPA has the authority to issue orders requiring any person who is in violation of certain sections of the CAA, including Section 112(r)(7), 42 U.S.C. § 7412(r)(7), to comply with such requirements of the CAA.
2. On EPA's behalf, the Director of the Enforcement & Compliance Assurance Division is delegated the authority to issue this Order under Section 113(a) of the Act.
3. Respondent, AdvanSix Resins & Chemicals LLC, is organized in the State of Delaware and does business in the Commonwealth of Virginia.
4. Respondent signs this Order on consent.

5. Although Respondent neither admits nor denies the allegations set forth in Section C (EPA Observations and Findings), stated below, it is entering into this Order and agreeing to comply therewith in order to resolve this matter amicably and will not contest EPA's authority or jurisdiction to issue or enforce the provisions of this Order.

B. STATUTORY AND REGULATORY BACKGROUND

6. On November 15, 1990, the President signed into law the Clean Air Act Amendments of 1990. The Clean Air Act Amendments added Section 112(r) to the Act, 42 U.S.C. § 7412(r), which requires the Administrator of EPA to, among other things, promulgate regulations in order to prevent accidental releases of certain substances listed pursuant to Section 112(r)(3) of the Act, 42 U.S.C. § 7412(r)(3).

7. Section 112(r)(3) of the Act, 42 U.S.C. § 7412(r)(3), mandates the Administrator to promulgate a list of regulated substances, with threshold quantities, and defines the stationary sources that will be subject to the accident prevention regulations mandated by Section 112(r)(7) of the Act, 42 U.S.C. § 7412(r)(7). The list of regulated substances and threshold levels are codified at 40 C.F.R. § 68.130.

8. On June 20, 1996, EPA promulgated a final rule known as the Chemical Accident Prevention Provisions, 40 C.F.R. Part 68 (the "Risk Management Program Regulations" or "RMP Regulations"), which implements Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7). The RMP Regulations require owners and operators of stationary sources to develop and implement a risk management program that includes a hazard assessment, a prevention program, and an emergency response program. The risk management program is described in a risk management plan that must be submitted to EPA. The risk management plan must include a hazard assessment to assess the potential effects of an accidental release of any regulated substance, a

program for preventing accidental releases of hazardous substances, and a response program providing for specific actions to be taken in response to an accidental release of a regulated substance, so as to protect human health and the environment.

9. Pursuant to Section 112(r)(7)(B)(iii) of the CAA, 42 U.S.C. § 7412(r)(7)(B)(iii), and its RMP Regulations at 40 C.F.R. § 68.10(a) and 68.150(a), the owner or operator of a stationary source at which a regulated substance is present in more than a threshold quantity must submit a risk management plan to EPA no later than the latter of June 21, 1999, or the date on which a regulated substance is first present above the threshold quantity in a process.

10. Section 112(r)(2)(C) of the Act, 42 U.S.C. § 7412(r)(2)(C), defines "stationary source," as "any buildings, structures, equipment, installations, or substance emitting stationary activities (i) which belong to the same industrial group, (ii) which are located on one or more contiguous properties, (iii) which are under the control of the same person (or persons under common control), and (iv) from which an accidental release may occur."

11. Section 302(e) of the Act, 42 U.S.C. § 7602(e), defines "person" as including an individual, corporation, partnership, association, State, municipality, political subdivision of a State and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof.

12. The RMP Regulations at 40 C.F.R. § 68.3 define "process" as any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

13. The RMP Regulations at 40 C.F.R. § 68.3 define "threshold quantity" as the quantity specified for regulated substances pursuant to Section 112(r)(5) of the CAA, listed in 40 C.F.R. § 68.130, Tables 1-4, and determined to be present at a stationary source as specified in 40 C.F.R. § 68.115.

14. The RMP Regulations at 40 C.F.R. § 68.3 define "regulated substance" as any substance listed pursuant to Section 112(r)(3) of the CAA in 40 C.F.R. § 68.130.

15. As used herein, the term "day" shall mean calendar day.

16. All terms not defined herein shall have the meanings set forth in the CAA.

C. EPA OBSERVATIONS AND FINDINGS

17. Respondent is a chemical company that owns and operates a caprolactam manufacturing facility located at 905 East Randolph Road in Hopewell, Virginia ("Facility"). Respondent uses and stores toxic and flammable chemicals at the Facility that are used in the caprolactam manufacturing process.

18. On May 10-11, 2022, EPA conducted an inspection at the Facility to determine whether Respondent was in compliance with Section 112(r)(1) and (7) of the Clean Air Act ("CAA"), 42 U.S.C. § 7412(r)(1) and (7), and the applicable regulations, the Chemical Accident Prevention Provisions, at 40 C.F.R. Part 68 (referred to as the "Risk Management Program Regulations" or "RMP Regulations") ("Inspection"). The Inspection occurred in the aftermath of a March 29, 2022 release of oleum/sulfur trioxide from the Facility, which resulted in a shelter-in-place for two neighboring facilities, and a March 9, 2022 release of anhydrous ammonia from the Facility.

19. EPA also sent an information request pursuant to CAA Section 114, 42 U.S.C. § 7414, to AdvanSix on May 10, 2022, as well as numerous follow-up emails. AdvanSix provided an

extranet site for EPA to review the documents requested in the information request on June 9, 2022, and responded to EPA's follow-up emails.

20. Based on its observations during the Inspection and its review of documents received from Respondent during the investigation, EPA determined that Respondent had the following chemicals present at its Facility, among other chemicals, in approximately the following amounts, from 2017 through 2022:

- 24,400,000 pounds of oleum (fuming sulfuric acid);
- 40,000,000 pounds of ammonia (anhydrous);
- 300,000 pounds of ammonia (concentration 20% or greater);
- 204,000 pounds of acetaldehyde; and
- 32,200 pounds of flammable mixture, containing hydrogen.

21. Oleum (fuming sulfuric acid), Chemical Abstract Service ("CAS") No. 8014-95-7, ammonia (anhydrous), CAS No. 7664-41-7, are regulated substances listed in accordance with CAA Section 112(r)(3), 42 U.S.C. § 7412(r)(3), pursuant to 42 U.S.C. § 7412(r)(2), in the list of regulated substances compiled at 40 C.F.R. § 68.130, each with a threshold quantity of 10,000 pounds. Ammonia (concentration 20% or higher), CAS No. 7664-41-7 is a regulated substance listed in accordance with CAA Section 112(r)(3), 42 U.S.C. § 7412(r)(3), pursuant to 42 U.S.C. § 7412(r)(2), in the list of regulated substances compiled at 40 C.F.R. § 68.130, with a threshold quantity of 20,000 pounds

22. According to its safety data sheet, the flammable mixture, CAS No. 00-11-11, contains at least ninety-nine percent (99%) of hydrogen, CAS No. 1333-74-0, with a fire rating of 4 under the National Fire Protection Association 704, Standard System for the Identification of the Hazards of Materials for Emergency Response. As such, the flammable mixture constitutes a regulated

substance listed at 40 C.F.R. § 68.130, with a threshold quantity of 10,000 pounds. 40 C.F.R. § 68.115(b)(2).

23. Section 112(r)(7)(B)(iii) of the CAA, 42 U.S.C. § 7412(r)(7)(B)(iii), and Section 68.150(a) of the RMP Regulations, 40 C.F.R. § 68.150(a), require the owner and operator of a stationary source to submit a risk management plan that includes the information required by 40 C.F.R. §§ 68.155-68.185 for all covered processes. 40 C.F.R. § 68.150(a)-(b).

24. Respondent submitted risk management plans for the Facility on September 5, 2017 and August 30, 2022.

25. According to the August 30, 2022 risk management plan, the caprolactam manufacturing process is subject to the Process Safety Management regulations promulgated by the Occupational Safety and Health Administration, at 29 C.F.R. 1910.119, and is subject to regulation under the Program 3 Prevention Program of the RMP Regulations, 40 C.F.R. Part 68, Subpart D. *See 40* C.F.R. § 68.10(i).

26. As a limited liability company, Respondent is, and at all times referred to herein, a "person" as defined by Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

27. The Facility is a "stationary source" pursuant to Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C).

28. Respondent has been the owner and operator of a "stationary source" at all times relevant to this Order.

29. EPA has determined that more than a threshold quantity of regulated substances oleum (fuming sulfuric acid), ammonia (anhydrous), ammonia (concentration greater than 20%), acetaldehyde, and flammable mixture are present in a process at the Facility.

30. Respondent is subject to the requirements of Section 112(r)(7) of the CAA, 40 C.F.R. § 7412(r)(7), and the RMP Regulations, 40 C.F.R. Part 68, at the Facility because Respondent is an owner or operator of a stationary source with more than a threshold quantity of a regulated substance present in a process at the Facility.

31. Based on its investigation, EPA has determined that Respondent did not fully comply with Section 112(r)(7) of the CAA and the RMP Regulations by failing to comply with certain mechanical integrity, process hazard analyses and process safety information requirements, as set forth in more detail below.

Mechanical Integrity - Piping Support Issues

32. Section 68.73(d)(2) of the RMP Regulations requires owners and operators of stationary sources to ensure that inspections and tests are performed on process equipment, including piping systems, and that the inspections and tests follow recognized and generally accepted good engineering practices. 40 C.F.R. § 68.73(a)(1)-(2), (d)(2).

33. Section 68.73(e) of the RMP Regulations requires owners and operators of stationary sources to correct deficiencies in equipment that are outside acceptable limits before further use, or in a safe and timely manner when necessary means are taken to assure safe operation. 40 C.F.R. § 68.73(e).

34. The term "recognized and generally accepted good engineering practices" for purposes of the design and maintenance of the caprolactam manufacturing process at the Facility includes the following five industry standards:

    a. MSS SP-58, Pipe Hangers and Supports-Materials, Design, Manufacture, Selection, Application and Installation (2006) (MSS SP-58);
    b. American Petroleum Institute 570, Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems, 3rd ed. (November 2009) (API 570);

c. American Petroleum Institute Recommended Practice 574, Inspection Practices for Piping System Components, 3rd ed. (November 2009) (API RP 574);
d. National Association of Corrosion Engineers SP0294, Standard Practice - Design, Fabrication, and Inspection of Storage Tank Systems for Concentrated Fresh and Process Sulfuric Acid and Oleum at Ambient Temperatures (2006) (NACE SP0294); and
e. National Association of Corrosion Engineers Publication 6G197/SSPC-TU 229, Design, Installation, and Maintenance of Coating Systems for Concrete Used in Secondary Containment- Information Report and Technology Update (February 1997) (NACE 6G197/SSPC-TU 229).

35. In the Facility's Marine Operations area, EPA inspectors observed that the piping associated with oleum tanks VT-518 and VT-519 was not properly supported in several locations. Specifically, piping was suspended from other pipes with hangers, which appeared to be carrying too much load, causing the pipes to bend under pressure.

36. In the Facility's Kellogg Unit around ammonia tank VT-520, EPA inspectors observed piping support brackets rising from ammonia pipes to support other ammonia pipes, wooden block piping supports, cinder block piping supports, and piping with missing insulation jackets. In the piping associated with ammonia-filled Horton Spheres HST-1 and HST-2, EPA inspectors observed piping lying atop other piping, piping on the ground, piping with missing jackets, piping supporting other pipes with cuts into insulation jackets, and piping with no insulation protective shields on the piping where hangers were located.

37. Support issues with the oleum and ammonia piping have existed at the Facility and were known to AdvanSix for some time. According to an AdvanSix 2016 inspection report for oleum tanks VT-518 and VT-519, inspectors observed broken pipe hangers and hangers being used inappropriately in vertical locations. The Facility's piping inspection report from 2015 for piping associated with tank VT-520 similarly describes "corroded/damaged or missing pipe supports," and improper wood block supports for pipes. The same conditions were present in 2020 for tank VT-520, with descriptions including "rope supports, "damaged hanger," "wire hanger," "loose

support," "needs support," "pipe resting on ground," "pipe resting on rock/conduit," "damaged pipe support," "corroded supports," "pipe supporting other pipe," "piping not in contact with support," and "pipe supported by wood."

38. Industry standard API RP 574 sets forth inspection practices for piping systems. With respect to supports it states, "External visual inspections are performed to determine the external condition of piping, insulation system, painting/coating systems, and associated hardware, and to check for signs of misalignment, vibration, and leakage." API RP 574, § 10.1. The standard goes on to specify problems to look for in piping supports during the visual inspection:

a) deterioration of protective coatings or fireproofing;
b) evidence of corrosion, especially at or near the foundation attachments;
c) distortion;
d) general physical damage;
e) movement or deterioration of concrete footings;
f) failure or loosening of foundation bolts;
g) insecure attachment of brackets and beams to the support;
h) restricted operation of pipe rollers or slide plates;
i) insecure attachment or improper adjustment of pipe hangers…;
j) broken or defective pipe anchors; and
k) restricted operation of pulleys or pivot points in counterbalanced piping systems.

API RP 574, § 10.1.4.1.

39. With respect to piping lying on the ground, the standard also specifies that inspection plans for piping plans should include the soil-to-air interface. API RP 574, § 7.2(g). As API 570 explains, the soil-to-air interface is an area in which external corrosion may occur on partially buried pipe, and thus the standard calls on owners/users to provide specific attention to the need for inspection of piping systems for specific types and areas of deterioration, including the soil-to-air interface. API 570, §§ 3.1.87 and 5.4.2.

40. Industry standard MSS SP-58 states that "Pipes shall not be suspended directly from each other unless formal calculations are performed and accepted by the responsible Piping Design

Engineer. If no calculations have been made, the individual hanger for each horizontal pipe in a vertical bank shall have the load transmitted directly to the rods, not the pipe above. Care shall be taken to size the rod appropriately for the total load at the support point." MSS SP-58, § 6.13. Industry standard API 570 provides that external inspections "shall include surveys for the condition of piping hangers and supports. Instances of cracked or broken hangers, "bottoming out" of spring supports, support shoes displaced from support members, or other improper restraint conditions shall be reported and corrected." API 570, § 5.5.4. For cold piping systems carrying ammonia, industry standards do not recommend wooden or concrete supports. *See* MSS SP-58, § 5.5.1 and Table A1.

41. Industry standard MSS SP-58 states, regarding insulated lines: "For piping systems using Type 40 protection shield for insulated piping, see Table A3 for spacing. Insulation protection shields shall be provided to protect the vapor barrier of insulation on cold lines. Under no circumstances shall hangers, supports or guides be applied directly to horizontal pipe or tubing on vapor barriered lines." MSS-SP-58, § 5.5.1. The standard further provides: "The connections to pipe attachments shall be outside the insulation so that movement of the line shall not cause damage to the insulation." MSS-SP-58, § 5.5.2.

42. The condition of the oleum and ammonia piping at the Facility, with its supports either improper or damaged, piping lying atop other piping, and missing insulation protective shields, is contrary to acceptable limits, as defined in MSS SP-58.

43. Respondent's inspections were deficient in not identifying the piping support deficiencies in the oleum tanks (VT-518 and VT-519), and in the ammonia tanks (VT-520, HST-1, and HST-2), in violation of the requirement that inspections and tests performed on process equipment follow recognized and generally accepted good engineering practices. 40 C.F.R. § 68.73(d)(2).

44. In not timely addressing the piping support deficiencies at its Facility, Respondent is in violation of the mechanical integrity requirements of the RMP Regulations, at 40 C.F.R. § 68.73(e).

Mechanical Integrity – Ammonia Piping Insulation Damage, Corrosion and Icing

45. EPA inspectors observed that, in some areas, ammonia piping associated with Horton Spheres HST-1 and HST-2 was lying on the ground, not insulated, with atmospheric corrosion. EPA inspectors also observed suspended piping with missing insulation jackets, exposed piping ends, and brackets piercing insulation in the absence of protective shields to spread the load of the brackets, with resulting breached vapor barriers, icing, and corrosion. EPA inspectors also observed that insulation jackets were missing from ammonia piping associated with tank VT-520, exposing foam insulation.

46. Exposed insulation core allows moisture to reach the carbon steel piping, which can lead to "corrosion under insulation" or "CUI." Industry standard API RP 574 discusses the need for a thorough CUI inspection to gauge whether CUI could be occurring, stating in relevant part: "External inspection of insulated piping systems should include a review of the insulation system integrity for conditions that could lead to CUI and signs of ongoing CUI. API 570 documents requirements of a CUI inspection program. Sources of moisture can include rain, water leaks, condensation, deluge systems, and cooling towers. The two forms of CUI are localized corrosion of carbon steel and chloride [stress corrosion cracking] of authentic stainless steels. See API 571 for additional details on CUI mechanisms." API RP 574, § 7.4.4.

47. The standard also discusses insulated piping systems susceptible to CUI, stating as follows: "Certain areas of piping systems are potentially more susceptible to CUI, including: … e) carbon steel piping systems, ones insulated for personnel protection, operating between 10 ºF (-12 ºC) and 350 ºF (175 ºC); CUI is particularly aggressive where operating temperatures cause frequent

or continuous condensation and reevaporation of atmospheric moisture. … k) piping systems with deteriorated insulation, coatings, and/or wrappings; bulges or staining of the insulation or jacketing systems or missing bands (bulges can indicate corrosion product buildup) … .” API RP 574, § 7.4.4.1.

48. Respondent’s representative indicated that the typical operating temperature of the Horton Spheres and associated piping is between 20 ºF and 30 ºF, indicating that the ammonia piping system is potentially more susceptible to CUI.

49. The companion standard, API 570, states about CUI Inspection:

> Inspection for CUI shall be considered for externally-insulated piping in areas or temperature ranges that are susceptible to CUI shown as indicated in API 574. CUI inspections may be conducted as part of the external inspection. If CUI damage is found during spot checks, the inspector should inspect other susceptible areas on the equipment.
>
> Although external insulation may appear to be in good condition, CUI damage may still be occurring. CUI inspection may require removal of some or all insulation. If external coverings are in good condition and there is no reason to suspect damage behind them, it is not necessary to remove them for inspection of the equipment. CUI damage is often quite insidious in that it can occur in areas where it seems unlikely.
>
> Considerations for insulation removal are not limited to but include:
>
> a) history of CUI for the specific piping system or comparable piping systems;
> b) visual condition of the external covering and insulation;
> c) evidence of fluid leakage (e.g. stains or vapors);
> d) whether the piping systems are in intermittent service;
> e) condition/age of the external coating, if known;
> f) evidence of areas with wet insulation;
> g) the type of insulation used and whether that insulation is known to absorb and hold water.

API 570, § 5.5.6.

50. The same piping areas associated with the Horton Spheres had been inspected by AdvanSix, as referenced in 2016 and 2021 piping inspection reports. Piping diagrams related to ammonia piping under HST-1 and HST-2 include the following observations made about this piping

during an April 4, 2016 visual inspection: "missing/damaged insulation," "minor general surface corrosion throughout," "pipe & insulation observed to be wet," "exposed pipe iced over throughout," "missing insulation," and "insulation and pipe wet." Similar conditions were observed five years later during the visual inspection conducted on March 23, 2021. The 2021 diagram includes the following observations for the same areas: "missing/damaged insulation," "minor general surface corrosion throughout," "exposed pipe iced over throughout," and "missing insulation/wet."

51. The Facility's piping inspection reports from 2020 for piping associated with tank VT-520 similarly describes: "Damaged, missing, and poorly sealed insulation was noted throughout the system" and "minor to moderate corrosion was noted on all exposed piping throughout the system experiencing coating failure" and recommended "repairing/replacing insulation" and "cleaning piping of corrosion scale and coating."

52. Respondent's own inspections in 2016 and 2021 identified conditions indicating likely CUI for the piping areas associated with the Horton Spheres. Further, Respondent's 2020 inspection report recommended repairing insulation and cleaning piping of corrosion scale to address the corrosion for piping associated with tank VT-520. At the time of EPA's inspection, Respondent had not informed EPA of any plans to address the damaged insulation, icing or corrosion, or to probe beneath the areas of insulation to ensure that corrosion was not occurring.

53. Respondent's failure to ensure the integrity of its ammonia piping by conducting the full piping inspection called for in API 570 is a violation of the requirement that inspections and tests performed on process equipment follow recognized and generally accepted good engineering practices. 40 C.F.R. § 68.73(d)(2).

54. In not timely addressing the corrosion deficiencies at its Facility, Respondent violated the mechanical integrity requirements to address equipment deficiencies in the RMP Regulations, at 40 C.F.R. § 68.73(e).

Mechanical Integrity – Condition of Oleum Containment Area

55. During the Inspection, EPA inspectors observed that the secondary containment area of oleum tank VT-746 was coated but that there was severe buckling, amounting to a coating failure, on the concrete floor of the containment area.

56. Industry standard NACE SP0294 contains a section dealing with safety and environmental concerns, specifically containment areas for oleum storage areas. NACE SP0294 states: *"*The area around sulfuric acid and oleum storage tank systems should be arranged such that any spillage goes to an *appropriate containment and neutralization system*. NACE Publication 6G197/SSPC-TU 229 contains information on coating systems for containment areas. See NFPA 30, OSHA 29 C.F.R. 1910 (j), and 40 CFR 112 Subparts A, B, and D.*"* NACE SP0294, § 6.3 (emphasis added).

57. The standard referred to in the above quotation, NACE Publication 6G197/SSPC-TU 229, describes maintaining good adhesion to the concrete substrate as critical to the performance of the coating performance, which depends on both the properties of the concrete substrate and the properties of the primer. NACE Publication 6G197, § 4.5. The standard also discusses thermal effects, specifically shrinkage from cure and aging: "Polymers and coatings often shrink volumetrically due to cross-linking or solvent evaporation. … When the stress and movement from shrinkage exceeds the tensile strength of the coating or adhesive strength between the coating and the concrete, the failure is usually evident as cracking in the coating and/or disbondment from the concrete. … Fillers, reinforcement, and thin coats are commonly used to reduce shrinkage and distribute shrinkage stress." NACE Publication 6G197, § 4.6.1.

58. The severe buckling witnessed by EPA inspectors in the concrete floor of the oleum containment area indicates either a flaw in the adhesion, perhaps due to thermal effects, or in the quality of underlying concrete. EPA inspectors determined that the containment structure, buckled as it was, was not an *appropriate* containment system.

59. It is unknown how long the floor of the oleum containment area was in such a condition. In 2022, Respondent's inspection report notes that the dike sealant was deteriorating, with a recommendation made to repair the sealant, just as with oleum tank VT-747. Respondent represents that it has a proposed plan to repair the containment areas of both VT-756 and VT-747.

60. By failing to timely address this evident process equipment deficiency, Respondent has violated the mechanical integrity requirements of the RMP Regulations at 40 C.F.R. § 68.73(e).

Mechanical Integrity – Insufficient Inspections of Oleum Tanks

61. During the investigation, EPA learned that Respondent conducted internal inspections of tanks VT-518 and VT-519, containing oleum, but Respondent did not utilize linear ultrasonic thickness ("UT") scanning methods for the tanks to evaluate "bathtub ring corrosion."

62. Industry standard NACE SP0294 provides that "Linear UT scans shall be used if bathtub-ring corrosion or erosion-corrosion is suspected. The results of the external visual and UT inspections in accordance with Paragraphs 5.5 and 5.6 may indicate that internal inspection should be performed sooner. Tanks experiencing leakage should be inspected internally and repaired within 3 months after leakage was first discovered and mitigated." NACE SP0294, § 5.1.3.1. The footnote explains that "Linear ultrasonic thickness scans are much more likely to detect bathtub-ring corrosion and local erosion-corrosion than spot UT measurements. UT scans are continuous thickness measurements (B-scans) along a straight path conducted manually or with a magnetic

crawler." NACE SP0294, FN 10. The footnote goes on to explain precisely how to conduct linear UT scans.

63. According to interviews conducted by a Respondent representative in April 2022, in the aftermath of the oleum release from VT-518, employees reported seeing fuming from underneath the insulation in the middle of the tank and oleum coming down the sides of the tank during the incident, and periodic smoking from the top of the tank during the months prior to the oleum release.

64. These visual observations by Respondent's employees indicate that tank VT-518 was experiencing leakage that should have led to an internal inspection of tank VT-518 within three months of the initial observations, in accordance with the industry standard, NACE SP0294, § 5.1.3.1.

65. EPA reviewed inspection reports for tank VT-518 dated June 2, 2014 (internal), March 27, 2019 (external), July 13, 2020 (internal) and March 30, 2022 (external). The 2014 inspection report contains observations and photographs consistent with bathtub-ring corrosion. The narrative of the inspection report dated June 2, 2014 identifies the following issues, among others: several instances of corrosion in the tank and "Grooving in shell beneath 2008 flush patch repair," which the report describes as "possibly the result of a weak acid attack." Photographs from Respondent's 2014 full internal inspection report includes one entitled "Grooves Below Flush Patch," which EPA has identified as "bathtub-ring corrosion."

66. EPA has determined that the thickness testing done on the oleum tanks was insufficient to identify bathtub-ring corrosion. Respondent conducted ultrasonic thickness testing ("UT") scans on tank VT-518 on April 16, 2013, March 27, 2019, April 14, 2020, and March 23, 2022. The

scans Respondent conducted do not appear to be linear UT scans, as NACE SP0294 indicates should be performed if bathtub-ring corrosion is suspected.

67. The inspection reports for tank VT-518 dated March 27, 2019 (external), July 13, 2020 (internal) and March 30, 2022 (external) indicate continued corrosion issues with tank VT-518, including an observation in 2020 of "[m]ultiple holes noted in roof towards the center of the tank at 90 and 180" and the following observation documented in 2022:

> Crystallized Product was noted on and around the first shell course manway at 180, the first shell course behind the tank insulation as well as on the support grillage and floor sections at 180. The suspected source is from the roof at 180° where epoxy type temporary repairs are present on the roof edge, an 18" roof nozzle and a ~2" nozzle near the 18" nozzle. Insulation jacketing has corroded away in an area directly beneath the temporary repairs. These repairs appear to be failing in areas around the 18" roof nozzle.

VT-518 External Visual Inspection Report, March 30, 2022.

68. Based on its review of these internal tank inspection reports, EPA believes bathtub-ring corrosion was present in tank VT-518 in 2014 and corrosion continued to manifest itself in the following years.

69. In not conducting a linear UT scan of tank VT-518 as indicated by the tank inspection reports and in accordance with NACE 0294, AdvanSix violated the mechanical integrity requirement in the RMP Regulations that "inspections and tests performed on process equipment follow recognized and generally accepted good engineering practices." 40 C.F.R. § 68.73(d)(2).

70. In not timely addressing the corrosion deficiencies on tanks VT-518 at its Facility, AdvanSix violated the mechanical integrity requirement in the RMP Regulations to address equipment deficiencies, at 40 C.F.R. § 68.73(e).

71. EPA also reviewed inspection reports for the companion tank also containing oleum, tank VT-519, dated March 27, 2014 (external), April 17, 2017 (internal), April 20, 2017 (external), and February 28, 2020 (external). The inspection reports contain observations and photographs of

corrosion, with possible bathtub-ring corrosion. The narrative of the inspection report dated April 17, 2017 for the internal inspection conducted between April 3-7, 2017, notes the following corrosion issues, among others:

- "The roof has 2 holes (temporarily patched) and severe corrosion in the vicinity of the conservation vent nozzle. In this vicinity, the roof to rim angle weld has through wall corrosion in 2 places."
- "2 areas of severe localized corrosion were observed in the upper shell course at approximately 0 degrees. (Beneath temp patch)"
- An internal scab patch was observed on the shell beneath the RV nozzle at approximately 31' elevation. Severe localized corrosion was observed on the patch. A corner of the fillet weld had corroded through wall. A pinhole was observed in the termination of the patch longitudinal weld (patch is made of 2 sections welded vertically). Severe corrosion was observed on the shell beneath the patch, and adjacent to this area."
- "UT thickness inspection and follow up thickness scans identified areas of the lower shell course where external corrosion had resulted in material wastage to below or near shell course minimum allowable thickness."

72. The corrosion in tank VT-519 appears to be located around the same height, the filling height, as the corrosion present in tank VT-518. EPA also reviewed a set of photographs associated with the 2017 internal inspection of tank VT-519. EPA believes that photographs DSCN5884, DSCN5885 and IMG_1997 of tank VT-519 exhibit bathtub-ring corrosion. AdvanSix conducted UT-scans on tank VT-519 in 2017. However, the UT scans Respondent conducted do not appear to be linear UT scans, as NACE SP0294 indicates should be performed if bathtub-ring corrosion is suspected.

73. The inspection reports for tank VT-519 dated March 27, 2014, April 17, 2017, April 20, 2017 and February 28, 2020 also indicate corrosion issues with tank VT-519. For example, the external inspection report from 2020 notes that, "Moisture is getting between the shell insulation and the tank due to a gap in the insulation and the shell where it meets the roof."

74. In its investigation findings after the oleum release, Respondent noted that holes in the roof of tank VT-518 were caused by intermittent breathing through the conservation vent when the vent

scrubber line (SE-141) became plugged. The holes in turn allowed the infiltration of moisture. Respondent had previously identified holes in the tops of oleum tank VT-518 in inspections in 2019 and 2020, and in oleum tank VT-519 in 2017. In tanks containing oleum, the introduction of moisture can create dilute sulfuric acid.

75. Internal corrosion of unlined carbon steel tanks by dilute sulfuric acid is addressed by industry code NACE SP0294. The code explains: "Dilute sulfuric acid causes rapid attack of carbon steel. Dilute acid can be formed by absorption of moisture from the outside air, entry of rainwater, or improper cleaning. Entry of moisture from the outside should be controlled by proper venting and by minimizing air movement caused by natural convection." NACE SP0294, § 2.8.1.1.

76. To ensure the continued integrity of its oleum tanks with conservation vents, Respondent must ensure that moisture is not introduced into the tanks via these roof holes by promptly identifying and addressing the cause of the holes and timely repairing the holes.

77. Based in its review of these tank inspection reports, EPA believes bathtub-ring corrosion was present in tank VT-519 in 2017 and continued to manifest itself in the years following. Given that the 2017 photographs of tank VT-519 indicate possible bathtub-ring corrosion, and tank VT-518, a tank in similar service to tank VT-519, also exhibited bathtub-ring corrosion, Respondent should have considered this hazard in managing tank VT-519.

78. In not conducting a linear UT scan of tank VT-519 after seeing its tank inspection reports in accordance with NACE 0294, Respondent violated the mechanical integrity requirement in the RMP Regulations that "inspections and tests performed on process equipment follow recognized and generally accepted good engineering practices." 40 C.F.R. § 68.73(d)(2)

79. In not timely addressing the corrosion deficiencies on tank VT-519 at its Facility, Respondent violated the mechanical integrity requirement in the RMP Regulations to address equipment deficiencies, at 40 C.F.R. § 68.73(e).

Process Hazard Analysis

80. Section 68.67 of the RMP Regulations requires owners and operators to perform an initial process hazard analysis (hazard evaluation) on processes covered by the Program 3 Prevention Program (Subpart D of the RMP Regulations). 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. 40 C.F.R. § 68.67(a). The process hazard analysis shall address the hazards of the process, among other factors. 40 C.F.R. § 68.67(c)(1). The process hazard analysis shall be updated at least every five (5) years after the completion of the initial process hazard analysis. 40 C.F.R. § 68.67(f).

81. One of the industry standards Respondent identified as applying to the oleum tanks, VT-518 and VT-519, is NACE SP0924. This industry standard specifically identifies bathtub-ring corrosion as a possible hazard for tanks with corrosion and infiltration issues. NACE SP0924, § 5.1.3.2.1

82. Based on EPA inspectors' review of the Marine Operations process hazard analysis ("PHA") from 2017 for oleum tanks VT-518 and VT-519, the PHA did not consider the potential hazard of bathtub-ring corrosion in the oleum tanks. Specifically, the process hazard analysis did not identify bathtub-ring corrosion as a deviation, an intermediate event, or a significant process safety scenario, nor did the PHA identify any safeguards to put in place to prevent bathtub-ring corrosion or make any recommendations with regard to the risk.

[1] Oleum, also known as fuming sulfuric acid, is a mixture of sulfuric acid (H2SO4) and sulfur trioxide (SO3). When released or spilled, oleum gives off sulfur trioxide gas. The gas reacts with moisture in air and forms a cloud of sulfuric acid mist. The same occurs when the oleum is exposed to moisture in the air, such as when moisture infiltrates the tank through holes. The resulting sulfuric acid attacks the steel of the tank.

83. Moreover, the PHA conducted after the oleum release, the May 5, 2022 Marine Operations PHA revalidation report, also did not identify bathtub-ring corrosion as a potential hazard.

84. Respondent's failure to consider and address the potential hazard of bathtub-ring corrosion identified by industry standard NACE SP0294 in its PHA is a violation of the requirements for PHAs in the RMP Regulations, at 40 C.F.R. § 68.67(a), (c)(1).

Process Safety Information

85. EPA also determined that Respondent's oleum tanks VT-518 and 519, acetaldehyde pressurized vessel tank HT-187 and ammonia tank VT-520 were not labeled in accordance with industry standards.

86. Under the RMP Regulations, owners and operators of stationary sources must compile and maintain up-to-date safety information related to the regulated substances, processes, and equipment, including codes and standards used to design, build, and operate the process. See 40 C.F.R. § 68.48(a). Further, owners and operators must ensure that the process is designed in compliance with recognized and generally accepted good engineering practices. See 40 C.F.R. § 68.48(b).

87. The relevant recognized and generally accepted good engineering practices for purposes of the caprolactam manufacturing process at the Facility includes the following three industry standards:

- American Petroleum Institute Standard 650, *Welded Steel Tanks for Oil Storage*, 10th ed. (November 1998) (API 650);
- American Society of Mechanical Engineers VIII, *Boiler & Pressure Vessel Code* (2004) (ASME VIII); and
- National Fire Protection Association 400, *Hazardous Materials Code* (2010) (NFPA 400).

88. With respect to oleum tanks VT-518 and VT-519, tank drawings, inspection documentation, responsive documentation provided by Respondent, and field observations for oleum tanks VT-518 and VT-519 indicate the tanks are inspected to API 653 and NACE SP0924 standards, and that both tanks are constructed to API 650 standards.

89. During the field inspection, EPA inspectors observed no legible nameplates on tanks VT-518 and VT-519.

90. Industry Standard API 650 states: "A tank made in accordance with this standard shall be identified by a nameplate similar to that shown in Figure 8-1." API 650, § 8.1.1. Nameplates identify information such as the tank standard, diameter and height, capacity, design metal temperature, maximum operating temperature, and fabrication manufacturer. *Id*.

91. Respondent's reports for the external inspections of tanks VT-518 and 519 in March 2019 and February 2020, respectively, noted as an issue in each report that the tanks were neither marked nor labeled and recommended that a label be applied to the tanks.

92. In the years since the reports were issued, Respondent did not address the lack of labeling on either tank VT-518 or VT-519.

93. With respect to ammonia tank VT-520, a concrete tank, industry standard NFPA 400 provides, "Visible hazard identification sign in accordance with NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, shall be placed … (1) On stationary aboveground tanks." NFPA 400, § 6.1.8.2.1.

94. EPA inspectors observed during the Inspection that tank VT-520 had no NFPA 704 placard, although an NFPA 704 placard was on the stairway leading to the roof of the tank.

95. Respondent's failure to comply with the process safety information standards set forth in industry standards API 650, ASME VIII, and NFPA 400 violates the requirements in the RMP

Regulations to "ensure that the process is designed in compliance with recognized and generally accepted good engineering practices." *See* 40 C.F.R. § 68.48(b).

D. ORDER

96. Respondent agrees to undertake the action and provide the information specified below (the "Work").

a. Within thirty (30) days of the effective date of this Order, identify a person, subject to acceptance by EPA, competent to undertake the Work specified herein;

b. Within thirty (30) days of receipt of EPA's written acceptance of the person competent to undertake the Work, Respondent shall submit to EPA for approval a work plan and schedule ("Work Plan and Schedule") for the implementation of improvements to the Facility to address the conditions described in Paragraphs 17 through 95, above. The Work shall be consistent with the safety protection provided by the industry standards MSS SP-58-2009, API 570, API RP 574, NACE SP0294, NACE 6G197/SSPC-TU-229, API 650, ASME VIII, and NFPA 400.

c. EPA will review the Workplan and Schedule submitted pursuant to subparagraph 96.b., and will either accept it or direct Respondent to make changes and resubmit the document within twenty (20) days;

d. Within seven (7) days of receipt of EPA's written acceptance of the Workplan and Schedule, submitted pursuant to subparagraph 96.b., Respondent shall initiate implementation of the EPA-accepted Workplan and complete the Workplan in accordance with the EPA-accepted Schedule;

e. On the one-month anniversary of the Effective Date of this Order, and each thirty (30) days thereafter, Respondent shall submit electronically to EPA a written monthly progress report detailing steps taken during the preceding month to implement the EPA-accepted Workplan in accordance with the EPA-accepted Schedule;

f. Within thirty (30) days after completing the work in accordance with the EPA-accepted Workplan and Schedule at the Facility, Respondent shall submit to EPA, for EPA's approval, a written report verifying that Respondent has complied with the EPA-accepted Workplan and Schedule at the Facility ("Completion Report"). The Completion Report, with the following certification, shall be signed by a responsible official of Respondent, as such term is defined in paragraph 97, below:

> I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

g. EPA will review the Completion Report submitted pursuant to subparagraph 96.f., and will either approve it in writing or identify deficiencies in writing ("Notice of Work Deficiencies") and direct Respondent to correct and/or re-perform any or all Work disapproved by EPA and resubmit the report for EPA approval within thirty (30) days of receiving the Notice of Work Deficiencies associated with the Completion Report.

97. Any notice, report, plan, certification, data presentation or other document submitted by Respondent under or pursuant to this Order which discusses, describes, demonstrates or supports

any finding or makes any representation concerning Respondent's compliance or noncompliance with any requirement(s) of this Order shall be certified by a responsible official of said Respondent. The term "responsible official" means: (i) the president, secretary or vice-president of the corporation in charge of principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The responsible official of a partnership or sole proprietorship means the general partners or the proprietor, respectively.

98. Respondent shall provide EPA and its representatives, including contractors and grantees, with access to the Facility for the purpose of assessing Respondent's compliance with this Order and with the Act. Respondent shall also provide EPA and its representatives, including contractors and grantees, with access to all non-privileged records relating to Respondent's implementation of this Order, and shall comply with all requests for information pertaining to this Order.

99. Respondent shall preserve all documents and information relating to the activities carried out pursuant to this Order for five (5) years after completion of the Work required by this Order. Upon request, Respondent shall provide EPA with copies of such non-privileged documents and information.

100. All documents submitted by Respondent to EPA in the course of implementing the Order shall be available to the public unless identified as confidential by the Respondent pursuant to 40 C.F.R. Part 2, Subpart B, and determined by EPA to require treatment as confidential business information in accordance with applicable law.

E. GENERAL PROVISIONS

101. Any violation of this Order may result in a civil administrative or judicial action for an injunction or civil penalties of up to $55,808 per day per violation, or both, as provided in Sections 113(b)(2) and 113(d)(1) of the Act, 42 U.S.C. §§ 7413(b)(2) and 7413(d)(1), as amended by the Debt Collection Improvement Act, as well as criminal sanctions as provided in Section 113(c) of the Act, 42 U.S.C. § 7413(c). EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.

102. Nothing in this Order shall relieve Respondent of the duty to comply with all applicable provisions of the Act or other federal, state or local laws or statutes, nor shall it restrict EPA's authority to seek compliance with any applicable law or regulations, nor shall it be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

103. Nothing herein shall be construed to limit the power of EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to the public health, welfare, or the environment.

104. Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by Respondent or Respondent's employees, agents, contractors, or consultants engaged to carry out any action or activity pursuant to this Order, nor shall EPA or the United States be held as a party to any contract entered into by Respondent or by Respondent's employees, agents, contractors, or consultants engaged to carry out the requirements of this Order.

105. The provisions of this Order shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives, successors, and assigns. From the Effective Date of this Order until the Termination Date as set out in paragraph

118 below, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion of or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to EPA. In the event of any such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless EPA has provided written approval of the release of said obligations or liabilities.

106. Unless this Order states otherwise, whenever, under the terms of this Order, written notice or other document is required to be given, it shall be directed electronically to the individuals specified at the addresses below unless those individuals or their successors give notice of a change of address to the other party in writing:

For EPA:

Arlin Galarza-Hernandez
Enforcement and Compliance Assurance Division
Galarza-Hernandez.Arlin@epa.gov

Patrick Beckley
Enforcement and Compliance Assurance Division
Beckley.Patrick@epa.gov

Kevin Daniel
Office of Enforcement and Compliance Assurance
Daniel.Kevin@epa.gov

Daniel Boehmcke, Senior Assistant Regional Counsel
Office of Regional Counsel
Boehmcke.Daniel@epa.gov

Jennifer Abramson, Senior Assistant Regional Counsel
Office of Regional Counsel
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For Respondent:

John Sheridan, PSM Site Leader
AdvanSix Resins & Chemicals LLC
John.Sheridan@advansix.com

Eric J. Cuvo, PSM Manager
AdvanSix Resins & Chemicals LLC
Eric.Cuvo@advansix.com

Achilles B. Kintiroglou, Senior Vice President and General Counsel
AdvanSix Resins & Chemicals LLC
AKintiroglou@advansix.com

Patrick S. Casey
Sidley Austin LLP
pcasey@sidley.com

All notices and submissions shall be considered effective upon receipt.

107. To the extent this Order requires Respondent to submit any information to EPA, Respondent may assert a business confidentiality claim covering part or all of that information, but only to the extent and only in the manner described in 40 C.F.R. Part 2, Subpart B. EPA will disclose information submitted under a confidentiality claim only as provided in 40 C.F.R. part 2, Subpart B. If Respondent does not assert a confidentiality claim, EPA may make the submitted information available to the public without further notice to Respondent.

108. Each undersigned representative of the Parties certifies that he or she is authorized to enter into the terms and conditions of this Order to execute and bind legally the Parties to this document.

109. For purposes of the identification requirement in Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 1.162(f)(2)(A)(ii), and 26 C.F.R. § 1.162-21(b)(2), performance of the Work identified in Section D is restitution, remediation, or required to come into compliance with the law.

F. EFFECTIVE DATE AND OPPORTUNITY FOR A CONFERENCE

110. Pursuant to Section 113(a)(4) of the Act, an Order does not take effect until the person to whom it has been issued has had an opportunity to confer with EPA concerning the alleged violations. By signing this Order, Respondent acknowledges and agrees that it has been provided an opportunity to confer with EPA prior to issuance of this Order. Accordingly, this Order will take effect upon receipt by Respondent of a fully executed copy of the Order.

111. Any reports, plans, specifications, or other submissions required by this Order are, upon acceptance by EPA, incorporated into this Order. Any non-compliance with such EPA-accepted reports, plans, specifications, schedules, or other submissions shall be considered non-compliance with the requirements of this Order.

112. No informal advice, guidance, suggestions or comments by EPA regarding reports, plans, specifications, schedules, or other submissions by the Respondent or the requirements of this Order will be construed as relieving the Respondent of its obligations to obtain formal acceptance when required by this Order, and to comply with the requirements of this Order unless formally modified.

113. This Order may be modified or amended in a writing executed by the Director of the Enforcement & Compliance Assurance Division. Such modifications or amendments shall be effective on the date they are fully executed by Respondent and the Director of the Enforcement & Compliance Assurance Division or such other date as set by the Director of the Enforcement & Compliance Assurance Division. Minor modifications to the Order and/or schedule thereto may be approved by EPA's Risk Management Coordinator, Kevin Daniel.

114. In the event of an inability or anticipated inability on the part of the Respondent to perform any of the actions required by this Order in the time and manner required herein, the Respondent

shall notify EPA orally within twenty-four (24) hours of such event (or, if the event occurs on a Friday or Saturday, Sunday, or legal holiday, no later than the following business day) and in writing as soon as possible, but in no event more than three (3) days after such event. Such notice shall set forth the reason(s) for, and the expected duration of, the inability to perform; the actions taken and to be taken by Respondent to avoid and mitigate the impact of such inability to perform; and the proposed schedule for completing such actions. Such notification shall not relieve Respondent of any obligation of this Order. Respondent shall take all reasonable actions to prevent and minimize any delay.

115. Failure by Respondent to carry out any requirement of this Order in accordance with the terms and conditions specified herein may result in the initiation of an enforcement action against Respondent to require Respondent to perform such actions, in addition to any other relief that may be available to EPA pursuant to applicable law. Respondent reserves all rights, claims and defenses to respond to any enforcement by EPA pursuant to this paragraph or under any authority.

116. Nothing in this Section or any other provision of this Order shall be construed to limit any powers EPA may have under the Act or any other law or regulation, nor shall they be construed to limit any defenses that Respondent may have under the Act or otherwise.

G. JUDICIAL REVIEW

117. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b)(1) of the Act, 42 U.S.C. § 7607(b)(1).

H. TERMINATION

118. This Order shall terminate on the earlier of the following (the "Termination Date"):

a. One year after the Effective Date of this Order;

b. The effective date of any determination by EPA that Respondent has achieved compliance with all terms of this Order; or

c. Immediately upon receipt by Respondent of notice from EPA finding that an imminent and substantial endangerment to public health, welfare, or the environment has occurred.

119. Termination of this Order shall not, however, terminate Respondent's obligation to comply with any continuing obligations of any federal, state or local law, statute, ordinance, rule or regulations, and all continuing obligations shall continue was they did before the termination of the Order.

I. COPIES OF ADMINISTRATIVE ORDER

120. Subject to the provisions of 40 C.F.R. Part 2, Subpart B regarding the confidentiality of business information, a copy of this Order or portions thereof will be provided to: Lee Crowell, Director, Enforcement Division, Virginia Department of Environmental Quality at Lee.Crowell@deq.virginia.gov.

For United States Environmental Protection Agency Region 3

KAREN MELVIN

Digitally signed by KAREN MELVIN
Date: 2023.02.22 13:05:59 -05'00'

[*Digital Signature and Date*]
Karen Melvin, Director
Enforcement & Compliance Assurance Division

For Respondent, AdvanSix Resins & Chemicals LLC

2/16/2023

[Digital Signature and Date]

Name: Andy Girvin,
Title: Hopewell AdvanSix Site Leader
Address: 905 East Randolph Road
Hopewell, Virginia 23860

CERTIFICATION OF SERVICE

I certify that the foregoing "Administrative Compliance Order on Consent" In the Matter of AdvanSix Resins & Chemicals LLC, Docket No. CAA-03-2023-0068DA, was filed and copies of the same were mailed to the parties as indicated below via electronic mail:

For Respondent:

John Sheridan, PSM Site Leader
AdvanSix Resins & Chemicals LLC
John.Sheridan@advansix.com

Eric J. Cuvo, PSM Manager
AdvanSix Resins & Chemicals LLC
Eric.Cuvo@advansix.com

Achilles B. Kintiroglou,
Senior Vice President and General Counsel
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Patrick S. Casey
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pcasey@sidley.com

For EPA:

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_____
[*Digital Signature and Date*]
Regional Hearing Clerk
U.S. Environmental Protection Agency, Region 3