

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

Headquarters
1200 Pennsylvania Ave., NW
Washington DC 20460

IN THE MATTER OF:)	
)	
)	
3M Company)	ADMINISTRATIVE ORDER
3M Center)	ON CONSENT
St. Paul, MN 55144)	
)	
Cordova Facility)	Proceeding under Section 1431(a)(1)
22614 Route 84 North)	of the Safe Drinking Water Act,
Cordova, IL 61242)	42 U.S.C. § 300i(a)(1)
)	
)	
)	Docket No. SDWA-HQ-2023-0001-EO
)	

I. STATUTORY AUTHORITY

1. This Administrative Order on Consent is entered into voluntarily by the United States Environmental Protection Agency (“EPA”) and the 3M Company (“3M”) pursuant to the authority vested in the Administrator of EPA by Section 1431(a)(1) of the Safe Drinking Water Act (“SDWA” or “the Act”), 42 U.S.C. § 300i(a)(1).
2. The authority to issue this Order was delegated to the Director of the Water Enforcement Division by Delegation No. 9-17, dated January 17, 2017.
3. Under SDWA Section 1431, EPA has authority to act to protect the health of persons from contaminants that are present in or likely to enter a public water system or an underground source of drinking water.

II. STIPULATIONS

4. This Order is mutually entered into by EPA and 3M.
5. By entering into this Order, 3M: (1) consents to EPA’s authority to issue this Order; (2) consents to personal service by electronic mail; (3) neither admits nor denies the factual allegations or determinations as set forth in this Order; (4) agrees to undertake all actions required by the terms and conditions of this Order; and (5) agrees not to contest the authority of EPA to issue this Order or the validity of any terms or conditions in this Order.

6. 3M waives any and all claims for relief and otherwise available rights or remedies to judicial or administrative review of this Order, including, but not limited to, any right of judicial review of this Order under Section 1448(a), 42 U.S.C. § 300j-7(a), of the SDWA.

III. DEFINITIONS AND BACKGROUND

7. All terms, not otherwise defined herein, shall have their ordinary meaning unless defined in the SDWA, in which case the SDWA definition shall control.

a) “Alternate Drinking Water Supply/Treatment” shall mean: connection of a Private Water System to a Public Water System or installation of a point-of-entry treatment (“POET”) or point-of-use treatment (“POUT”) system that removes PFAS, including PFOA, PFOS, PFBS, and HFPO-DA, from drinking water as further described in the Work Plan.

b) “Contaminant” shall mean “any physical, chemical, biological, or radiological substance or matter in water.” See 42 U.S.C. § 300f(6). This definition includes “unregulated contaminants” within the meaning of the fifth Unregulated Contaminant Monitoring Rule (UCMR5), 86 Fed. Reg. 73131 (Dec. 2021), which requires analysis of substances which are suspected to be present in drinking water but that do not yet have health-based standards set under the SDWA.

c) “Contractor” shall mean any person, including contractors, subcontractors, or agents, retained or hired by 3M to undertake any work under this Order.

d) “Day” shall mean a calendar day, unless otherwise specified. When the stated time expires on a Saturday, Sunday, or federal holiday, the stated time shall be extended to include the next business day.

e) “Facility” shall mean the 3M Company’s Cordova Facility located in Cordova, Illinois, which is owned and operated by 3M.

f) “IDNR” shall mean the Iowa Department of Natural Resources.

g) “IDPH” shall mean the Illinois Department of Public Health.

h) “IEPA” shall mean the Illinois Environmental Protection Agency.

i) “Order” shall mean this SDWA § 1431 Administrative Order on Consent, any attachments or appendices to this Order, and all documents that are required by the terms and conditions of this Order. All attachments or appendices to this Order, and all documents that are required by the terms and conditions of this Order are, after being approved by EPA, incorporated into this Order, and shall be enforceable hereunder.

j) The term “PFAS” shall mean per- and polyfluoroalkyl substance(s) where perfluorinated substances are defined as man-made chemicals of which all of the carbon

atoms are fully fluorinated, and where polyfluoroalkyl substances are defined as man-made chemicals containing a mix of fully fluorinated carbon atoms, partially fluorinated carbon atoms, and nonfluorinated carbon atoms. For purposes of sampling and monitoring required in Section VI of this Order, PFAS shall mean the specific PFAS listed by Chemical Abstract Services Registry Number (“CAS RN”) chemical abstract numbers in Table 1: PFAS Analytes, attached hereto. For purposes of treatment required under Section VI of this Order, only PFOA, PFOS, PFBS, and HFPO-DA will be utilized as indicators to determine efficacy of treatment.

- k) “Private Water System” shall mean a drinking water system that is used by individual residents or serves less than 25 persons per year from a well or other source and is otherwise not a “PWS.”
- l) “Public Water System” (“PWS”) provides piped drinking water for human consumption to persons within the meaning of Section 1401(4) of the Act, 42 U.S.C. §300f(4) and 40 CFR § 141.2.
- m) “3M” shall mean the 3M Company.
- n) “Underground Source of Drinking Water” (“USDW”) shall mean an aquifer or a portion thereof which supplies a PWS, or which contains a sufficient quantity of groundwater to supply a PWS and/or which currently supplies drinking water for human consumption or contains fewer than 10,000 milligrams per liter total dissolved solids and is not an exempted aquifer. *See* 40 C.F.R. § 144.3.
- o) “Work” shall mean all tasks and activities required by this Order.

IV. EPA’s FINDINGS OF FACT

8. 3M, a Minnesota corporation originally named Minnesota Mining and Manufacturing Company in 1902, was incorporated in 1929 under the laws of the State of Delaware to continue operations. On April 8, 2002, the company’s name was changed to 3M Company.

9. 3M owns and operates a manufacturing facility known as 3M Cordova (“Facility”), located in Cordova, IL.

10. The Facility is located on the banks of the Mississippi River, in Illinois, and across from the state of Iowa.

11. Facility operations began in 1970 and 3M, at various times, has manufactured, produced, generated, or used a variety of PFAS at the Facility, including, but not limited to:

Analyte	Abbreviation	CAS RN
Perfluoropropanoic acid	PFPrA/PFPA	422-64-0
Perfluorobutanoic acid	PFBA	375-22-4
Perfluorobutanesulfonic acid	PFBS	375-73-5

Perfluorohexanoic acid	PFH _x A	307-24-4
Perfluorohexanesulfonic acid	PFH _x S	355-46-4
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
1,1,1-Trifluoro-N- [(trifluoromethyl)sulfonyl]methanesulfonamide	TFSI	82113-65-3
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6

12. From the mid-1970s to present, 3M released and currently emits certain PFAS from the Facility associated with its manufacturing and processing operations. 3M installed a thermal oxidizer at the Facility in 2003 for the purpose of receiving and treating PFAS manufacturing processes vent gas streams.

13. The Facility’s greenhouse gas emissions inventory includes certain PFAS.

14. The Facility operates, and has continuously operated, a wastewater treatment plant (“WWTP”) on the western edge of the manufacturing portion of the Facility since 1970.

15. The WWTP is used to treat all process and sanitary wastewaters generated onsite.

16. From approximately 1975-1999, 3M was authorized by IEPA Permit #1975-SC-3427-OP and #1975-SC-3427-OP-1 to land-apply sludge generated by the Facility’s WWTP onto the sludge incorporation area (“SIA”) located at the Facility in the areas east of Route 84 and south of the main manufacturing facilities.

17. The Facility has discharged and currently discharges wastewater and stormwater containing PFAS into the Mississippi River, including, but not limited to, the PFAS listed above in Paragraph 11.

18. On December 28, 2012, IEPA issued to 3M a National Pollutant Discharge Elimination System Permit, No. IL0003140, (“NPDES Permit”) under Section 402 of the Clean Water Act (“CWA”), 33 U.S.C. § 1342, with the effective date of January 1, 2013, and an expiration date of December 31, 2017. The NPDES Permit has been administratively extended.

19. Since January 1, 2013, 3M’s National Pollutant Discharge Elimination System (“NPDES”) permit requires that 3M monitor the following 14 PFAS at Outfall 001: PFBA, PFOA, PFOS, PFBS, PFH_xS, PFNA, PFDA, PFH_xA, perfluoropentanoic acid (PFPeA), perfluoroheptanoic acid (PFHpA), perfluoroundecanoic acid (PFUnA), perfluorododecanoic acid (PFDoA), perfluorotridecanoic acid (PFTrDA), and perfluorooctanesulfonamide (PFOSA).

20. From March 2008 to October 2018, 3M detected certain PFAS at groundwater monitoring wells at and around the Facility, non-potable wells at nearby commercial properties, private drinking water wells near the Facility, and at its onsite water supply wells at the Facility.

21. In 2014, the State of Illinois designated the wellfield located east of the 3M Facility as a groundwater management zone.
22. On October 7, 2019, 3M voluntarily disclosed to EPA that 3M identified PFAS in its wastewater discharge that were not identified in the Facility NPDES permit.
23. On December 3-10, 2019, EPA, through the National Enforcement Investigations Center, conducted a multimedia inspection (“Inspection”) of the Facility, focusing on the CWA and the Resource and Conservation Recovery Act (“RCRA”). Particularly, the inspection focused on waste management and PFAS wastewater generation, management, treatment, and effluent discharge.
24. As of the time of the Inspection, the State of Illinois classified the wellfield referenced above in Paragraph 23 as a “Non-Transient, Non-Community Public Water System” (PWS ID No. IL3049031) drinking water supply system which serves a population of 300.
25. The water supply system referenced above (i.e., PWS ID No. IL3049031) had not been used for drinking water since at least 2006.
26. At the time of the Inspection, NEIC collected samples from various locations, including wastewater discharge, at the Facility, which confirmed the presence of certain PFAS.
27. 3M’s operations at the Facility have resulted in discharges of PFAS to water, emissions of PFAS to air, and disposal of PFAS onto the ground and/or land-application of sludge containing PFAS, including, but not limited to, at least 60 PFAS analytes.
28. Though EPA has not done specific modeling at the Facility, EPA’s PFAS atmospheric transport studies at other major PFAS manufacturing facilities suggest a likelihood that PFAS compounds from the Facility have been transported via the air and deposited into the soils and waters in Illinois and/or Iowa.
29. PFAS released to the environment can migrate through the soil into groundwater.
30. Sample results from some of the Private Water Systems and Public Water Systems show that certain PFAS are present in drinking water.
31. Studies have found that some PFAS are persistent and bio-accumulative in the environment.
32. Working with IEPA, 3M has actively reduced the movement of PFAS-contaminated groundwater from migrating off the Facility site by using groundwater extraction wells.
33. The average precipitation in the vicinity of the Facility is 35.4 inches per year.

34. Though EPA has not done specific modeling at the Facility, rain events in locations where air emissions from a facility deposit PFAS onto the ground and soil may cause the release of PFAS into surface waters and migration of PFAS into the groundwater and USDWs.

35. Studies involving humans and animals have shown that certain PFAS can bioaccumulate in the body (e.g., serum half-lives from months to years in humans and monkeys; hours to days/months in rodents).

36. EPA has found that epidemiological studies in human populations and experimental animal studies show correlations between exposures to certain PFAS and an array of cancer and noncancer health effects, including susceptible subpopulations (e.g., early developmental life stages and women of child-bearing age).

37. Populations in the vicinity of the Facility may have been exposed to PFAS by consuming drinking water that may contain PFAS that was released from and/or land-applied at the Facility and/or from multiple other sources.

38. On June 15, 2022, EPA issued interim updated drinking water health advisories for PFOA and PFOS that supersede those EPA issued in 2016. The interim advisory levels indicate that some negative health effects may occur with concentrations of PFOA or PFOS in water that are near zero. At the same time, EPA issued final health advisories for PFBS and HFPO-DA. Drinking water health advisories provide information on contaminants that can cause health effects and are known or anticipated to occur in drinking water. EPA health advisories are non-regulatory at the federal level and reflect EPA's assessment of the best available peer-reviewed science.

39. As of the Effective Date of this Order, there are currently no National Primary Drinking Water Regulations in effect for PFAS pursuant to the SDWA.

40. In e-mail correspondence dated February 18, 2022, 3M informed EPA that it had identified 198 Private Water Systems and five Public Water Systems within a three-mile radius of the Facility, and 35 Public Water Systems within a 10 ten-mile radius of the Facility. 3M again provided EPA the aforementioned information on October 4, 2022.

41. On June 27, 2022, 3M provided notice to EPA that it intended to notify by letter certain private landowners within a three-mile radius of the Facility and PWSs within a 10-mile radius of the Facility of 3M's offer to sample the Private Water Systems or Public Water Systems, respectively, for the presence of certain PFAS, as outlined in 3M's June 17, 2022, letter to EPA. 3M confirmed to EPA that the letters were in the process of being sent on June 27, 2022.

42. 3M independently began sampling Private Water Systems on July 25, 2022, and Public Water Systems on July 27, 2022.

43. On September 8, 2022, 3M orally provided to EPA that it received some validated PFAS sample results for some Private Water Systems within a three-mile radius of the Facility, and some validated PFAS sample results for some Public Water Systems within a 10-mile radius of the Facility, and that 3M planned to offer to install point-of-entry treatment ("POET") or point-

of-use treatment (“POUT”) systems, which use granulated activated carbon (“GAC”), at all Private Water Systems within a three-mile radius of the Facility that agreed to 3M’s offer to sample for PFAS.

44. On September 13, 2022, 3M offered a POET or POUT water treatment system to residents within a three-mile radius of the Facility who agreed to have 3M sample their private drinking water well.

45. By e-mail correspondence dated September 28, 2022, 3M provided an example letter, dated September 13, 2022, in which 3M offered a POET or POUT water treatment system within a three-mile radius of the Facility to residents who agreed to have 3M sample their private drinking water well.

46. On September 12, 2022, October 4, 2022, and October 18, 2022, 3M provided to EPA validated sample results and indicated to EPA that those samples were analyzed using Eurofins’ Environment Testing America EPA Method 537 (modified).

47. On October 18, 2022, 3M provided to EPA documents that show the third-party laboratory used by 3M is accredited and capable to perform such analysis.

48. As of October 26, 2022, 95 Private Water Systems and 15 Public Water Systems agreed to provide access to 3M to sample their well(s) for PFAS.

49. In the above referenced October 4, 2022, e-mail correspondence, 3M provided to EPA validated results for 96 of the drinking water samples 3M had collected.

50. Of the 72 Private Water Systems for which 3M provided results, 68 private wells show the presence of at least two co-occurring PFAS.

51. Of the eight Public Water Systems for which 3M provided results, three PWSs show the presence of at least two co-occurring PFAS.

52. 12 sample results disclosed by 3M indicate the co-occurrence of PFAS in Private Water Systems near the perimeter of 3M’s the three-mile radius sampling effort.

53. By email correspondence dated October 19, 2022, 3M provided an example letter dated October 18, 2022, in which 3M offered a water treatment system to a private resident within a three-mile radius of the Facility who gets their drinking water from an underground well. In the October 19, 2022, email to EPA, 3M indicated it offered treatment to private well owners in the three-mile radius of the Facility that had not yet responded to or otherwise were not participating in 3M’s sampling program.

54. EPA’s 1986 *Guidelines for the Health Risk Assessment of Chemical Mixtures* and the *Supplementary Guidance for Conducting Health Risk Assessment of Chemical Mixtures* (EPA, 2000), define a chemical mixture as “any combination of two or more chemical substances, regardless of source or of spatial or temporal proximity, that can influence the risk of chemical toxicity in the target population.”

55. Chemical mixtures are of concern because of the uncertainties inherent in predicting the magnitude and nature of toxicant interactions to include mixture risk info and unknown risk to public health from mixture.

V. EPA's CONCLUSIONS OF LAW AND DETERMINATIONS

56. 3M Company is a corporation and is therefore a "person" within the meaning of Section 1401(12) of the SDWA, 42 U.S.C. § 300f (12).

57. The Facility emissions, releases, discharges, disposal, and/or land-application of sludge containing PFAS have resulted in releases of PFAS to air, groundwater, surface water, and soil.

58. The releases referred to above have entered, or may enter, PWSs, USDWs, and surface waters.

59. 3M's continued investigation is needed to characterize the nature and extent of PFAS in Private Water Systems and Public Water Systems located in the vicinity of the Facility.

60. Based on the findings above, EPA has determined that 3M's continued investigation is needed to identify the potential risk to human health from consuming water from Public and Private Water Systems located in the vicinity of the Facility that may contain PFAS that was emitted, released, discharged, disposed of, and/or land-applied from the Facility.

61. Based on the findings above, EPA has determined that there is a contaminant present in, or likely to enter, a PWS or USDW which may present an imminent and substantial endangerment to the health of persons living in the vicinity of the Facility where PFAS emissions, releases, discharges and land-application have occurred or may be occurring.

62. For purposes of this Order, EPA has determined that exposures to PFAS, including those co-occurring in drinking water in the vicinity of the Facility where PFAS emissions, releases, discharges and land-application have occurred or may be occurring, may lead to adverse health effects.

63. IEPA and IDPH support EPA taking steps to require 3M to act as specified in this Order.

64. In furtherance of the cooperative working relationship between IEPA and EPA, and to more effectively allocate workloads between the Agencies, on March 2, 2022, IEPA submitted a written request expressing support for EPA's issuance of this Order and updated its letter of support on June 23, 2022.

65. In furtherance of the cooperative working relationship, between IDPH and EPA and to more effectively allocate workloads between the Agencies, on June 17, 2022, IDPH submitted a written request expressing support for EPA's issuance of this Order.

66. On June 30, 2022, IDNR submitted a written description of actions it has taken and continues to take to address PFAS contamination in Iowa and encouraged EPA to take further action to the extent of its authority.

67. EPA consulted with IEPA, IDPH, IDNR, and local authorities to the extent practicable in light of the potential imminent endangerment, to confirm the correctness of the information on which this Order is based and to ascertain the actions which such authorities were or would be taking.

68. Despite state actions taken to address PFAS contamination from the Facility, EPA has determined that those actions are not adequate, timely, or are otherwise insufficient and the actions specified in this Order are necessary to address the potential imminent and substantial endangerment. The actions required by this Order will support ongoing IEPA, IDPH, IDNR, and local health department actions in order to adequately protect public health.

69. EPA has determined that any local authorities' actions in Illinois and Iowa have not resulted in the adequate protection of the health of persons living in the vicinity of the Facility, with respect to the actions required under the Order.

70. Section 1431 of the SDWA requires a finding that "a contaminant which is present in or is likely to enter a public water system or an underground source of drinking water...may present an imminent and substantial endangerment to the health of persons...." As required by Section 1431 of the SDWA and for purposes of this Order, EPA has therefore determined that the actions specified in this Order are necessary precautionary measures intended to protect the health of persons living near the Facility by further delineating the current or potential exposure, and by reducing current or potential exposure, to a mixture of PFAS present in or likely to enter PWSs and USDWs in the vicinity of the Facility that may present a potential endangerment to human health to which 3M has caused or contributed.

VI. ORDER

71. Pursuant to the authority given to the EPA Administrator by Section 1431(a)(1) of the SDWA, 42 U.S.C. § 300i(a)(1), and redelegated to the Director, Water Enforcement Division, Office of Enforcement and Compliance Assurance ("OECA"), 3M is hereby ORDERED:

A. Work Plans. Within twenty (20) business days of the Effective Date of this Order, 3M shall develop and submit to EPA for review and approval Private Water System and Public Water System work plans that meet the requirements of this subparagraph (A).

i. General Provisions:

- a. If EPA approves a work plan, 3M shall implement according to the implementation program in the approved work plan for the geographic areas identified in the work plan. EPA may provide comments or changes for incorporation into a work plan prior to EPA approval.
- b. If EPA does not approve a work plan, 3M shall address the comments and resubmit the work plan for review within twenty (20) business days of receipt of EPA's disapproval in writing. Upon resubmission, EPA, in its

- sole discretion, may either approve the work plan, or if EPA determines that the work plan does not adequately address the comments provided by EPA, EPA may modify the work plan and will provide 3M with a copy of the work plan as modified.
- c. 3M shall implement the modified work plan under subparagraph) (A)(i)(b) according to the activities and schedule contained therein. Once approved by EPA, the work plan shall be incorporated by reference and fully enforceable under the terms of this Order.
 - d. For all initial samples that are collected after January 1, 2023, 3M must utilize the following laboratory analytical methods to analyze for the presence of the UCMR5 PFAS: all PFAS quantifiable by EPA Method 533 (as written) (*see* Table 1) and EPA Method 537.1 (as written) to quantify PFTA, PFTTrDA, N-EtFOSAA, N-MeFOSAA. For TFSI and PFPrA, 3M will continue to use Eurofins' Environment Testing America EPA Method 537 (modified) until EPA approves an alternative analytical method for TFSI and PFPrA.
 - e. Within ninety (90) days of the Effective Date of this Order, 3M shall provide to EPA a data validation package for EPA's review and approval of an alternative analytical method for TFSI and PFPrA.
 - f. All confirmatory samples will utilize the same method used for the initial sample.
- ii. Private Water System Work Plan: The Private Water System Work Plan shall specify that 3M will offer to sample all Private Water Systems within a four-mile radius of the Facility as depicted in Figure 1. The Private Water System Work Plan shall include 3M's previous offer for Alternative Drinking Water Supply/Treatment for Private Water Systems within a three-mile radius as depicted in Figure 1. For the Private Water Systems within the three-mile radius for which the owner has agreed within one year of the Effective Date to allow sampling, 3M shall request access to collect, and if authorized to collect, will collect and analyze one sample in each calendar quarter at each location in 2023. For Private Water Systems that have not accepted a POET or POUT, for a period of four calendar years beginning in 2024, EPA may require additional sampling based upon an evaluation of collected data. For the Private Water Systems in the area between the three-mile radius and the four-mile radius, 3M shall offer to collect, and if authorized to collect, will collect and analyze one initial and one confirmatory sample. 3M shall also collect samples in calendar years 2024 and beyond for wells at locations where the owner has accepted 3M's offer to install a POET or a POUT. The frequency of this sampling shall be determined in the context of development of the work plan for O&M. For the sampling beginning in 2023, 3M shall use EPA methods 533 and 537.1 as written. TFSI and PFPrA will be quantified using the current Eurofins' Environment Testing America method 537 (modified) until otherwise approved by EPA.
- a. 3M shall submit for EPA review and approval a work plan that acknowledges and accepts the work already completed by 3M and that

addresses the following matters for the treatment systems 3M has already offered and/or installed: (1) the period for which operation and maintenance of installed treatment systems must be provided by 3M, as further addressed in subparagraph C below; paragraph 71(A)(ii)(c) below; (2) the approach to ensure that the installed treatment system performs as intended with respect to PFOA, PFOS, HFPO-DA, and PFBS; (3) how to address situations where the offered GAC system cannot be accommodated for a particular location (e.g., space constraints); and (4) the protocol for EPA review of any decision by 3M to substitute connection to a public water system or drilling of a new well in lieu of providing a treatment system and/or long-term operation and maintenance.

- b. For purposes of this Order, 3M asserts that GAC is the presumptively appropriate treatment technology and EPA is supportive of this approach. The parties agree, however, that conditions at a particular location may require use of an alternate technology (e.g., ion exchange resins, and high-pressure membranes such as nano-filtration or reverse osmosis) to address unique installation challenges or non-PFAS water quality issues.
- c. The operation and maintenance period for water treatment systems for private wells shall terminate not less than five (5) years after installation. After five (5) years from the date of installation, 3M may cease providing operation and maintenance for these treatment systems if, and when, sampling data consistently and reliably demonstrate an influent concentration of PFOA, PFOS, PFBS, and HFPO-DA below any then-existing maximum contaminant level(s) (“MCL”) established by EPA under the Safe Drinking Water Act. For purposes of this paragraph, “consistently and reliably” is demonstrated by five consecutive sampling events with results below any then applicable MCL
- d. The work plan shall include an implementation program, continued sampling, operation and maintenance obligations, and efficacy of treatment (for PFOA, PFOS, PFBS, HFPO-DA), considering any requirements to obtain state and/or local permits or approvals.

- iii. Public Water System Work Plan: 3M will offer to collect, and if authorized to collect, will collect and analyze samples at Public Water Systems within a 10-mile radius of the Facility (depicted in Figure 2) as well as the following Public Water Systems: East Moline, Illinois; Moline, Illinois; Rock Island, Illinois; and Davenport, Iowa. 3M shall offer to sample these Public Water Systems. If the offer is accepted, 3M will collect and analyze a sample(s) at each PWS on a quarterly interval in 2023, and for a period of four calendar years beginning in 2024, EPA may require additional sampling based upon an evaluation of collected data, as further described in the Work Plan. The sampling for the Camanche Water Supply – PWS ID# IA2322066 will be harmonized with, or addressed in, the Camanche Alternative Water Supply Work Plan is described in subparagraph (E) below.

- B. Sharing of Samples with EPA. Upon EPA’s request, 3M shall provide EPA with split or duplicate samples collected by 3M during the sampling activities identified in the

- Private Water System Work Plan and the Public Water System Work Plan. It is EPA's sole responsibility to: i) timely provide 3M with sample bottles; and ii) arrange for the shipping of the split or duplicative samples to an EPA selected laboratory. 3M agrees to pay for the cost of the PFAS-related laboratory analytical work of the split or duplicate samples performed by one EPA-selected third-party laboratory. The EPA-selected laboratory will report the results of the laboratory analytical work to EPA. EPA will share the results of the analytical results it receives with 3M.
- C. Submit Quality Assurance Project Plan. Within fifteen (15) business days of EPA approval of the Work Plan, 3M shall submit a quality assurance project plan ("QAPP") that is consistent with EPA guidance (*See* <https://www.epa.gov/quality/guidance-quality-assurance-project-plans-epa-qag-5>) for EPA review and approval. If EPA approves the QAPP, 3M shall implement it as approved. EPA may provide comments or changes required for incorporation into the QAPP prior to EPA approval. If EPA does not approve the QAPP, 3M shall address EPA's comments and resubmit the QAPP for review within fifteen (15) business days of receipt of EPA's disapproval. Upon resubmission, EPA, in its sole discretion, may either approve the QAPP, or if EPA determines that the QAPP does not adequately address the comments provided by EPA, EPA may modify the QAPP and will provide 3M with a copy of the QAPP as modified. Once approved or modified by EPA, the QAPP shall be incorporated by reference and fully enforceable under the terms of this Order.
- D. Newly Activated or Permitted Water Systems. 3M shall, on a semi-annual basis following the Effective Date of this Order, contact in writing the appropriate state or local agencies to request that such agencies identify any newly activated Private Water Systems within a four-mile radius of the Facility or Public Water Systems within a ten-mile radius of the Facility since the receipt of the prior written request from 3M. Upon identification of any newly activated Private Water Systems or Public Water Systems, 3M shall, within seven (7) business days of learning of any newly activated Private Water Systems or Public Water Systems, offer to sample the water system(s) as specified in the work plans. If the offer is accepted, 3M shall follow the applicable provisions set forth in Paragraph 71 (A). 3M shall continue to make the semi-annual request that the appropriate state or local agencies identify any newly activated Private Water Systems within a four-mile radius of the Facility or Public Water Systems within a ten-mile radius of the Facility until such time as the parties agree to modify such obligation pursuant to Paragraph 73 or the Order is terminated pursuant to Paragraph 82. 3M will provide subsequent purchasers of homes that have already received but not accepted an offer of a treatment system, the opportunity to request installation of a treatment system if such request is made within one year of the Effective Date of this Order.
- E. Camanche Alternative Water Supply/Treatment Plan. Within thirty (30) business days of the Effective Date of this Order, 3M shall submit for EPA review and approval a plan to offer, at 3M's expense, alternative water or treatment to Camanche Water Supply – PWS ID# IA2322066. The Camanche Alternative Water Supply/Treatment Work Plan shall provide for consultation with Camanche and appropriate state and

public agencies to identify the Alternate Drinking Water Supply/Treatment option (new well or treatment system) that is appropriate and set a schedule for development of the plans for implementation of the selected option.

72. Reports

- A. Beginning January 31, 2023, and annually thereafter, 3M shall submit Progress Reports. Each Progress Report shall summarize for each section of the work plans the completed and future activities under the work plans. 3M must also append to the Progress Report original data and electronic files (e.g., lab reports, sortable spreadsheets, and mapping files) if not previously submitted to EPA. EPA may direct 3M to include additional information in Progress Reports and 3M shall timely submit that information and further incorporate the requested information in subsequent Progress Reports.
- B. Additionally, beginning January 31, 2023, and at a frequency specified in the work plan, 3M shall provide to EPA a data report that includes sampling locations, the laboratory analytical results of samples taken, and whether treatment has been installed at the Private Water System or Public Water System represented by the samples.
- C. This reporting requirement shall remain in effect until 3M submits a written request to EPA to submit Progress Reports or data reports on a less frequent basis than set forth in Paragraphs 72(A) or 72(B) respectively and EPA approves such a request. 3M shall continue to submit Progress Reports until such time as EPA provides written notice that the reports are no longer necessary, or this Order is terminated pursuant to Paragraph 82.
- D. All Progress Reports required by this Paragraph shall contain the following certification, which shall be signed by a responsible corporate officer of 3M performing the work required under Paragraph 71 of this Order and summarized in the Progress Report:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

For purposes of this Order, a responsible corporate officer shall be:

- i. a president, secretary, treasurer, or vice-president in charge of a principal business function, or any other person who performs similar policy or decision-making functions for 3M performing the work required under Paragraph 71 of this Order; or
- ii. the Plant Director of the Cordova, IL, Facility, so long as authority to sign documents has been delegated in writing to the manager in accordance with corporate procedures.

E. Reports required under this Order shall be submitted electronically to the following addressees, or their successor:

As to EPA:

Chief, Industrial Branch
Water Enforcement Division
Office of Enforcement and Compliance Assurance
U.S. EPA, Headquarters

Supervisor, Section 3
Water Enforcement & Compliance Assurance Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 5

Chief, Drinking Water and Inspection Section
Water Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7

As to IEPA:

Division Manager Public Water Supplies
Illinois Environmental Protection Agency

As to IDPH:

Environmental Toxicology Program Manager
Illinois Department of Public Health, Division of Environmental Health

As to IDNR:

Supervisor
Water Supply Engineering Section
Iowa Department of Natural Resources

VII. GENERAL PROVISIONS

73. This Order may be modified only by mutual agreement of the signatories to this Order. Except as provided in this paragraph, any agreed modifications shall be in writing, signed by all signatories to this Order, shall be effective on the date of signature by EPA (“Effective Date”), and shall be incorporated into this Order. 3M shall submit Progress Reports as follows:

- A. EPA, after consultation with 3M, may modify any schedule or deliverable in writing or by oral direction without further formal amendment to the Order. EPA will promptly memorialize any oral modification, but its effective date is the date of EPA’s oral direction.

- B. If 3M seeks permission to deviate from the requirements of any approved schedule or deliverable, 3M shall submit a written request to EPA for approval outlining the proposed modification and its basis. 3M may not proceed with the requested deviation until receiving oral or written approval from EPA as described in Paragraph 73(A) above.
- C. No informal advice, guidance, suggestion or comment by EPA regarding reports, plans, specifications, schedules or any other writing 3M submits shall relieve 3M of its obligation to obtain any formal approval this Order requires, or to comply with all of this Order's requirements, unless it is modified in writing pursuant to this paragraph.

74. For purposes of this Order only, the parties have agreed to offer the provision of Alternate Drinking Water Supply/Treatment within a three-mile radius of the Facility, which is in no way intended to supersede, impede, interfere with or otherwise affect EPA's development of MCLs, health advisories, or regulatory limits for PFAS that may be established by EPA in the future. Moreover, nothing in this Order is intended to preclude 3M from challenging the appropriateness of any EPA proposed MCL(s), health advisory(ies), or regulatory limits for PFAS that may be established by EPA in the future.

75. The terms of this Order are binding on 3M and its assignees and successors. 3M must give notice of this Order to any successors in interest prior to transferring ownership, and must simultaneously verify to EPA, at the address specified in Paragraph 72(E) that 3M has given the notice.

76. 3M shall provide a copy of this Order to any contractor retained to perform work required under this Order within ten (10) days after the Effective Date or the date of such retention, whichever is later. 3M shall ensure that any such contractor performs the work in conformity with the terms of this Order. In any action to enforce this Order, 3M shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Order. Any change in the ownership or corporate status of 3M including, but not limited to, any transfer of assets or real or personal property shall not alter 3M's responsibilities under this Order, unless: (1) a third-party expressly agrees to assume the obligations of this Order and to be substituted for the 3M under the Order and thus be bound by the terms thereof; and (2) EPA consents to relieve the 3M of its obligations.

77. The undersigned representative of 3M certifies that they are fully authorized to enter into the terms and conditions of this Order and to execute and legally bind 3M to it.

78. Compliance with the terms and conditions of this Order shall not in any way be construed to relieve 3M from its obligations to comply with all provisions of federal, state, or local law, nor shall it be construed to be a determination of any issue related to any federal, state, or local permit. Compliance with this Order shall not be a defense to any actions subsequently commenced for any violation of federal laws and regulations administered by the EPA, and it is the responsibility of 3M to comply with such laws and regulations.

79. Pursuant to SDWA Section 1431(b), 42 U.S.C. § 300i(b), in the event 3M violates, fails, or refuses to comply with any of the terms or provisions of the Order, EPA may commence a civil action in U.S. District Court to require compliance with this Order and to assess a civil penalty of up to \$24,674 per day of violation under the SDWA, as adjusted by the Federal Civil Penalties Inflation Adjustment Act of 1990, amended by the Debt Collection Improvement Act of 1996, and the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. § 19.

80. EPA reserves all rights against 3M and all other persons to take any further civil, criminal, or administrative enforcement action pursuant to any available legal authority, and to exercise its information gathering and inspection authorities. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order as set forth in Paragraph 73 or issuance of additional Orders, and/or additional actions as EPA may deem necessary, and/or from requiring 3M in the future to perform additional activities pursuant to the SDWA or any other applicable law. EPA further expressly reserves the right to disapprove work performed by the 3M.

VIII. EFFECTIVE DATE

81. Under SDWA Section 1431, 42 U.S.C. § 300i, this Order shall be effective on the date on which it is signed by the Director of the Water Enforcement Division, OECA.

IX. TERMINATION AND SATISFACTION

82. The provisions of this Order shall be deemed satisfied when 3M receives written notice from EPA that 3M has demonstrated, to the satisfaction of EPA, that the terms of this Order have been satisfactorily completed, and the written notice from EPA will state that this Order is terminated.

SO ORDERED:

Date: _____

Diana J. Saenz
Acting Director
Water Enforcement Division
Office of Civil Enforcement/ U.S. EPA

AGREED TO:



John Banovetz
EVP, CTO and Environmental Responsibility
3M Research and Development

Date: Nov. 2, 2022

Table 1

PFAS Analyte	PFAS Acronym	Chemical Abstract Service Registry Number (CAS RN)	Minimum Reporting Level (ng/L)	EPA Analytical Method
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	5	533
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	2	533
4,8-dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	3	533
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	5	533
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	20	533
Perfluorobutanoic acid	PFBA	375-22-4	5	533
Perfluorobutanesulfonic acid	PFBS	375-73-5	3	533
1H,1H, 2H, 2H-perfluorodecane sulfonic acid	8:2FTS	39108-34-4	5	533
Perfluorodecanoic acid	PFDA	335-76-2	3	533
Perfluorododecanoic acid	PFDoA	307-55-1	3	533
Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7	3	533
Perfluoroheptanesulfonic acid	PFHpS	375-92-8	3	533
Perfluoroheptanoic acid	PFHpA	375-85-9	3	533
1H,1H, 2H, 2H-perfluorohexane sulfonic acid	4:2FTS	757124-72-4	3	533
Perfluorohexanesulfonic acid	PFHxS	355-46-4	3	533
Perfluorohexanoic acid	PFHxA	307-24-4	3	533
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	4	533
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	3	533
Perfluorononanoic acid	PFNA	375-95-1	4	533
1H,1H, 2H, 2H-perfluorooctane sulfonic acid	6:2FTS	27619-97-2	5	533
Perfluorooctanesulfonic acid	PFOS	1763-23-1	4	533
Perfluorooctanoic acid	PFOA	335-67-1	4	533
Perfluoropentanoic acid	PFPeA	2706-90-3	3	533
Perfluoropentanesulfonic acid	PFPeS	2706-91-4	4	533
Perfluoroundecanoic acid	PFUnA	2058-94-8	2	533
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6	5	537.1
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9	6	537.1
Perfluorotetradecanoic acid	PFTA	376-06-7	8	537.1
Perfluorotridecanoic acid	PFTTrDA	72629-94-8	7	537.1
1,1,1-Trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide	TFSI	82113-65-3		See Paragraph 71A.i.d
Perfluoropropanoic acid	PFPrA	422-64-0		See Paragraph 71A.i.d

Figure 1

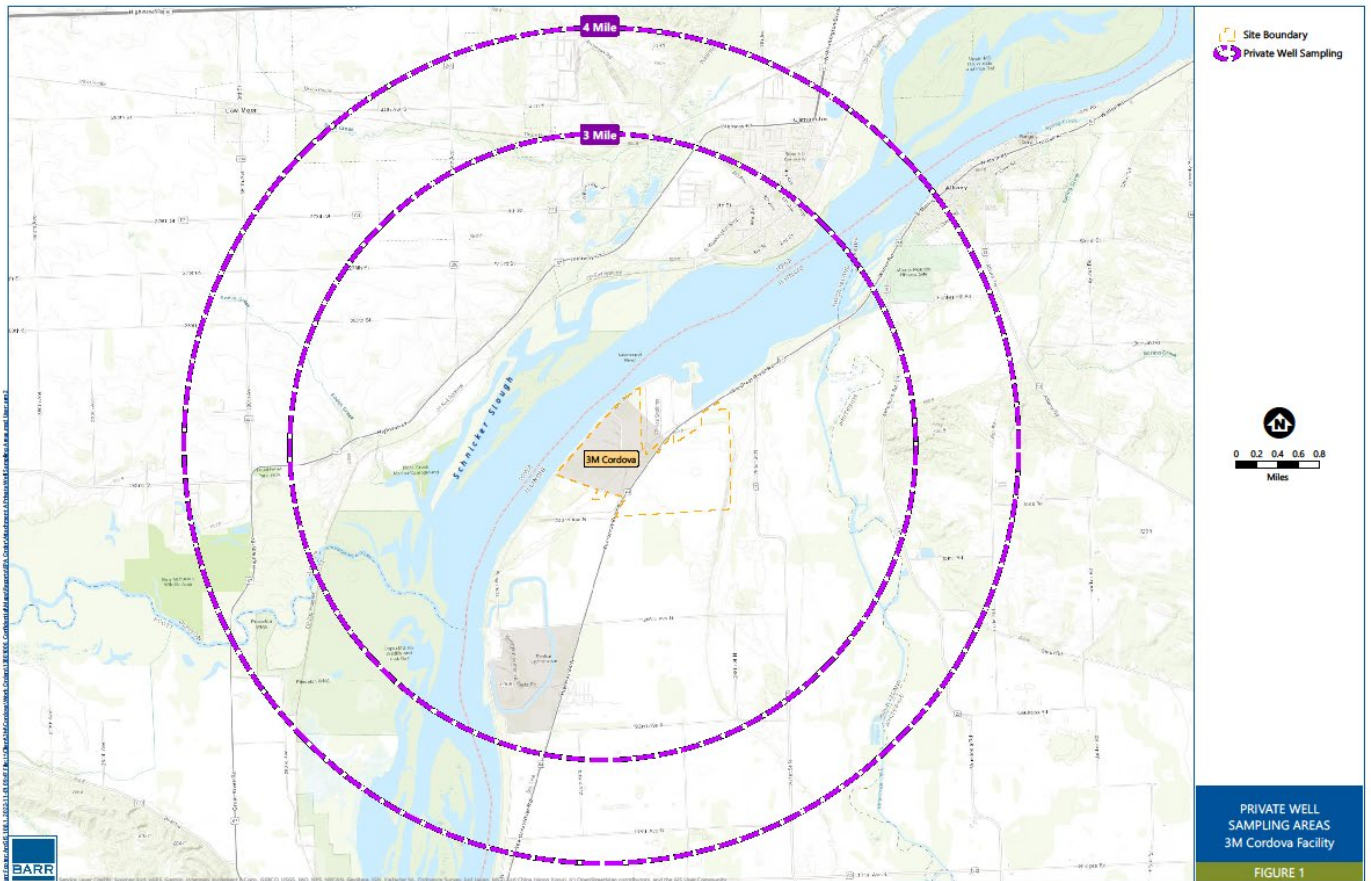


Figure 2

