IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA

IN RE: AQUEOUS FILM-FORMING FOAMS PRODUCTS LIABILITY LITIGATION	MDL No. 2:18-mn-2873-RMG
CITY AND COUNTY OF DENVER, *Plaintiff,* *- vs -* THE 3M COMPANY, f/k/a Minnesota Mining and Manufacturing Co., AGC CHEMICALS AMERICAS INC., AMEREX CORPORATION, ARKEMA INC., ARCHROMA U.S. INC., BASF CORPORATION, individually and as successor in interest to Ciba Inc., BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER GLOBAL CORPORATION, CHEMDESIGN PRODUCTS INC., CHEMGUARD INC. CHEMICALS, INC., CLARIANT CORPORATION, individually and as successor in interest to Sandoz Chemical Corporation, CORTEVA, INC., individually and as successor in interest to DuPont Chemical Solutions Enterprise, DEEPWATER CHEMICALS, INC., DUPONT DE NEMOURS INC., individually and as successor in interest to DuPont Chemical Solutions Enterprise, DYNAX CORPORATION, E. I. DU PONT DE NEMOURS AND COMPANY, individually and as successor in interest to DuPont Chemical Solutions Enterprise, FIRE SERVICE PLUS, INC., KIDDE-FENWAL, INC., individually and as successor in interest to Kidde Fire Fighting, Inc., NATION FORD CHEMICAL COMPANY, NATIONAL FOAM, INC., THE CHEMOURS COMPANY, individually and as successor in interest to DuPont Chemical Solutions Enterprise, THE CHEMOURS COMPANY FC, LLC, individually and as successor in interest to DuPont Chemical Solutions Enterprise, TYCO FIRE PRODUCTS, LP, individually and as successor in interest to The Ansul Company, and JOHN DOE DEFENDANTS 1-20, *Defendants.*	C/A No.: 2:23-cv-01250-RMG **COMPLAINT** **Jury Trial Demanded**

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I. COMPLAINT AND DEMAND FOR JURY TRIAL

Plaintiff City and County of Denver ("Plaintiff" or "Denver"), by and through its undersigned counsel, hereby files this Complaint against Defendants 3M Company, f/k/a Minnesota Mining and Manufacturing Co., AGC Chemicals Americas Inc., Amerex Corporation, Arkema Inc., Archroma U.S. Inc., BASF Corporation, Buckeye Fire Equipment Company, Carrier Global Corporation, ChemDesign Products Inc., CHEMGUARD Inc., Chemicals, Inc., Clariant Corporation, Corteva, Inc., Deepwater Chemicals, Inc., DuPont de Nemours Inc., DYNAX Corporation, E. I. du Pont de Nemours and Company, Fire Service Plus, Inc., Kidde-Fenwal, Inc., Nation Ford Chemical Company, National Foam, Inc., The Chemours Company, The Chemours Company FC, LLC, and Tyco Fire Products, LP, and Doe Defendants 1-20, fictitious names whose present identifies are unknown (collectively "Defendants") and alleges, upon information and belief, as follows:

II. INTRODUCTION

1. Per- and polyfluoroalkyl substances (collectively, "PFAS") are a class of highly toxic "forever" chemicals that persist in the environment indefinitely. These chemicals are human-made and do not occur naturally in the environment. PFAS are dangerous to human health and the environment even at fleetingly low levels. Because these compounds bio-accumulate and bio-magnify in human and animal tissues, there may be no safe level of exposure to PFAS. PFAS exposure interferes with human immune system functioning, disrupts mammalian reproductive and endocrine systems, and is associated with increased risks of kidney and testicular cancer. In addition to being highly toxic, these "forever chemicals" are highly mobile. When they enter the environment, they travel through soil and eventually work their way into groundwater.

2. Two of the most commonly used PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). For many decades, PFOA was used in the manufacturing of

DuPont's non-stick coating, Teflon. Another common use of both PFOA and PFOS is as a component of a fire-suppressant material called aqueous film-forming foam ("AFFF").

3. AFFF is used in training and firefighting activities for fighting liquid-based fires, including those involving jet fuel, gasoline, or other fuels. The Federal Aviation Administration ("FAA") requires AFFF to be used at commercial airports, including the Denver International Airport. When used in firefighting training, emergency response activities, and federally mandated testing of firefighting equipment, AFFF is sprayed over structures and onto the ground. In other words, AFFF directly enters the environment from its intended use.

4. Like fluorine-free firefighting foam, AFFF contains water, solvents, and hydrocarbon surfactants. Unlike fluorine-free firefighting foam, however, AFFF also contains fluorosurfactants. A surfactant is a chemical compound that acts to break up the surface tension between two materials; in the context of firefighting foam, surfactants allow the foam to spread over the material fueling the fire, thus blanketing and extinguishing the fire. A fluorosurfactant is a surfactant that contains a perfluoroalkyl group (i.e., PFAS).

5. At various times from the 1950s through today, Defendants designed, manufactured, marketed, distributed, and/or sold AFFF products containing PFOS, PFOA, and/or their chemical precursors, and/or designed, manufactured, marketed, distributed, and/or sold the fluorosurfactants and/or poly- and perfluorinated chemicals contained in AFFF (collectively, "AFFF/Component Products").

6. Defendants designed, manufactured, marketed, distributed, and/or sold AFFF/Component Products despite knowing that PFAS are toxic, persist indefinitely, and would be routinely released into the environment during firefighting training, emergency response

activities, and federally mandated testing of firefighting equipment, even when used as directed and intended by Defendants.

7. Like numerous other communities across the country, Denver is now facing the problem of pervasive PFAS contamination from AFFF use. This problem is particularly acute for Denver as the operator of Denver International Airport, the second-largest airport in the world by land area. Defendants, with their extensive knowledge of the properties and risks of PFAS, had all of the information necessary to know that their products would contaminate the environment. PFAS cleanup is difficult, expensive, and will take Denver years to complete. Denver should not be left to shoulder this burden. Defendants, who continued to manufacture and sell these chemicals for decades despite their knowledge, should pay to help clean up the mess that they created.

III. JURISDICTION AND VENUE

8. This Court has subject matter jurisdiction over the Defendants pursuant to 28 U.S.C. §1332(a), in that this action seeks monetary relief in excess of the sum or value of $75,000, exclusive of interest, and there is complete diversity between the parties.

9. Pursuant to this Court's Case Management Order No. 3 ("CMO 3"), this Complaint is filed as an original action in the United States District Court for the District of South Carolina.

10. But for CMO 3, Plaintiff would have filed this Complaint in the United States District Court for the District of Colorado. In accordance with CMO 3, Plaintiff designates as Plaintiff's Home Venue the United States District Court for the District of Colorado, being the proper venue of origin where the Plaintiff's claims could otherwise have been brought pursuant to 28 U.S.C. § 1391.

11. Venue is proper in the United States District Court for the District of Colorado because it is the judicial district in which Plaintiff is a resident, in which the property that is the

subject of Plaintiff's claims is situated, and where a substantial part of the events or omissions giving rise to Plaintiff's claims occurred.

12. This Court has personal jurisdiction over Defendants by virtue of each Defendants' regular and systematic contacts with Colorado, including, among other things, purposefully marketing, selling and/or distributing their AFFF/Component Products to and within Colorado, and because they have the requisite minimum contacts with Colorado necessary to constitutionally permit the Court to exercise jurisdiction over them consistent with traditional notions of fair play and substantial justice.

IV. PARTIES

A. Plaintiff

13. Plaintiff the City and County of Denver ("Plaintiff" or "City and County of Denver" or "Denver") is a home-rule municipality and a municipal corporation of the State of Colorado under the Colorado Constitution, Article XX.

14. The City and County of Denver owns and operates Denver International Airport. The management, operation, and control of Denver International Airport is delegated to the Denver Department of Aviation under Sections 2.11.1 to 2.11.3 of the Denver City Charter.

B. Defendants

15. The term "Defendants" refers to all Defendants named herein jointly and severally.

1. The AFFF Defendants

16. The term **"AFFF Defendants"** refers collectively to Defendants 3M Company, Amerex Corporation, Buckeye Fire Equipment Company, Carrier Global Corporation, Chemguard Inc., Fire Service Plus, Inc., Kidde-Fenwal, Inc., National Foam, Inc., and Tyco Fire Products L.P.

17. **Defendant The 3M Company f/k/a Minnesota Mining and Manufacturing Co. ("3M")** is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 3M Center, St. Paul, Minnesota 55144-1000.

18. Beginning before 1970 and until at least 2002, 3M designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

19. **Defendant Amerex Corporation ("Amerex")** is a corporation organized and existing under the laws of the State of Alabama, with its principal place of business located at 7595 Gadsden Highway, Trussville, AL 35173.

20. Amerex is a manufacturer of firefighting products. Beginning in 1971, it was a manufacturer of hand portable and wheeled extinguishers for commercial and industrial applications.

21. In 2011, Amerex acquired Solberg Scandinavian AS, one of the largest manufacturers of AFFF products in Europe.

22. On information and belief, beginning in 2011, Amerex designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

23. **Defendant Tyco Fire Products LP ("Tyco")** is a limited partnership organized under the laws of the State of Delaware, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143-2542.

24. Tyco is the successor in interest of The Ansul Company ("Ansul"), having acquired Ansul in 1990.

25. Beginning in or around 1975, Ansul designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

26. After Tyco acquired Ansul in 1990, Tyco/Ansul continued to design, manufacture, market, distribute, and sell AFFF products containing PFAS, including but not limited to PFOA and PFOS.

27. **Defendant Chemguard, Inc. ("Chemguard")** is a corporation organized under the laws of the State of Texas, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143.

28. On information and belief, Chemguard designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

29. On information and belief, Chemguard was acquired by Tyco International Ltd. in 2011.

30. **Defendant Buckeye Fire Equipment Company ("Buckeye")** is a corporation organized under the laws of the State of Ohio, with its principal place of business located at 110 Kings Road, Kings Mountain, North Carolina 28086.

31. On information and belief, Buckeye designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

32. **Defendant National Foam, Inc. ("National Foam")** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 141 Junny Road, Angier, North Carolina 27501.

33. Beginning in or around 1973, National Foam designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

34. On information and belief, National Foam currently manufactures the Angus brand of AFFF products.

35. On information and belief, National Foam merged with Chubb Fire Ltd. to form Chubb National Foam, Inc. in or around 1988.

36. On information and belief, Chubb is or has been composed of different subsidiaries and/or divisions, including but not limited to, Chubb Fire & Security Ltd., Chubb Security, PLC, Red Hawk Fire & Security, LLC, and/or Chubb National Foam, Inc. (collectively referred to as "Chubb").

37. On information and belief, Chubb was acquired by Williams Holdings in 1997.

38. On information and belief, Angus Fire Armour Corporation had previously been acquired by Williams Holdings in 1994.

39. On information and belief, Williams Holdings was demerged into Chubb and Kidde P.L.C. in or around 2000.

40. On information and belief, when Williams Holdings was demerged, Kidde P.L.C. became the successor in interest to National Foam System, Inc. and Angus Fire Armour Corporation.

41. On information and belief, Kidde P.L.C. was acquired by United Technologies Corporation in or around 2005.

42. On information and belief, Angus Fire Armour Corporation and National Foam separated from United Technologies Corporation in or around 2013.

43. **Defendant Kidde-Fenwal, Inc. ("Kidde-Fenwal")** is a corporation organized under the laws of the State of Delaware, with its principal place of business at One Financial Plaza, Hartford, Connecticut 06101.

44. On information and belief, Kidde-Fenwal was an operating subsidiary of Kidde P.L.C. and manufactured AFFF following Kidde P.L.C.'s acquisition by United Technologies Corporation.

45. On information and belief, Kidde-Fenwal is the entity that divested the AFFF business unit now operated by National Foam in 2013.

46. **Defendant Carrier Global Corporation ("Carrier")** is a corporation organized under the laws of the State of Delaware, with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418.

47. On information and belief, Carrier was formed in March 2020 when United Technologies Corporation spun off its fire and security business before it merged with Raytheon Company in April 2020.

48. On information and belief, Kidde-Fenwal became a subsidiary of Carrier when United Technologies Corporation spun off its fire and security business in March 2020.

49. **Defendant Fire Service Plus, Inc. ("Fire Service Plus")** is a corporation organized under the laws of the State of Georgia, with its principal place of business at 473 Dividend Drive, Peachtree City, Georgia 30269.

50. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and sold AFFF products containing PFOS, PFOA, and/or their chemical precursors that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed within Denver.

2. The Fluorosurfactant Defendants

51. The term **"Fluorosurfactant Defendants"** refers collectively to Defendants 3M, Arkema Inc., BASF Corporation, ChemDesign Products Incorporated, Chemguard Inc.,

Deepwater Chemicals, Inc., E.I. DuPont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, Corteva, Inc., DuPont de Nemours Inc., and Dynax Corporation.

52. **Defendant Arkema Inc.** is a corporation organized and existing under the laws of Pennsylvania, with its principal place of business at 900 First Avenue, King of Prussia, PA 19406.

53. Arkema Inc. develops specialty chemicals and polymers.

54. Arkema, Inc. is an operating subsidiary of Arkema France, S.A.

55. On information and belief, Arkema Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

56. **Defendant BASF Corporation ("BASF")** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 100 Park Avenue, Florham Park, New Jersey 07932.

57. On information and belief, BASF is the successor in interest to Ciba. Inc. (f/k/a Ciba Specialty Chemicals Corporation).

58. On information and belief, Ciba Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

59. **Defendant ChemDesign Products Inc. ("ChemDesign")** is a corporation organized under the laws of Delaware, with its principal place of business located at 2 Stanton Street, Marinette, WI, 54143.

60. On information and belief, ChemDesign designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

61. **Defendant Deepwater Chemicals, Inc. ("Deepwater")** is a corporation organized under the laws of Delaware, with its principal place of business located at 196122 E County Road 40, Woodward, OK, 73801.

62. On information and belief, Deepwater Chemicals designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products

63. **Defendant Dynax Corporation ("Dynax")** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 103 Fairview Park Drive, Elmsford, New York 10523.

64. On information and belief, Dynax entered into the AFFF market on or about 1991 and quickly became a leading global producer of fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors.

65. On information and belief, Dynax designed, manufactured, marketed, distributed, and sold fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

66. **Defendant E.I. du Pont de Nemours and Company ("DuPont")** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 974 Centre Road, Wilmington, Delaware 19805.

67. On information and belief, DuPont is the successor in interest to DuPont Chemical Solutions Enterprise.

68. **Defendant The Chemours Company ("Chemours Co.")** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, P.O. Box 2047, Wilmington, Delaware, 19899.

69. On information and belief, Chemours Co. was incorporated as a subsidiary of DuPont as of April 30, 2015. From that time until July 2015, Chemours Co. was a wholly owned subsidiary of DuPont.

70. In July 2015, DuPont spun off Chemours Co. and transferred to Chemours Co. its "performance chemicals" business line, which includes its fluoroproducts business, distributing shares of Chemours Co. stock to DuPont stockholders, and Chemours Co. has since been an independent, publicly traded company. On information and belief, Chemours Co. has supplied fluorosurfactants containing PFOS and PFOA, and/or their chemical precursors, to manufacturers of AFFF products.

71. **Defendant The Chemours Company FC, LLC ("Chemours FC")** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, Wilmington, Delaware, 19899. Chemours FC operates as a subsidiary of Chemours Co. and manufactures fluoropolymer resins.

72. **Defendant DuPont de Nemours Inc. f/k/a DowDuPont, Inc. ("DuPont de Nemours Inc.")** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805 and 2211 H.H. Dow Way, Midland, Michigan 48674.

73. On August 31, 2017, DuPont merged with The Dow Chemical Company to create DowDuPont, Inc. ("DowDuPont"). Since the merger, DowDuPont has completed a series of separation transactions to separate its businesses into three independent, publicly traded companies for materials, science, and specialty products.

74. **Defendant Corteva, Inc. ("Corteva")** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Rd., Wilmington, Delaware 19805.

75. Corteva was initially formed in February 2018 as a subsidiary of DowDuPont. From that time until June 1, 2019, Corteva was a wholly owned subsidiary of DowDuPont.

76. On June 1, 2019, DowDuPont separated its agriculture business through the spin-off of Corteva. On June 1, 2019, DowDuPont distributed to DowDuPont stockholders all issued and outstanding shares of Corteva common stock by way of a pro-rata dividend. Following that distribution, Corteva became the direct parent of E. I. Du Pont de Nemours & Co.

77. Corteva holds certain DowDuPont assets and liabilities, including DowDuPont's agriculture and nutritional businesses.

78. On June 1, 2019, DowDuPont, the surviving entity after the spin-off of Corteva and of another entity known as Dow, Inc., changed its name to DuPont de Nemours, Inc., to be known as DuPont ("New DuPont"). New DuPont retained assets in the specialty products business lines following the above-described spin-offs, as well as the balance of the financial assets and liabilities of DuPont not assumed by Corteva.

79. Defendants E. I. Du Pont de Nemours and Company; The Chemours Company; The Chemours Company FC, LLC; Corteva, Inc.; and DuPont de Nemours, Inc. are collectively referred to as "DuPont" or the "DuPont Defendants" throughout this Complaint.

80. On information and belief, DuPont designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

81. On information and belief, 3M and Chemguard also designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

82. On information and belief, the Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed in Denver.

3. The Fluorochemical Defendants

83. The term **"Fluorochemical Defendants"** refers collectively to 3M, AGC Chemicals Americas Inc., Archroma U.S. Inc., ChemDesign Products Inc., Chemicals, Inc., Clariant Corporation, Deepwater Chemicals, Inc., E. I. Du Pont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, Corteva, Inc., DuPont de Nemours Inc., and Nation Ford Chemical Company.

84. **Defendant AGC Chemicals Americas, Inc. ("AGC")** is a corporation organized and existing under the laws of Delaware, having its principal place of business at 55 East Uwchlan Avenue, Suite 201, Exton, PA 19341.

85. On information and belief, AGC Chemicals Americas, Inc. was formed in 2004 and is a subsidiary of AGC Inc., a foreign corporation organized under the laws of Japan, with its a principal place of business in Tokyo, Japan.

86. AGC manufactures specialty chemicals. It offers glass, electronic displays, and chemical products, including resins, water and oil repellants, greenhouse films, silica additives, and various fluorointermediates.

87. On information and belief, AGC designed, manufactured, marketed, distributed, and sold fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

88. **Defendant Archroma U.S., Inc. ("Archroma")** is a corporation organized and existing under the laws of Delaware, with its a principal place of business at 5435 77 Center Drive, Charlotte, North Carolina 28217.

89. On information and belief, Archroma was formed in 2013 when Clariant Corporation divested its textile chemicals, paper specialties, and emulsions business to SK Capital Partners.

90. On information and belief, Archroma designed, manufactured, marketed, distributed, and sold fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

91. **Defendant Chemicals, Inc. ("Chemicals, Inc.")** is a corporation organized and existing under the laws of Texas, with its principal place of business located at 12321 Hatcherville, Baytown, TX 77520.

92. On information and belief, Chemicals, Inc. supplied fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

93. **Defendant Clariant Corporation ("Clariant")** is a corporation organized and existing under the laws of New York, with its principal place of business at 4000 Monroe Road, Charlotte, North Carolina 28205.

94. On information and belief, Clariant is the successor in interest to the specialty chemicals business of Sandoz Chemical Corporation ("Sandoz"). On information and belief, Sandoz spun off its specialty chemicals business to form Clariant in 1995.

95. On information and belief, Clariant supplied fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

96. **Defendant Nation Ford Chemical Co. ("Nation Ford")** is a corporation organized and existing under the laws of South Carolina, with its principal place of business located at 2300 Banks Street, Fort Mill, SC 29715.

97. On information and belief, Nation Ford supplied fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

98. On information and belief, 3M, ChemDesign, Deepwater Chemicals, and DuPont also supplied fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

99. On information and belief, the Fluorochemical Defendants supplied fluorochemicals containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed in Denver.

100. All Defendants, at all times material herein, acted by and through their respective agents, servants, officers and employees, actual or ostensible, who then and there were acting within the course and scope of their actual or apparent agency, authority or duties. Defendants are liable based on such activities, directly and vicariously.

101. Defendants represent all or substantially all of the market for AFFF/Component Products within City and County of Denver.

V. FACTUAL ALLEGATIONS

A. 1940s-1950s: 3M, DuPont, and the Development of a Toxic Chemical Family

102. PFAS are a class of chemicals that contain a chain of carbon bonded to multiple fluorine atoms. There are thousands of different chemicals in the PFAS "family," each one human-made, as PFAS are not naturally occurring.

103. The carbon-fluorine bond in PFAS is one of the shortest and strongest chemical bonds known. As a result, PFAS are thermally, chemically, and biologically stable. They resist degradation due to light, water, and biological processes.

104. PFAS are also highly mobile molecules. They readily contaminate soils and leach from soil into groundwater, where they can travel significant distances.

105. In addition, PFAS bioaccumulate and biomagnify, meaning that they tend to accumulate both in individual organisms and at every step up the food chain. And PFAS are toxic, meaning that they pose serious health risks to humans and animals. PFAS are readily absorbed after consumption or inhalation and accumulate primarily in the bloodstream, kidney, and liver.

106. The development of this family of chemical compounds began with Defendant 3M in the 1940s. At that time, 3M's Central Research Laboratory was working with a scientist at Penn State University, Joseph H. Simons, who had developed and patented a process of preparing fluorine compounds through electrochemical fluorination ("ECF"). In 1945, 3M acquired Simons' ECF patents. It would be another three years before 3M's Central Research developed fluorinated compounds that could be used for commercial applications. During that time, 3M scientists continuously researched and created new fluorochemicals; in the words of one researcher,

"[a]lmost every day we made a new molecule which had never been on the face of the earth before."[1]

107. From the early days of its fluorochemical research, 3M recognized the very characteristics that make PFAS persistent pollutants in the environment today. For example, Simons' 1948 patent for the ECF process, which was assigned to 3M, stated that the compounds produced through ECF "are non-corrosive, and of little chemical reactivity," and "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."[2] The patent also stated that the fluorochemicals produced by ECF do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the carbon skeleton of the molecule. 3M understood that the stability of the carbon-to-fluorine bonds prevented the fluorinated compounds from undergoing further chemical reactions or degrading under natural processes in the environment.[3]

108. 3M was also aware of the thermal stability of its fluorinated compounds prior to commercial production. Simons' ECF patent application states that the compounds produced by ECF were thermally stable at temperatures up to 750° C (1382º F). Additional research by 3M expanded its understanding of the thermal stability of fluorinated compounds.[4]

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[1] Neil McKay, *A Chemical History of 3M: 1933-1990*, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1365.pdf.

[2] Joseph H. Simons, *Method of Making Fluorocarbons, U.S. Patent No. 2,456,027*, December 14, 1948, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2616.pdf.

[3] Joseph H. Simons, *Fluorocarbons and Their Production*, Fluorine Chemistry, 1(12): 401-422 (1950), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3008.pdf.

[4] T.J. Brice, *Their Properties and Wartime Development*, Fluorine Chemistry, Fluorine Chemistry, 1(13): 423-462 (1950).

109. In 1949, 3M built the first manufacturing facility to expand ECF from laboratory research to commercial production, and it began to present its fluorochemical research in order to find potential uses and customers for the compounds it was manufacturing.

110. 3M soon found a customer: DuPont. In 1951, DuPont began purchasing a perfluorinated carboxylic acid (perfluorooctanoic acid or PFOA), for use in manufacturing a non-stick coating called Teflon.

111. Even then, 3M's research had already documented that PFAS accumulate in the blood of mice exposed to the chemicals in laboratory tests.[5] A 1956 study by researchers at Stanford University found that PFAS bind to proteins in human blood.

112. In 1964, a group of DuPont employees working in Teflon manufacturing became sick after their department was moved to a more enclosed workspace.[6] They experienced chills, fever, difficulty breathing, and a tightness in the chest—symptoms referred to variously as "polymer-fume fever," "Teflon flu," or simply, "the shakes." Polymer-fume fever was first reported in the medical literature in 1951.

113. A 1965 study sponsored by DuPont found liver damage and increased spleen size in rats fed a PFAS compound over a ninety-day period.[7]

114. In addition to these demonstrations of toxicity, by at least the end of the 1960s, additional research and testing performed by 3M and DuPont indicated that fluorosurfactants were

[5] 3M, *Test Study Results with Perfluorobutyric Acid*, Hasleton Lab Report, Jan, 10, 1950, *available at* https://static.ewg.org/reports/2019/pfa-timeline/1950_Mice.pdf?_ga=2.21758526.426747500.1673645134-2012946541.1673645134.

[6] Charles E. Lewis and Gerald R. Kerby, *An Epidemic of Polymer-Fume Fever*, 191 JAMA 375 (February 1, 1965).

[7] Gordon L. Nordby and J. Murray Luck, *Perfluorooctanoic Acid Interactions with Human Serum Albumin*, 219 J. Biol. Chem. 399-404 (1956).

resistant to environmental degradation and would persist essentially unaltered if allowed to enter the environment.

115. One 3M employee wrote in 1964, "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon."[8] Thus, 3M knew by the mid-1960s that its fluorosurfactants were immune to chemical and biological degradation in soils and groundwater.

116. 3M also knew by 1964 that fluorocarbon carboxylic acids and fluorocarbon sulfonic acids, when dissolved, dissociated to form highly stable perfluorocarboxylate and perfluorosulfonate ions. Later studies by 3M on the adsorption and mobility of FC-95 (the potassium salt of PFOS) and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very high mobility in soils for both compounds.[9]

B. 1960s: The Introduction of AFFF

117. Despite early warnings of the toxic, persistent, and bioaccumulative nature of PFOS and PFOA, these chemicals began to be used in a product that would be released in large quantities directly into the environment whenever used: firefighting foam.

118. AFFF was first developed in the 1960s as a result of the U.S. Navy's research into the use of fluorosurfactants in firefighting foam to extinguish fuel-based shipboard fires. AFFF is synthetically formed by combining fluorine-free hydrocarbon foaming agents with fluorosurfactants. When mixed with water, the resulting solution produces an aqueous film that spreads across the surface of hydrocarbon fuel, extinguishing the fire.

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[8] H. G. Bryce, *Industrial and Utilitarian Aspects of Fluorine Chemistry* (1964), *available* at https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3022.pdf.

[9] 3M Technical Report Summary from Stephen K. Welsh to D. L. Bacon on Adsorption of FC 95 and FC143 on Soil (Feb. 27, 1978), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf.

119. In 1969, the Navy promulgated a military standard or "MilSpec" requiring contractors to use "fluorocarbon surfactants" in firefighting foam products. Since then, the Navy has revised this MilSpec multiple times, but at no time did the Navy specify the specific fluorosurfactants to be used in AFFF. The AFFF MilSpec was a "performance specification," meaning that the product manufacturers were given great flexibility with respect to designing a product that would meet the military's performance requirements.

120. Firefighting foam can be made without the fluorosurfactants that contain PFOA, PFOS, and/or their precursor chemicals.

121. When the Navy first promulgated the AFFF MilSpec, hundreds of different fluorosurfactants had already been created.

122. Nonetheless, beginning in the 1960s, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold AFFF products that used fluorosurfactants containing either PFOS, PFOA, or the chemical precursors that degrade into PFOS and PFOA.

123. From the late 1960s to 2002, Defendant 3M manufactured and sold AFFF containing PFOS under the brand name "Light Water."

124. Because 3M held the patents on the ECF process, other AFFF Defendants utilized PFAS produced through a different process, called fluorotelomerization. These fluorotelomer AFFF formulations were produced beginning in the 1970s. Although they are not made with PFOA, they contain precursors—polyfluorinated compounds that are known to degrade to compounds that include PFOA.

125. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold the AFFF products discharged into the environment in Denver

during firefighting training, emergency response activities, and federally mandated testing, resulting in widespread PFAS contamination.

126. The AFFF Defendants treated their foam formulations as proprietary information and did not disclose the specific chemical ingredients of their formulations to government agencies or the public.

127. Some or all of the Defendants understood how stable the fluorinated surfactants used in AFFF are when released into the environment from their first sale to a customer, yet they failed to warn their customers or provide reasonable instruction on how to manage wastes generated from their products.

C. 1970s-1980s: Defendants' Deepening Knowledge of the Risks of PFOA and PFOS

128. By at least the 1970s, as Defendants expanded the market for AFFF formulations containing PFOA and PFOS, 3M and DuPont knew or should have known that PFOA and PFOS are mobile and persistent, bioaccumulative and biomagnifying, and toxic.

129. An internal 3M memo from 1971 states that "the thesis that there is 'no natural sink' for fluorocarbons obviously demands some attention."[10] But if 3M did give this issue the attention demanded at this time, it did not share it with the public.

130. In 1975, two independent toxicologists, Dr. Warren Guy and Donald Taves, discovered that an unidentified fluorine compound had been found in human blood sampled from different blood banks. Dr. Guy contacted 3M to ask if it knew of "possible sources" of the

[10] 3M Memorandum from H. G. Bryce to R. M. Adams on Ecological Aspects of Fluorocarbons (Sept. 13, 1971), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1088.pdf.

chemicals.[11] 3M's scientists concluded internally that the fluorine compounds resembled PFOS manufactured by 3M, but 3M did not share this conclusion with the independent toxicologists or anyone else outside of 3M.

131. 3M did, however, test the blood of its own workers in 1976, finding "up to 1000 times 'normal' amounts of organically bound fluorine in their blood."[12]

132. That same year, another 3M study found that FC-95 (i.e., PFOS) did not biodegrade—a unsurprising result, given that, as the report noted, "[b]iodegradation of FC 95 is improbable because it is completely fluorinated."[13]

133. In 1977, Ansul, the AFFF manufacturer later acquired by Defendant Tyco, authored a report titled "Environmentally Improved AFFF," which acknowledged that releasing AFFF into the environment could pose potential negative impacts to groundwater quality.[14] Ansul wrote: "The purpose of this work is to explore the development of experimental AFFF formulations that would exhibit reduced impact on the environment while retaining certain fire suppression characteristic . . . improvements [to AFFF formulations] are desired in the environmental area, i.e., development of compositions that have a reduced impact on the environment without loss of fire suppression effectiveness." Thus, Ansul knew by the mid-1970s that the environmental impact of AFFF needed to be reduced, yet there is no evidence that Ansul (or any other Defendant) ever pursued initiatives to do so.

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[11] 3M Memorandum from G. H. Crawford to L.C. Krogh et al. on Fluorocarbons in Human Blood Plasma (Aug. 20, 1975), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1118.pdf.

[12] 3M, *Chronology – Fluorochemicals in Blood*, Aug. 26, 1977, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1144.pdf.

[13] Technical Report Summary from E. A. Reiner to R. L. Bohon on Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons – III (August 12, 1976).

[14] The Ansul Co., *Final Report: Environmentally Improved AFFF*, N00173-76-C-0295, Marinette, WI, Dec. 13, 1977, *available at* https://apps.dtic.mil/dtic/tr/fulltext/u2/a050508.pdf.

134. A 1978 3M biodegradation study likewise reported that an "extensive study strongly suggest[ed]" one of its PFAS was "likely to persist in the environment for extended period unaltered by metabolic attack."[15] A year later, a 3M study reported that one of its fluorosurfactants "was found to be completely resistant to biological test conditions," and that it appeared waterways were the fluorosurfactant's "environmental sink."[16]

135. At the same time, several studies sponsored by 3M showed that the fluorosurfactants used in AFFF were even more toxic than previously believed. A study of subacute toxicity in rhesus monkeys, in which the monkeys were to be given doses of PFOS over ninety days, had to be redesigned and repeated "[b]ecause of unexpected early mortalities in all monkeys at all levels."[17] None of the monkeys survived past twenty days. As a summary of the study stated, PFOS "proved to be considerably more toxic to monkeys than anticipated[.]" In addition, PFOA reduced the survival rate of fathead minnow fish eggs,[18] and PFOS and PFOA were

[15] 3M Technical Report Summary from E. A. Reiner to D. L. Bacon on Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons – II (Jan. 9, 1978), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1153.pdf.

[16] 3M Technical Report Summary from E. A. Reiner to D. L. Bacon on Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons – III (July 19, 1978), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1179.pdf.

[17] International Research and Development Corp., *Ninety-Day Subacute Rhesus Monkey Toxicity Study*, Dec. 18, 1978, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1191.pdf; International Research and Development Corp., *90-Day Subacute Rhesus Monkey Toxicity Study*, Jan. 2, 1979, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1193.pdf; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf

[18] EG&G, Bionomics Aquatic Toxicology Laboratory, The Effects of Continuous Aqueous Exposure to 78.03 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow, June 1978, available at https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1176.pdf.

shown to be toxic to rats.[19] As the summary observed, "[b]ecause of the apparent persistence of these fluorochemicals in the body, ***the most important question remains possible long term effects***."[20]

136. In 1979, 3M also completed a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.[21] More than a decade after 3M began selling AFFF containing fluorosurfactants, it wrote, "there has been a general lack of knowledge relative to the environmental impact of these chemicals." The report asked, "If these materials are not biodegradable, what is their fate in the environment?"

137. In 1979, 3M and DuPont discussed 3M's discovery of high levels of PFOS in the blood of its workers. Both companies came to the same conclusion: there was "no reason" to notify the EPA of the finding.[22] 3M told the EPA in 1980 only that it had discovered PFOS in the blood of "some of our plant employees."

138. By at least the end of the 1980s, additional research and testing performed by Defendants, including at least 3M and DuPont, indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been

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[19] International Research and Development Corp., *Acute Oral Toxicity (LD_{50}) Study in Rats (FC-143)*, May 5, 1978, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1170.pdf; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf.

[20] *Id.* (FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf.)

[21] 3M Technical Report Summary from A.N. Welter to R. A. Prokop on Final Comprehensive Report on FM 3422 (Feb. 7, 1979), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2563.pdf.

[22] 3M Memorandum from R. A. Prokop to J. D. Lazerte on Disclosure of Information on Levels of Fluorochemicals in Blood (July 26, 1979), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2723.pdf.

observed among workers exposed to such materials, including at least PFOA, but such data was not published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

139. In 1981, DuPont tested for and found PFOA in the blood of female workers at its Washington Works plant in Parkersburg, West Virginia, where it had been using 3M's PFOA to manufacture Teflon since 1951. DuPont observed and documented pregnancy outcomes in exposed workers, finding two of seven children born to female plant workers between 1979 and 1981 had birth defects—one an "unconfirmed" eye and tear duct defect, and one a nostril and eye defect.[23]

140. In 1983, 3M researchers concluded that concerns about PFAS "give rise to concern for environmental safety," including "legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment."[24] That same year, 3M completed a study finding that PFOS caused the growth of cancerous tumors in rats.[25] This finding was later shared with DuPont and led them to consider whether "they may be obliged under their policy to call FC-143 a carcinogen in animals."[26]

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[23] C-8 Blood Sampling Results, *available at* https://static.ewg.org/files/PFOA_013.pdf?_ga=2.163206265.435547009.1676618801-2012946541.1673645134.

[24] 3M Memorandum from R. L. Rohn - Environmental Lab/EE & PC to J. D. Lazerte on Fate of Fluorochemicals - Phase II (May 20, 1983), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1284.pdf.

[25] Riker Laboratories, Inc. and 3M, *Two Year Oral (Diet) Toxicity/Carcinogenicity Study of Fluorochemical FC-143 in Rats*, Volume 1 of 4, Aug. 29, 1987, *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1337.pdf.

[26] 3M Memorandum from R. G. Perkins to F. D. Griffith on Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988 meeting with DuPont (Jan. 5, 1988), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf.

141. In 1984, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers, leading one of the company's medical officers to warn in an internal memo: "we must view this present trend with serious concern. It is certainly possible that . . . exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body."[27]

142. The same year, DuPont tested drinking water near its Washington Works plant and found elevated PFOA levels in the water, but, after deciding that limiting PFOA discharge from the plant would not be "economically attractive," it did nothing to reduce contamination from the plant.

D. 1990s-2000s: With 3M and DuPont Under Scrutiny, the AFFF Market Shifts to Telomerization

143. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that "reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment." Toxic Substances Control Act ("TSCA") § 8(e), 15 U.S.C. § 2607(e).

144. Despite its decades of research, 3M waited until May 1998 to submit a report to the EPA under TSCA Section 8(e). Even in that submission, however, 3M downplayed what it knew, according to a former employee:

> Just before that submission we found PFOS in the blood of eaglets—eaglets still young enough that their only food consisted of fish caught in remote lakes by their parents. This finding indicates a widespread environmental contamination and food chain transfer and probable bioaccumulation and bio-magnification. This is a very significant finding that the 8e reporting rule was created to collect. 3M

[27] 3M Memorandum from D. E. Roach to P. F. Riehle on Organic Fluorine Levels (Aug. 31, 1984), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf.

> chose to report simply that PFOS had been found in the blood of animals, which is true but omits the most significant information.[28]

145. And although 3M acknowledged, in 1998, the presence of PFOS in the blood of the general population, it insisted that it did not "believe that any reasonable basis exists to conclude that PFOS 'presents a substantial risk of injury to health or the environment.'" Internally, the message was quite different: 3M's Manager of Corporate Toxicology advised the company to replace "PFOS-based chemistry as these compounds [are] ***VERY persistent and thus insidiously toxic***."

146. In 2000, 3M, after half a century of manufacturing fluorinated chemicals through ECF, announced that it would phase out its production of several long-chain PFAS compounds, including PFOA, although it continued to manufacture other PFAS chemicals.

147. In April 2006, 3M agreed to pay EPA a penalty of more than $1.5 million after being cited for 244 violations of the TSCA, which included violations for failing to disclose studies regarding PFOS, PFOA, and other fluorinated compounds, dating back decades.

148. The late 1990s and early 2000s also brought scrutiny to DuPont's use of PFOA, beginning in 1998 when a farmer in the Ohio River Valley sued DuPont over contamination from its Washington Works plant. DuPont had purchased land from the farmer in 1984 for use as a landfill for supposedly non-hazardous waste materials. Over the years, that farmer observed wildlife dying off near the landfill, serious illness among family members, and the loss of an entire herd of cattle. DuPont settled that case in 2001, but soon faced another lawsuit, as that same landfill plot contained a creek that fed directly into the Ohio River, exposing tens of thousands of residents to PFOA contamination. The settlement agreement in the second action included the creation of a

[28] Letter from R. Purdy to 3M (Mar. 28, 1999), *available at* https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf.

panel of independent scientists tasked with researching the health effects of PFOA, called the "C8 Science Panel." "C8" is another term for PFOA, based on its eight carbon atoms.

149. The C8 Science Panel consisted of three epidemiologists specifically tasked with determining whether there was a probable link between PFOA exposure and human diseases. Between 2005 and 2013, the C8 Science Panel carried out exposure and health studies in the Mid-Ohio Valley communities. The panel found probable links between PFOA and kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, pregnancy-induced hypertension (including preeclampsia), and hypercholesterolemia.

150. In December 2005, the EPA announced it was imposing the "largest environmental administrative penalty in agency history" against DuPont based on evidence that it violated the TSCA by concealing the environmental and health effects of PFOA.

151. Following 3M's phase-out of ECF production and its AFFF product, telomerization emerged as the dominant manufacturing process for fluorosurfactants. 3M had been the dominant manufacturer in the lucrative AFFF market, and multiple companies seized the opportunity created by 3M's withdrawal. But the market opportunity presented uncertainties, as it was unclear whether regulators would view the telomer-based AFFF as posing the same hazards as 3M's PFOS-containing AFFF. The key question for regulators was whether the telomer-based AFFF would degrade to PFOA once in the environment.

152. Defendants Tyco, Chemguard, Kidde, National Foam, and Buckeye formed a group called the Fire Fighting Foam Coalition ("FFFC") to protect their business opportunity and advocate for the continued use of telomer-based AFFF. The FFFC declared that it would serve as "a single source for accurate, balanced information on environment related questions" and would "ensure that accurate information about PFOS alternatives, including telomer-based products, is

disseminated in the marketplace." The FFFC made several representations regarding the safety of telomer-based AFFF that were either misleading half-truths or were contrary to Defendants' internal knowledge. For example, the FFFC assured the public that "telomer based AFFF does not contain PFOS and cannot be oxidized or metabolized into PFOS." This statement was true, but only because PFOS was exclusively manufactured by 3M, and it did not mean that telomer-based AFFF was any safer.

153. The FFFC also told the EPA in 2001 that telomer-based AFFF ""does not contain any PFOA-based product." The issue, however, was whether telomer-based AFFF could degrade into PFOA. One company executive admitted in an internal memo that his company's AFFF "will degrade in the environment" to produce PFOA and the "question is how toxic" and how "bioaccumulative" these degraded products are. But contrary to this internal acknowledgment, the FFFC publicly asserted that "telomer based fire fighting foams are not likely to be a source of PFOA in the environment."

154. The EPA appointed a committee known as the Telomer Technical Workgroup to make recommendations to the agency. The president of the FFFC represented the telomer-based AFFF industry on the EPA committee. When, in 2003, the Telomer Technical Workgroup reported its conclusions and recommendations, the FFFC president was the spokesperson.

155. In what the FFFC president called a "major victory" for the industry, the EPA accepted the proposal of its Workgroup that "telomer-based fire fighting foams no longer be considered as part of the PFOA ECA process." The FFFC president remarked that "[w]hen we started this organization two years ago [in 2001], the fate of telomer based AFFF was being tied directly to the fate of PFOA and the EPA had just told the military to start searching for alternatives

to AFFF." The telomer-based AFFF Defendants had successfully forestalled government restrictions on their products, thereby prolonging the use of AFFF in Denver and elsewhere.

156. The fluorosurfactants used in AFFF products sold by the AFFF Defendants other than 3M were manufactured by the Fluorosurfactant Defendants through the process of telomerization.

157. The fluorochemicals the Fluorosurfactant Defendants needed to manufacture those fluorosurfactants contained PFOS, PFOA, and/or their chemical precursors and were designed, manufactured, marketed, distributed and/or sold by the Fluorochemical Defendants.

158. On information and belief, the Fluorochemical and Fluorosurfactant Defendants were aware that the fluorochemicals and fluorosurfactants they designed, manufactured, marketed, distributed, and/or sold would be used in the AFFF products designed, manufactured, marketed, distributed, and/or sold by the AFFF Defendants.

159. On information and belief, the Fluorochemical and Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and/or sold the fluorochemicals and/or fluorosurfactants contained in the AFFF products discharged into the environment within City and County of Denver during firefighting training, emergency response activities, and federally mandated testing of firefighting equipment.

E. DuPont's Transfer of Liabilities to Chemours Co.

160. In 2013, DuPont announced its intention to separate its performance chemicals business, including fluoroproducts, through a U.S. tax-free spin-off to shareholders. This spinoff was designed to transfer significant environmental and tort liabilities while extracting a multibillion-dollar dividend from the new company.

161. Chemours Co. was formed in February 2014 as a wholly owned subsidiary of DuPont, remaining so until July 1, 2015, when DuPont completed the spin-off, along with the

transfer of vast environmental liabilities which Chemours Co. assumed, including those related to PFOS and PFOA and fluorosurfactants.

162. Through their effectuation of the spin-off in July 2015, Chemours Co. and DuPont caused Chemours Co. to transfer valuable assets to DuPont, including but not limited to a $3.9 billion dividend (the "Transfers"), while simultaneously assuming significant liabilities (the "Assumed Liabilities").

163. At the time the Transfers were made and Assumed Liabilities were incurred, Chemours had a separate board; however, the board was controlled by DuPont employees.

164. At the time the Transfers were made and Assumed Liabilities were incurred, DuPont had been sued, threatened with suit, and/or had knowledge of the likelihood of litigation to be filed regarding DuPont's liabilities for damages and injuries from the manufacture, sale, and/or disposal of PFAS-containing products. For example:

A. In 2005, DuPont agreed to pay $16.5 million in civil penalties to the EPA to resolve eight counts of alleged violations of environmental statues concerning PFAS contamination.

B. Also in 2005, DuPont agreed to pay $343 million to settle the class action lawsuit filed on behalf of 70,000 residents of the Ohio River Valley relating to the contamination of the watershed with PFOA. This settlement also created the C8 Science Panel, which, as discussed above, conducted studies on the health effects of PFOA exposure between 2005 and 2013.

C. In 2015, at the time the Transfers were made and Assumed Liabilities were incurred, another MDL involving over 3,500 PFOA-related personal injury claims brought by citizens of Ohio and West Virginia was pending in Ohio.[29]

165. The assets DuPont transferred to Chemours were unreasonably small in relation to the business or transaction and to the Assumed Liabilities. As a result, Chemours Co. did not receive a reasonably equivalent value in exchange for the transfer of debts and obligations from DuPont.

166. DuPont knew or reasonably should have known that Chemours Co. would incur debts beyond its ability to pay as they became due. Through the Transfers and Assumed Liabilities DuPont and Chemours Co. limited the availability of assets to cover all of the liability for damages and injuries arising from DuPont's manufacture and sale of PFAS-containing products.

F. Defendants Hid What They Knew from the Government and the Public

167. On information and belief, Defendants knew or should have known that AFFF containing PFOA or PFOS would very likely injure and/or threaten public health and the environment, even when used as intended or directed.

168. Defendants failed to warn of these risks to the environment and public health, including the impact of their AFFF/Component Products on the quality of unprotected water sources.

169. Defendants were all sophisticated and knowledgeable in the art and science of designing, formulating, and manufacturing AFFF/Component Products. They understood far more about the properties of their AFFF/Component Products—including the potential hazards they

[29] On February 13, 2017, following three multimillion-dollar jury verdicts in three bellwether trials in the Ohio MDL, DuPont and Chemours Co. agreed to pay $671 million to resolve the Ohio MDL, with an additional $125 million promised by Chemours Co. for future PFOA costs not covered by the settlement for a period of five years.

posed to human health and the environment—than any of their customers. Still, Defendants declined to use their sophistication and knowledge to design safer products.

170. As discussed above, neither 3M, DuPont, nor, on information and belief, any other Defendant complied with their obligations to notify EPA about the "substantial risk of injury to health or the environment" posed by their AFFF/Component Products. *See* TSCA § 8(e).

171. Human health effects associated with PFOS exposure include immune system effects, changes in liver enzymes and thyroid hormones, low birth weight, high uric acid, and high cholesterol. In laboratory testing on animals, PFOA and PFOS have caused the growth of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and immune system.

172. The injuries caused by PFAS can arise months or years after exposure.

173. Even after the C8 Science Panel publicly announced that human exposure to 50 parts per trillion, or more, of PFOA in drinking water for one year or longer had "probable links" with certain human diseases, including kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, preeclampsia, and medically diagnosed high cholesterol, Defendants repeatedly assured and represented to governmental entities, their customers, and the public (and continue to do so) that the presence of PFOA in human blood at the levels found within the United States presents no risk of harm and is of no legal, toxicological, or medical significance of any kind.

174. Furthermore, Defendants have represented to and assured such governmental entities, their customers, and the public (and continue to do so) that the work of the independent C8 Science Panel was inadequate to satisfy the standards of Defendants to prove such adverse effects upon and/or any risk to humans with respect to PFOA in human blood.

175. At all relevant times, Defendants, through their acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or risks associated therewith, effectively preventing the public from discovering the existence and extent of any injuries/harm as alleged herein.

G. Federal, State, and International Government Agencies Call for Monitoring and Cleanup of PFAS Contamination

176. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule ("UCMR3"), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.[30]

177. In the May 2015 "Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS's)," scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.[31]

178. On May 25, 2016, the EPA released a lifetime health advisory level (HAL) for drinking water and health effects support documents for PFOS and PFOA.[32] *See* Fed. Register,

[30] Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems, 77 Fed. Reg. 26,072 (May 2, 2012).

[31] A. Blum, S.A. Balan, M. Scheringer, X. Trier, G. Goldenman, I. T. Cousins, M. Diamond, T. Fletcher, C. Higgins A. E. Lindeman, G. Peaslee, P. de Voogt, Z. Wang, R, Weber, *The Madrid Statement on Poly- and Perfluoroalkyl Substances (PFASs)*, Environmental Health Perspectives (2015), 123:A107–A111; *available at* http://dx.doi.org/10.1289/ehp.1509934.

[32] *See* Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate, 81 Fed. Reg. 33,250 (May 25, 2016).

Vol. 81, No. 101, May 25, 2016. The EPA developed the HAL to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAL identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HAL was based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and was also informed by epidemiological studies of human populations exposed to PFOS. These studies indicated that exposure to PFOS and PFOA over the HAL could result in adverse health effects, including:

A. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);

B. Cancer (testicular and kidney);

C. Liver effects (tissue damage);

D. Immune effects (e.g., antibody production and immunity);

E. Thyroid disease and other effects (e.g., cholesterol changes).

179. In 2016, the National Toxicology Program of the United States Department of Health and Human Services ("NTP") and the International Agency for Research on Cancer ("IARC") both released extensive analyses of the expanding body of research regarding the adverse effects of fluorochemicals. The NTP concluded that both PFOA and PFOS are "presumed to be an immune hazard to humans" based on a "consistent pattern of findings" of adverse immune effects in human (epidemiology) studies and "high confidence" that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.[33]

[33] *See* U.S. Dep't of Health and Human Services, Nat'l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane*

180. IARC similarly concluded that there is "evidence" of "the carcinogenicity of . . . PFOA" in humans and in experimental animals, meaning that "[a] positive association has been observed between exposure to the agent and cancer for which a causal interpretation is . . . credible."[34]

181. California has listed PFOA and PFOS on its Proposition 65 list as chemicals known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.[35]

182. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included $42 million to remediate fluorochemical contamination from military bases, as well as devoting $7 million toward the Investing in Testing Act, which authorizes the Center for Disease Control and Prevention to conduct a study into the long-term health effects of PFOA and PFOS exposure.[36] The legislation also required that the Department of Defense submit a report on the status of developing a new military specification for AFFF that did not contain PFOS or PFOA.[37]

Sulfonate (Sept. 2016), at 1, 17, 19, *available at* https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf.

[34] *See* Int'l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, *available at* http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf.

[35] California Office of Environmental Health Hazard Assessment, Chemicals Listed Effective Nov. 10, 2017 as Known to the State of California to Cause Reproductive Toxicity: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) (Nov. 9, 2017), available at https://oehha.ca.gov/proposition-65/crnr/chemicals-listed-effective-november-10-2017-known-state-california-cause.

[36] National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, 115th Congress (Dec. 12, 2017), *available at* https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf.

[37] *Id.*; *see also* U.S. Department of Defense, *Alternatives to Aqueous Film Forming Foam Report to Congress* (June 2018), *available at* https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/.

183. In June 2018, the Agency for Toxic Substances and Disease Registry ("ATSDR") and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.[38]

184. In December 2019, the United States Senate and House of Representatives passed the National Defense Authorization Act for Fiscal Year 2020 ("FY 2020 NDAA"), which introduced new prohibitions on the use of AFFF for land-based applications.[39] Section 322 of the Act introduced a timeline for the phasing out of AFFF use by the military, including by requiring the Secretary of the Navy to publish a new military specification for a fluorine-free fire-fighting agent for use at all military installations by January 31, 2023. Section 322(b) and (c) then provide that Department of Defense organizations will no longer be authorized to purchase AFFF containing more than 1 part per billion of PFAS after October 1, 2023, and that after October 1, 2024, this prohibition will extend to the use of any PFAS-containing AFFF at any military installation.

185. On February 20, 2020, the EPA announced a proposed decision to regulate PFOA and PFOS under the Safe Drinking Water Act, which the agency characterized as a "key milestone" in its efforts to "help communities address per- and polyfluoroalkyl substances (PFAS) nationwide."[40]

[38] ATSDR, *Toxicological Profile for Perfluoroalkyls* (May 2021), *available at* https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf.

[39] National Defense Authorization Act for Fiscal Year 2020, S. 1790, 116th Congress (Jan. 3, 2019), *available at* https://www.govinfo.gov/content/pkg/BILLS-116s1790enr/pdf/BILLS-116s1790enr.pdf.

[40] EPA Press Release, *EPA Announces Proposed Decision to Regulate PFOA and PFOS in Drinking Water* (Feb. 20, 2020), *available at* https://www.epa.gov/newsreleases/epa-announces-proposed-decision-regulate-pfoa-and-pfos-drinking-water.

186. On June 15, 2022, the EPA released new drinking water health advisory levels (HALs) for four PFAS, including new interim HALs for PFOS and PFOA that departed significantly from the 2016 EPA HAL they replaced.[41] *See* Fed. Register, Vol. 87, No. 36848, June 21, 2022. Specifically, EPA issued HALs of 0.004 ppt for PFOA and 0.02 ppt for PFOS,[42] which collectively accounted for only a small fraction of the combined 70 ppt HAL that preceded them. Importantly, EPA set these interim HALs at levels below which PFOS and PFOA can be measured using current analytic methods, meaning that the mere detection of PFOS or PFOA in a water provider's system would be sufficient on its own to exceed the new levels.

187. As support for its decision, EPA explained that the new interim HALs for PFOS and PFOA were "based on human studies" that "found associations between PFOA and/or PFOS exposure and effects on the immune system, the cardiovascular system, human development (e.g., decreased birth weight), and cancer."[43] Specifically, EPA had performed updated health effects analyses for PFOS and PFOA to provide support for the drinking water regulations the agency planned to adopt for the two chemicals under the SDWA. Based on these analyses, EPA concluded that "the levels at which negative health effects could occur are much lower than previously understood when EPA issued the 2016 health advisories for PFOA and PFOS—including near zero for certain health effects."[44] For this reason, the agency determined there was a "pressing need

[41] *See* Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances, 87 Fed. Reg. 36,848 (June 21, 2022).
[42] *Id.*
[43] EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Communities* at 1-2 (June 2022), *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf.
[44] EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Public Water Systems* at 2 (June 2022), *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-water-system.pdf.

to provide updated information on the current best available science to public health officials prior to finalization of the health effects assessment."[45]

188. Because the referenced health analyses are still undergoing final review by EPA's Science Advisory Board, the agency has stated that the new interim HALs for PFOS and PFOA are subject to change. EPA has indicated, however, that it does not anticipate any changes resulting in revised HALs for PFOS and PFOA that are greater than the 4 ppt minimum reporting level[46] that applies to Public Water Systems.[47]

189. On September 6, 2022, EPA published a notice of proposed rulemaking seeking public comment on its plan to designate PFOS and PFOA as hazardous substances under CERCLA.[48]

190. On January 6, 2023, the Defense Logistics Agency within the Department of Defense published a new Military Specification for "Fire Extinguishing Agent, Fluorine-Free Foam (F3) Liquid Concentrate, for Land-Based, Fresh Water Application," MIL-PRF-32725 ("F3

[45] EPA Office of Water, EPA Doc. No. 822-R-22-003, *INTERIM Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA) CASRN 335-67-1* at 2 (June 2022), *available at* https://www.epa.gov/system/files/documents/2022-06/interim-pfoa-2022.pdf; EPA Office of Water, EPA Doc. No. 822-R-22-004, *INTERIM Drinking Water Health Advisory: CASRN 1763-23-1* at 2 (June 2022), *available at* https://www.epa.gov/system/files/documents/2022-06/interim-pfos-2022.pdf.

[46] As EPA's website explains, the Minimum Reporting Level ("MRL") for Unregulated Contaminant Monitoring Rule (UCMR) 5 is the minimum quantitation level that, with 95 percent confidence, can be achieved by capable analysts at 75 percent or more of the laboratories using a specified analytical method. The MRLs in EPA's chart are based on the UCMR 5 requirement to use EPA Method 533.

[47] EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Public Water Systems* at 2 (June 2022), *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-water-system.pdf.

[48] *See* Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 87 Fed. Reg. 54,415 (Sep. 6, 2022).

MilSpec") in accordance with § 332(a)(1) of the FY 2020 NDAA.[49] This new specification will govern fire extinguishing foams used by all Department of Defense organizations and will require such foams to test "non-detect" for PFAS. The specification further requires manufacturers to "certify in writing that PFAS has not intentionally been added to the concentrate."

191. On March 29, 2023, EPA published a notice of proposed rulemaking seeking public comment on its plan to set maximum contaminant levels ("MCLs")—legally mandated regulatory standards under the Safe Water Drinking Act—for six PFAS chemicals.[50] The proposed rule would set an MCL of 4.0 ppt for PFOA and PFOS, set a hazard index for the remaining four PFAS chemicals, and require public water systems to monitor for these PFAS, notify the public of the levels of these PFAS, and reduce the levels of these PFAS in drinking water if they exceed the proposed standards.

H. State of Colorado's Response to PFAS Contamination from AFFF

192. Between 2019 and 2020, the Colorado General Assembly passed a series of house and senate bills directed to regulating the use of AFFF and other PFAS-containing products:

A. House Bill 19-1279—which became the *Firefighting Foams and Personal Protective Equipment Control Act*—banned the use of AFFF containing PFAS chemicals for training or testing systems that suppress fire beginning August 2, 2019, as well as restricted the sale, manufacture, and distribution of AFFF within Colorado beginning August 2, 2021. This bill contains exemptions including for compliance with federal law requirements, but also imposes new disclosure requirements on manufacturers of AFFF

[49] Available on the Defense Logistics Agency's website, Doc. ID: MIL-PRF-32725, https://quicksearch.dla.mil/qsDocDetails.aspx?ident_number=285047 (last visited Feb. 16, 2023).

[50] *See* PFAS National Primary Drinking Water Regulation Rulemaking, 88 Fed. Reg. 18,638 (Mar. 29, 2023).

products. It also established a timeline for the State government to take an inventory of PFAS-containing AFFF within the State by January 1, 2023.

B. Senate Bill 20-218 created a take back program for unspent AFFF containing PFAS, managed by the Colorado Department of Public Health and the Environment ("CDPHE"). As of March 2022, the CDPHE had arranged for the takeback of over 9,000 gallons of AFFF through this program.[51] This bill also created a PFAS Cash Fund to address PFAS contamination and reduce exposure from PFAS chemicals through grants for sampling, emergency assistance, and infrastructure.

C. House Bill 20-1119 made amendments to the *Firefighting Foams and Personal Protective Equipment Control Act* including by prohibiting the use of PFAS-containing AFFF in certain aircraft hangars beginning January 1, 2023, including at airports that are designated by the FAA as a public-use airport. This bill also created a Certification of Registration Program for entities that use or store AFFF in Colorado.

193. In 2019, the CDPHE published an Action Plan for Toxic Firefighting Foam and Related Chemicals, which summarized how the department proposed to address the public risks posed by PFAS chemicals, in particular those found in AFFF.

194. In 2020, the CDPHE conducted a state-wide PFAS sampling project to investigate the potential impacts to drinking water from PFAS. The sampling included approximately half of the community public drinking water systems in the state servicing around three quarters of the population, as well as 15 firefighting districts and a range of groundwater sources and surface

[51] *See* Complaint, *State of Colorado v. E. I. Du Point de Nemours et al.*, No. 2:22-cv-01195-RMG, Dkt. No. 1-2 (Dist. Court City of Denver filed Mar. 25, 2022).

water sources for PFAS.[52] All of the samples taken from Colorado lakes and rivers had some detectable level of PFAS chemicals.[53]

195. Also in 2020, the Colorado Water Quality Control Commission within the CDPHE adopted PFAS Narrative Policy 20-1 that provides guidance on how to implement permit conditions addressing narrative surface water and groundwater standards, using numeric values for a subset of PFAS chemicals. For PFOA and PFOS the Commission established a translation level of 70 ng/L that applies to each compound individually and to the sum of the compounds plus additional compounds. This policy was also designed to aid with reviewing drinking water monitoring results for PFAS to evaluate the potential for human health effects. Adoption of this policy was part of the department's PFAS Action Plan and was designed to address PFAS exposure as a serious risk to public health.

196. In 2022, the Colorado General Assembly passed another bill addressing the use of PFAS chemicals in consumer products, House Bill 22-1345. This bill also contained provisions addressing the use of PFAS-containing AFFF, including establishing a requirement that a person who uses AFFF is prohibited from releasing the firefighting foam into the environment and must fully contain the firefighting foam during its use. This bill also extended the effective date on the restriction on use of PFAS-containing AFFF at airport hangars until January 1, 2024.

[52] Colorado Department of Public Health and the Environment, *2020 PFAS Sampling Effort Report* (2020), *available at* https://drive.google.com/file/d/1cy6UKhmf_Qn0G_b5I7xskl_SYZjCSRUq/view.

[53] *See* Complaint, *State of Colorado v. E. I. Du Point de Nemours et al.*, No. 2:22-cv-01195-RMG, Dkt. No. 1-2 (Dist. Court City of Denver filed Mar. 25, 2022).

I. Regulation of AFFF at Airports by the Federal Aviation Administration

197. Commercial Service Airports are certified by the FAA under 14 C.F.R. Part 139, "Certification of Airports." 14 CFR 139.315-.319 govern Aircraft Rescue and Firefighting ("ARFF") operations. The Part 139 regulations require airports to use AFFF.

198. The FAA issues "Advisory Circulars" providing guidance to airports for complying with the Part 136 requirements. In 2004, the FAA issued Advisory Circular 150/5210-6D, which established requirements for AFFF use at Part 139 Certificated airports. AC 150/5210-6D incorporated a 1992 Department of Defense military specification, MIL-F-24385, requiring the use of AFFF containing perfluorinated surfactants. AC 150/5210-6D replaced the prior 1985 AC, 150/5210-6C. AC 150/5210-6C also required airports to use AFFF containing perfluorinated surfactants.

199. Additionally, in 2016, the FAA issued Order 5280.5D, Airport Certification Program Handbook (the "Handbook"), which also establishes requirements for airports to use AFFF as part of ARFF operations. In the 2016 update to the Handbook, the FAA reaffirmed the requirement that certificated airports must use AFFF containing PFAS to meet the firefighting capability requirements of Part 139. The 2016 handbook was a replacement of the 2006 Handbook, Order 5280.5C. The 2006 Handbook included the same requirements for the use of AFFF in ARFF operations. Order 5280.5C was in turn a replacement for the 1994 Handbook, Order 5280.5B, which also included requirements that ARFF operations use AFFF. In addition to using AFFF in aircraft emergencies, Part 139 Certificated Airports have historically been required to deploy AFFF when training with and testing their ARFF systems, resulting in releases of AFFF.

200. In January 2019, the FAA issued guidance addressing the use of AFFF in testing of AFFF systems, "CertAlert" No. 19-01. This guidance provided that the FAA would thereafter accept new AFFF testing systems that do not require the actual dispensing of foam onto the ground.

201. On January 12, 2023, following the publication of the new F3 MilSpec (*see* paragraph 190 above), the FAA issued "CertAlert" No. 23-01, informing Part 139 Certificated Airports that the FAA will accept the use of new fluorine-free foam ("F3") agents once the agent passes the new military performance standards, qualification testing, and is added to the Navy's Qualified Products Database.[54] Use of AFFF within Part 139 Certificated Airports' ARFF operations is expected to be completely replaced with F3 products in the near future, following FAA approval of suitable F3 replacement products.

202. For decades, airports such as Denver International Airport, which are required to use AFFF in their ARFF operations, were unaware of the full extent of the environmental and health risks associated with using Defendants' AFFF and component products containing PFOA and PFOS. Across the country, the use of AFFF at airports and similar sites has been linked to widespread PFAS contamination, including of surface and groundwater, as well as public drinking water wells.

J. AFFF Containing PFOS and PFOA Is Fungible and Commingled in the Groundwater

203. AFFF containing PFOS and/or PFOA, once it has been released to the environment, lacks characteristics that would enable identification of the company that manufactured that particular batch of AFFF or chemical feedstock.

204. A subsurface plume, even if it comes from a single location, such as a retention pond or fire training area, originates from mixed batches of AFFF and chemical feedstock coming from different manufacturers.

[54] Federal Aviation Administration, National Part 139 CertAlert No. 23-01 (Jan. 12, 2023), *available at* https://www.faa.gov/sites/faa.gov/files/part-139-cert-alert-23-01-F3_3.pdf.

205. Because precise identification of the specific manufacturer of any given AFFF/Component Product that was a source of the PFAS found at a particular location is nearly impossible, given certain exceptions, Plaintiff must pursue all Defendants, jointly and severally.

206. Defendants are also jointly and severally liable because they conspired to conceal the true toxic nature of PFOS and PFOA, to profit from the use of AFFF/Component Products containing PFOS and PFOA, at Plaintiff's expense, and to attempt to avoid liability.

K. PFAS Contamination on Plaintiff's Property

207. PFOA and PFOS have been detected in varying amounts and at varying times in soil, sediment, groundwater, and surface water sampled from Denver's property. PFOA and PFOS have been detected at Denver's property at levels exceeding the current State and Federal advisory levels, including but not limited to the EPA's 2022 health advisory for PFAS in drinking water and Colorado's Policy 20-1 issued by the CDPHE Water Quality Control Commission.

208. Denver is in the process of investigating the scope of PFAS contamination to its property, including in connection with the use of AFFF. Denver has incurred and will continue to incur substantial costs in connection with its ongoing investigations. Through its investigations Denver has discovered PFAS contamination, including PFOA and PFOS, in soils, sediment, groundwater, and surface water at various sites in the City and County of Denver, including at the Denver International Airport and the Roslyn Fire Training Facility. PFAS contamination may exist in other properties owned by Denver, including but not limited to Denver's property located within the former Stapleton International Airport site. The detection and/or presence of PFOA and PFOS, and the threat of further detection and/or presence of PFOA and PFOS, on Denver's property in varying amounts and at varying times has resulted, and will continue to result, in significant injury and damage to Denver.

209. The invasion of Denver's property with PFOA and PFOS is ongoing as these chemicals persist in the soils, sediment, groundwater, and surface water on Denver's property.

210. Continuing investigation is necessary to ascertain the full scope of PFAS contamination resulting from AFFF and to ensure that any City and County property affected by AFFF is safe. Defendants are liable for the costs of such continued investigation and abatement.

i. **Denver International Airport**

211. Denver International Airport ("DEN"), located at 8500 Peña Boulevard in Denver, Colorado, is the largest airport in North America—and second largest in the world—by land area, with an approximate size of 53 square miles. The City and County of Denver acquired the land comprising DEN in the late 1980s and early 1990s. Prior to the development of the airport, the property was largely undeveloped and primarily utilized for agricultural purposes. Since opening in February 1995, DEN has become one of the busiest airports in the world, serving almost 70 million passengers in 2022.

Denver International Airport

212. Part of the primary operations and supporting infrastructure at the airport includes six fire stations (five current and one decommissioned) and various current and former training and equipment testing areas.

213. Since opening, Denver has been required to use Defendants' AFFF products containing PFOS, PFOA, and/or their chemical precursors, in connection with emergency response actions, during routine airport operations, as part of regulatory compliance requirements, and through incidental spills at DEN. Denver's use of Defendants' AFFF products was as directed and intended by Defendants.

214. As a Part 139 Certificated Airport, DEN has, for decades, been required to use AFFF in its ARFF operations. Part 139 airports are required to use AFFF that meets the specification of MIL-F-24385 in certain situations. In addition to using AFFF in aircraft emergencies, Part 139 airports have historically been required to train with and test their ARFF systems, which has resulted in releases of AFFF at DEN.

One of DEN's ARFF Vehicles

215. Use of AFFF at DEN has diminished because of changes made by the FAA to the Part 139 certification requirements. Use of AFFF within the airport's ARFF is expected to be completely replaced with fluorine-free foam ("F3") by 2024, following FAA approval of an F3 for Part 139 airports and once the approved F3 becomes available in the required quantities for DEN's operations.

216. In 2017, PFAS were detected at DEN through soil testing performed in connection with a spill of AFFF at the Frontier Hangar area leased by Frontier Airlines.

217. In December 2020, Denver conducted an environmental site assessment of the airport property, focusing on the current and historical use of AFFF and on identifying and managing the risk of encountering legacy PFAS contamination associated with historical AFFF releases. The environmental site assessment documented that AFFF has been, or may have been, released to the environment at over 60 locations within the airport property.

218. Between March and July 2022, PFAS contamination of groundwater exceeding EPA's health advisory levels for drinking water, as well as Colorado's Policy 20-1 translation levels of 70 ng/L, was discovered in samples taken from temporary monitoring wells in connection with four construction and maintenance projects at DEN.

219. Upon information and belief, Denver asserts that PFOA, PFOS, and other PFAS contamination of soil and groundwater at DEN is connected to the use and storage of AFFF.

220. As the extent of PFAS contamination at DEN began to emerge, Denver started working on a sitewide risk-based exposure assessment of PFAS contamination. As a preliminary step in addressing the harm caused by PFAS contamination, Denver intends to assess and control the potential for PFAS exposure at DEN through completing further investigation and sampling of

groundwater and surface water, and soil and sediment under Colorado's Voluntary Cleanup Program.

221. Through this action, Denver seeks compensatory damages for the harm done to its property and past and future costs associated with investigating, remediating, and monitoring PFAS contamination caused by the use of AFFF at DEN, including the costs of replacing and cleaning equipment contaminated with AFFF.

1. Roslyn Fire Training Facility

222. Since at least 1991, the Denver Fire Department has operated a firefighting training facility at 5440 Roslyn Street in Denver ("Roslyn Facility"). This property is wholly owned by the City and County of Denver.

223. For decades, Denver used AFFF products containing PFOS, PFOA, and/or their chemical precursors, as directed and intended by Defendants, in connection with various firefighting training activities at the Roslyn Facility.

224. In 2019, Denver conducted an initial assessment of PFAS in soil, surface water, and groundwater at the property. Four soil borings were drilled and then converted into monitoring wells. A surface water sample was also collected. The results of this testing detected PFAS compounds, including PFOS and PFOA, in three of the four soil samples, with the highest concentrations being of PFOS detected in the area immediately north of the fire training area on the northern portion of the facility. The groundwater samples showed the highest number of PFAS compounds and the highest concentrations for each PFAS compound. Both the surface water sample and two of the four groundwater samples detected PFOA and PFOS in concentrations exceeding EPA's health advisory levels for drinking water, as well as Colorado's Policy 20-1 translation levels of 70 ng/L.

The "Burn House" used for training at the Roslyn Facility

225. In 2020, Denver continued its investigation of PFAS contamination connected to the Roslyn Facility by conducting further soil, sediment, groundwater, and surface water testing both inside and on land adjacent to the property, and by reviewing publicly available data to identify potential offsite releases of PFAS within surrounding properties.

226. This testing detected various PFAS compounds, including PFOS and PFOA, across the site, with the highest concentrations in soil found around the training and wash pads areas, correlating to former areas of AFFF use. The highest total PFAS concentrations in groundwater were found in the area north of the fire training pad, an area where water from fire training pools before it evaporates, infiltrates into soil, or runs off toward the detention basin. PFAS concentrations in groundwater decreased with distance from this area. PFAS were found at detectable levels in all surface water and groundwater samples. In most cases the ground water and surface water samples of PFOA and PFOS exceeded EPA's health advisory levels for drinking water, as well as Colorado's Policy 20-1 translation levels of 70 ng/L.

227. The site history and composition and distribution of PFAS revealed by the testing performed in 2020 suggest that the use of AFFF is a likely cause of the contamination. As a preliminary step in addressing the harm caused by PFAS contamination, Denver is assessing PFAS levels in groundwater and soils at the Roslyn Facility. Additionally, Denver has entered the State of Colorado's Voluntary Cleanup Program to remediate the site to protect public health and the environment.

228. Through this action, Denver seeks compensatory damages for the harm done to its property and for past and future costs associated with investigating, remediating, and monitoring PFAS contamination caused by the use of AFFF at the Roslyn Facility, including the costs of replacing and cleaning equipment contaminated with AFFF.

VI. MARKET SHARE LIABILITY, ALTERNATIVE LIABILITY, CONCERT OF ACTION, AND ENTERPRISE LIABILITY

229. Defendants in this action are manufacturers that control a substantial share of the market for AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors in the United States and are jointly responsible for the contamination of Plaintiff's property, including the soil, sediment, surface water, and groundwater within the City and County of Denver. Market share liability attaches to all Defendants and the liability of each should be assigned according to its percentage of the market for AFFF/Component Products at issue in this Complaint.

230. Because PFAS is fungible, it is impossible to identify the exact Defendant who manufactured any given AFFF/Component Product containing PFOS, PFOA, and/or their chemical precursors found free in the air, soil, or groundwater, and each of these Defendants participated in a territory-wide and U.S. national market for AFFF/Component Products during the relevant time.

231. Concert of action liability attaches to all Defendants, each of which participated in a common plan to commit the torts alleged herein and each of which acted tortuously in pursuance of the common plan to knowingly manufacture and sell inherently dangerous AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors.

232. Enterprise liability attaches to all the named Defendants for casting defective products into the stream of commerce.

VII. CAUSES OF ACTION

COUNT ONE — DEFECTIVE DESIGN

233. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 232 above, and further alleges the following:

234. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to all persons and entities whom their products might foreseeably harm, including Plaintiff, and a duty not to market any product which is unreasonably dangerous in design for its reasonably anticipated use.

235. Defendants' AFFF/Component Products were unreasonably dangerous for their reasonably anticipated uses for the following reasons:

A. PFAS cause extensive groundwater contamination, even when used in their foreseeable and intended manner;

B. Even at extremely low levels, PFAS render drinking water unfit for consumption;

C. PFAS pose significant threats to public health; and

D. PFAS create real and potential environmental damage.

236. Defendants knew of these risks and failed to use reasonable care in the design of their AFFF/Component Products.

237. AFFF containing PFOS, PFOA, and/or their chemical precursors poses a greater danger to the environment and to human health than would be expected by ordinary persons such as Plaintiff and the general public.

238. At all times, Defendants were capable of making AFFF/Component Products that did not contain PFOS, PFOA, and/or their chemical precursors. Thus, reasonable alternative designs existed which were capable of preventing Plaintiff's injuries.

239. The risks posed by AFFF containing PFOS, PFOA, and/or their chemical precursors far outweigh the products' utility as a flame-control product.

240. The likelihood that Defendants' AFFF/Component Products would be spilled, discharged, disposed of, or released into the environment and cause harmful and adverse impacts to the environment and human health, far outweighed any burden on Defendants to adopt an alternative design, and outweighed the adverse effect, if any, of such alternative design on the utility of the product.

241. As a direct and proximate result of Defendants' unreasonably dangerous design, manufacture, and sale of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Plaintiff has incurred and will continue to incur costs and expenses related to the past, present, and future investigation, sampling, testing, and assessment of the extent of PFAS contamination within the City and County of Denver, as well as costs and expenses related to the treatment and remediation. Defendants knew that it was substantially certain that their acts and omissions described above would cause significant injury and damage to Plaintiff, including by preventing Plaintiff and its citizens from fully utilizing Plaintiff's property, including its water

rights. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiff's health and safety, and/or property rights.

COUNT TWO —
FAILURE TO WARN

242. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 241 above, and further allege the following:

243. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants had a duty to provide adequate warnings of the risks of these products to all persons whom its product might foreseeably harm, including Plaintiff and the public.

244. Defendants' AFFF/Component Products were unreasonably dangerous for its reasonably anticipated uses for the following reasons:

A. PFAS causes extensive groundwater contamination, even when used in their foreseeable and intended manner;

B. Even at extremely low levels, PFAS render drinking water unfit for consumption;

C. PFAS poses significant threats to public health; and

D. PFAS create real and potential environmental damage.

245. Defendants knew of the health and environmental risks associated with their AFFF/Component Products, and failed to provide a warning that would lead an ordinary reasonable user or handler of a product to contemplate the dangers associated with their products or an instruction that would have avoided Plaintiff's injuries.

246. Despite Defendants' knowledge of the environmental and human health hazards associated with the use and/or disposal of their AFFF/Component Products in the vicinity of drinking water supplies, including PFAS contamination of public drinking supplies and private wells, Defendants failed to issue any warnings, instructions, recalls, or advice regarding their AFFF/Component Products to Plaintiff, other governmental agencies, or the public.

247. As a direct and proximate result of Defendants' failure to warn, Plaintiff has suffered, and will continue to suffer, damage to its property from PFAS contamination requiring investigation, remediation, and monitoring costs, including the costs of replacing and cleaning equipment contaminated with AFFF.

248. Defendants knew that it was substantially certain that their acts and omissions described above would result in damage to Plaintiff's property from PFAS contamination. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiff's health and safety, and/or property rights.

COUNT THREE —
NEGLIGENCE

249. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 248 above, and further alleges the following:

250. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to Plaintiff and to all persons whom its products might foreseeably harm and to exercise due care in the formulation, manufacture, sale, labeling, warning, and use of AFFF.

251. Defendants owed a duty to Plaintiff to act reasonably and not place inherently dangerous AFFF/Component Products into the marketplace when its release into the air, soil, and water was imminent and certain.

252. Defendants knew or should have known that PFAS were leaching into surface and ground water from AFFF used for firefighting training, emergency response activities, and federally mandated testing of firefighting equipment.

253. Defendants knew or should have known that PFAS are highly soluble in water, highly mobile, extremely persistent in the environment, and highly likely to become a persistent pollutant if released into the environment.

254. Defendants knew or should have known that the manner in which they were designing, manufacturing, marketing, distributing, and selling their AFFF/Component Products would result in contamination of Plaintiff's property with PFAS.

255. Despite the fact that Defendants knew or should have known that PFAS are toxic, can contaminate the environment, and are carcinogenic, Defendants negligently:

A. designed, manufactured, formulated, handled, labeled, instructed, controlled, marketed, promoted, and/or sold AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors;

B. issued deficient instructions on how their AFFF/Component Products should be used and disposed of, thereby permitting PFAS to contaminate soils, sediment, groundwater, and surface water in and around City and County of Denver;

C. failed to recall and/or warn the users of their AFFF/Component Products of the dangers of groundwater contamination as a result of standard use and disposal of their products;

D. failed and refused to issue the appropriate warning and/or recalls to the users of their AFFF/Component Products; and

E. failing to take reasonable, adequate, and sufficient steps or actions to eliminate, correct, or remedy any contamination after it occurred.

256. The magnitude of the burden on the Defendants to guard against this foreseeable harm to Plaintiff was minimal, as the practical consequences of placing this burden on the Defendants amounted to a burden to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products.

257. As manufacturers, Defendants were in the best position to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products, and to take steps to eliminate, correct, or remedy any contamination they caused.

258. As a direct and proximate result of Defendants' negligence, Plaintiff has suffered, and will continue to suffer, damage to its property from PFAS contamination requiring investigation, remediation, and monitoring costs, including the costs of replacing and cleaning equipment contaminated with AFFF.

259. Defendants knew that it was substantially certain that their acts and omissions described above would result in damage to Plaintiff's property from PFAS contamination. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiff's health and safety, and/or property rights.

COUNT FOUR —
PRIVATE NUISANCE

260. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 259 above, and further alleges the following:

261. Plaintiff is the owner, operator, and actual possessor of real property and improvements throughout the City and County of Denver.

262. Defendants designed, manufactured, distributed, marketed, and sold AFFF/Component Products with the actual knowledge and/or substantial certainty that AFFF containing PFOS, PFOA, and/or their chemical precursors would, through normal use, release PFAS that would migrate into the soil, sediment, surface water, and groundwater, causing contamination.

263. Defendants negligently, recklessly, and/or intentionally designed, manufactured, distributed, marketed, and sold AFFF/Component Products in a manner that caused PFAS to contaminate Plaintiff's property.

264. Defendants' actions and omissions created, or participated in creating, a nuisance that unreasonably and injuriously interfered with and continues to interfere with the Plaintiff's use and enjoyment of its property.

265. Defendants' conduct has also injured and continues to injure the Plaintiff's property, as well as the health, safety, and comfort of the citizens of the City and County of Denver who utilize and/or work at properties owned by the Plaintiff.

266. Actual and threatened PFAS contamination, including with PFOA and PFOS, caused by Defendants' conduct constitutes an ongoing nuisance.

267. As a result of the nuisance, Plaintiff has suffered and will continue to suffer substantial damages related to PFAS investigation, cleanup, and remediation, including the costs of replacing and cleaning equipment contaminated with AFFF.

268. Defendants knew that it was substantially certain that their acts and omissions described above would cause injury and damage, including PFAS contamination of Plaintiff's

property. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious disregard for the reasonably foreseeable impact on the environment, groundwater resources, and public health and welfare.

COUNT FIVE —
TRESPASS

269. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 268 above, and further alleges the following:

270. Plaintiff is the owner, operator, and actual possessor of real property, including but not limited to Denver International Airport, and structures located on such property.

271. Defendants designed, manufactured, distributed, marketed, and sold AFFF/Component Products with the actual knowledge and/or substantial certainty that AFFF containing PFOS, PFOA, and/or their chemical precursors would, through normal use, release PFAS that would contaminate soil, sediment, groundwater, and surface water.

272. Defendants negligently, recklessly, and/or intentionally designed, manufactured, distributed, marketed, and sold AFFF/Component Products in a manner that caused PFAS to contaminate Plaintiff's property.

273. Plaintiff has not consented to, and does not consent to, this contamination.

274. Defendants knew or reasonably should have known that Plaintiff would not consent to this contamination, and that they had no right or authority to carry out this trespass.

275. As a direct and proximate result of Defendants' trespass, Plaintiff has suffered and continues to suffer property damage requiring investigation, remediation, and monitoring costs, including the costs of replacing and cleaning equipment contaminated with AFFF.

276. Defendants knew that it was substantially certain that their acts and omissions described above would threaten public health and cause extensive contamination of property,

including groundwater collected for drinking. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for the health and safety of others, and for Plaintiff's property rights.

COUNT SIX —
VIOLATION OF THE COLORADO UNIFORM FRAUDULENT TRANSFER ACT
(DUPONT DEFENDANTS)

277. Plaintiff adopts, realleges, and incorporates the allegations in paragraphs 1 through 276 above, and further alleges the following:

278. Plaintiff seeks relief under the Colorado Uniform Fraudulent Transfer Act, Colo. Rev. Stat. § 38-8-101, *et seq.* ("CUFTA"). Under CUFTA:

> (1) A transfer made or obligation incurred by a debtor is fraudulent as to a creditor, whether the creditor's claim arose before or after the transfer was made or the obligation was incurred, if the debtor made the transfer or incurred the obligation:
> (a) With actual intent to hinder, delay, or defraud any creditor of the debtor; or
> (b) Without receiving a reasonably equivalent value in exchange for the transfer or obligation, and the debtor:
> (I) Was engaged or was about to engage in a business or a transaction for which the remaining assets of the debtor were unreasonably small in relation to the business or transaction; or
> (II) Intended to incur, or believed or reasonably should have believed that he would incur, debts beyond his ability to pay as they became due. (§ 38-8-105 C.R.S.).

279. Denver is a "Creditor" holding "Claims" against DuPont as those terms are defined in § 38-8-102 C.R.S.

280. DuPont and Chemours Co. have acted with actual intent to hinder, delay, and defraud parties, and/or without receiving a reasonably equivalent value in exchange for the transfer or obligation, and were engaged or was about to engage in a business or a transaction for which the remaining assets of Chemours Co. were unreasonably small in relation to the business; or

intended to incur, or believed or reasonably should have believed that Chemours Co. would incur, debts beyond its ability to pay as they became due.

281. Through their effectuation of the spin-off in July 2015, Chemours Co. and DuPont caused Chemours Co. to transfer valuable assets to DuPont, including but not limited to the $3.9 billion dividend (the "Transfers"), while simultaneously assuming significant liabilities (the "Assumed Liabilities").

282. The Transfers and Assumed Liabilities were made for the benefit of DuPont.

283. At the time that the Transfers were made and the Liabilities were assumed, and until the spin-off was complete, DuPont was in a position to, and in fact did, control and dominate Chemours Co.

284. Chemours Co. and DuPont made the Transfers and incurred the Assumed Liabilities with the actual intent to hinder, delay, and defraud the creditors or future creditors of Chemours Co.

285. Upon information and belief, Chemours Co. did not receive a reasonably equivalent value in exchange for the Transfer and Assumed Liabilities.

286. Plaintiff has been harmed as a result of the conduct of Chemours Co. and DuPont.

287. Plaintiff is entitled to avoid the transfer of DuPont's liabilities for the claims brought in this Complaint and to hold DuPont jointly and severally liable for any damages or other remedies that may be awarded by the Court or jury and to recover property or value transferred from Chemours Co. to DuPont.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, the City and County of Denver, demands judgment against Defendants, and each of them, jointly and severally, and requests the following relief from the Court:

A. an award of compensatory damages according to proof including, but not limited to:

i. costs and expenses related to the past, present, and future investigation, sampling, testing, and assessment of the extent of PFAS contamination within City and County of Denver;

ii. costs and expenses related to past, present, and future treatment and remediation of PFAS contamination within City and County of Denver; and

iii. costs and expenses related to past, present, and future installation and maintenance of filtration systems to assess and evaluate PFAS at within City and County of Denver;

B. an order barring the transfer of DuPont's liabilities for the claims brought in this Complaint;

C. an award of consequential damages;

D. an award of attorney fees and costs, as provided by law;

E. an award of pre-judgment and post-judgment interest as provided by law; and

F. an order for all such other relief the Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiff, CITY AND COUNTY OF DENVER, demands a trial by jury of all issues so triable as a matter of right.

Dated: March 29, 2023

Respectfully submitted,

CITY AND COUNTY OF DENVER

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