

PFCs Summary Timeline **Commercial Production and Disposal**

(Does not include ongoing discovery at former and active military sites (e.g., AFFF), landfills, waste treatment facilities and sludge applications in the U.S. and around the world)

1938 Dr. Roy Plunkett accidentally discovers a waxy substance while experimenting with refrigerant chemicals in a Chemours lab in New Jersey. The material has extremely slippery properties and is exalted as a chemical wonder with stain-resistant and non-stick properties that will change the world of plastics.

1940s Teflon is trademarked and put into production with wide commercial application.

1954 DuPont begins to document PFOA health effects. DuPont monitors pregnant employees -- 2 out of 8 babies born with birth defects.

1980s DuPont scientists begin recording presence of PFOA in the Ohio River by its Washington Works plant, and in nearby drinking water supplies.

1981 3M finds low dose PFOA exposures cause birth defects in rodents. Data reportedly shared with the EPA and DuPont.

1981 DuPont removes all female workers from Teflon operations in its West Virginia plant.

1999 Wilbur Tennant, a cattle farmer in West Virginia, contacts Rob Bilott, an environmental lawyer at Taft Stettinius & Hollister, with video documentation of the gruesome death of hundreds of cattle. Tennant had sold a portion of his land to the adjacent DuPont factory, which was reportedly to be used as a "non-hazardous landfill." Tennant suspected DuPont had poisoned the creek that ran through his property and from which his cows drank water. DuPont argued the cattle died due to poor animal husbandry practices.

2001 DuPont settles the Wilbur Tennant case for an undisclosed sum of money.

Bilott and his law firm submit a 972-page document to the EPA demanding immediate action to regulate PFOA as a hazardous substance and clean up the water for impacted residents.

EPA determines DuPont violated the Toxic Substances Control Act (TSCA) by intentionally concealing the toxicity of PFOA and by contaminating the water supply of thousands of residents.

2001 Rob Bilott argues contamination is not limited to the Tennant property, and that DuPont had been releasing PFOA into the air and the Ohio River from its Washington Works plant in West Virginia since the 1950s (~ 50 years). Drinking water in six water districts is contaminated affecting over 80,000 people in West Virginia and Ohio, bound by the Ohio River.

August 2001 Bilott files a class-action lawsuit alleging DuPont knowingly contaminated the drinking water supplies of over 70,000 people surrounding its Washington Works plant.

2002 3M voluntary decides to stop producing PFOA and PFOS.

September 2004 DuPont settles the class action lawsuit for \$70 million and installs filtration systems to clean up contaminated water being supplied to residents near its Washington Works plant. This settlement sets precedent for thousands of personal injury lawsuits that will follow.

Importantly, as part of the settlement, comprehensive blood testing begins for 69,000 residents impacted by contaminated water in the mid-Ohio River communities of West Virginia and Ohio. The health effects of PFOA begin to be documented.

DuPont loses the first three trials and is ordered to pay cancer survivors \$1.6 m, \$5.6 m, and \$12.5 m with punitive damages ordered in the last two cases.

2005 DuPont settles with the EPA and pays a fine of \$16 million, a drop in the bucket for DuPont, but the largest penalty in EPA history. \$10m in fines and \$6m to fund two research projects.

2006 Some manufacturers begin to phase out longer-chain PFCs for shorter-chain replacement PFCs, called GenX.

2013 C8 Science Panel releases its findings after exposure analyses and testing the blood of 69,000 affected residents from 2005-2013. The panel determines PFOA has a “probable link” with six diseases, including: high cholesterol, ulcerative colitis, thyroid disease, testicular cancer, kidney cancer, and pregnancy-induced hypertension.

2013 DuPont stops producing PFOA (11 years after 3M).

2014 EPA summarizes evidence of multiple health effects of PFOS, including reproductive and liver effects.

2015 First lawsuit against 3M alleging it knew about the toxicity of PFOA and PFOS.

2017 DuPont pays \$670m to settle 3,550 individual personal injury cases under a combined agreement. Plaintiffs allege DuPont knowingly contaminated their drinking water by dumping PFOA (C8) from its Washington Works plant into the Ohio River, contaminating drinking water for thousands of area residents. Plaintiffs argue the health effects from contaminated drinking water include a wide-range of illnesses, including certain types of cancer.

August 31, 2017 DuPont and Dow Chemical, the two largest chemical companies in the United States, complete their historic \$130 billion merger to form the largest chemical company in the world, DowDuPont.