Connecticut
Department of Energy &
Environmental Protection

MEMORANDUM

DATE: June 30, 2026

TO: Staff, Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division, Stakeholders, and Environmental Professionals

FROM: Audra Godfrey, Director, Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division

SUBJECT: Industrial Wastewater PFAS Roadmap 2.0

This memorandum is an update to the September 2023 NPDES & Pretreatment PFAS Roadmap, and provides information to stakeholders on how the Department of Energy and Environmental Protection's ("DEEP" or "Department") Water Permitting and Enforcement Division ("WPED") is responding to the evolving regulatory landscape around the emerging per- and polyfluoroalkyl substances ("PFAS") contaminants.

Notice: This document provides a high-level strategic overview of the WPED's ongoing PFAS management initiatives. It is intended to outline core regulatory trajectories and policy frameworks; it is not intended to serve as an exhaustive technical manual or to address granular, site-specific permitting procedures.

Regulatory Authority and Reserved Rights. DEEP operates its delegated National Pollutant Discharge Elimination System ("NPDES"), Underground Injection Control ("UIC"), and state permitting programs to proactively manage emerging contaminants and protect public health.

Consistent with the EPA PFAS Strategic Roadmap and the Connecticut PFAS Action Plan, the Department explicitly reserves the right to require routine PFAS monitoring, effluent limits, reporting, and source control requirements as necessary for known or suspected PFAS discharges across all general and individual permits. The permitting programs will deploy these requirements on a case-by-case or sector-by-sector basis to prevent the degradation of state waters.

Section 1. Background and Regulatory Context

Per- and polyfluoroalkyl substances ("PFAS") are a class of synthetic chemicals widely utilized across various industrial and commercial sectors. Due to their chemical stability, they resist environmental degradation, migrate readily through soil, contaminate drinking water supplies, and bioaccumulate within aquatic life and wildlife ecosystems. Persistent exposure to certain PFAS analytes is documented to cause adverse impacts on human health.

In response to these environmental and public health challenges, federal and state frameworks have been established to systematically address PFAS releases:

- **Federal Guidance:** On December 5, 2022, the U.S. Environmental Protection Agency ("EPA") issued a memorandum recommending that states leverage NPDES and pretreatment programs to identify PFAS sources and implement appropriate monitoring and control actions through permitting authorities.
- **State Action:** Connecticut established an Interagency PFAS Task Force on July 8, 2019, which culminated in the Connecticut PFAS Action Plan on November 1, 2019. The Action Plan outlines a three-pronged strategy:
    1. Minimize environmental PFAS exposure for Connecticut residents.
    2. Minimize future environmental releases of PFAS.
    3. Identify, assess, and remediate historical PFAS releases.

Currently, WPED is executing the investigatory and data-collection phase of this strategy. Through state and federal collaboration, a comprehensive list of industrial activities and corresponding NAICS/SIC codes has been compiled in Appendix A of this Roadmap representing facilities with a high probability of generating PFAS-impacted wastewater. DEEP is actively acquiring effluent data from these sectors to trace contributing sources and establish sound regulatory baselines.

Section 2. PFAS Permitting Strategy and Regulatory Objectives

The primary objective of the 2026 WPED PFAS Roadmap is to systematically transition from an informational data-gathering posture to a structured, enforceable regulatory framework. The strategy is anchored by the following procedural milestones:

1. **Informational Screening:** Collect and evaluate PFAS screening data to understand the presence and prevalence of PFAS in industrial discharges.
2. **Source Identification & Minimization:** Identify contributory sources based on screening results. Require PFAS Source Identification and Reduction Plans for industries with known or potential presence of PFAS in their discharges to reduce contamination at the source.
3. **Case-by-Case Technology and Controls:** Apply technology-based effluent limits ("TBELs") on a case-by-case basis where permits require robust, redundant treatment systems. Monitor effectiveness and adjust controls to minimize risk.
4. **Long-Term Water Quality Alignment:** Include numeric ("WQBELs") where applicable, upon the formal promulgation of water quality criteria.

II. PFAS PERMITTING STRATEGY AND REGULATORY OBJECTIVES

The primary objective of the WPED PFAS Roadmap is to systematically transition from an informational data-gathering posture to a structured, enforceable regulatory framework. The strategy is anchored by the following procedural milestones:

1. INFORMATIONAL SCREENING

Collect and evaluate PFAS screening data to understand the presence and prevalence of PFAS in industrial discharges.

2. SOURCE IDENTIFICATION & MINIMIZATION

Identify contributory sources of PFAS and require permittees with detectable levels to implement source reduction and minimization measures to stop contamination at the source.

3. CASE-BY-CASE TBEL CONTROLS

Apply technology-based effluent limits (TBELs) and require robust, redundant treatment systems on a case-by-case basis while numeric standards are pending.

4. LONG-TERM WATER QUALITY ALIGNMENT

Include numeric Water Quality-Based Effluent Limits (WQBELs) where applicable, upon the formal promulgation of water quality criteria.

SOURCE IDENTIFICATION AND SCREENING

Requiring targeted industrial categories and high-risk operations to screen for PFAS analytes using standardized EPA methodology.

MANDATORY SOURCE REDUCTION

Compelling permittees with detectable levels of PFAS to implement operational changes and chemical substitutions to stop contamination at the source.

INTERIM TECHNOLOGY-BASED CONTROLS

Utilizing case-by-case technology-based effluent limits (TBELs) and engineering redundant treatment systems while numeric standards are pending.

LONG-TERM WATER QUALITY ALIGNMENT

Include numeric Water Quality-Based Effluent Limits (WQBELs) where applicable, upon the formal promulgation of water quality criteria.

GOAL: Protect public health and the environment by reducing and, where feasible, eliminating PFAS discharges to Connecticut's waters through a science-based, phased regulatory approach.

Section 3. Standardized Analytical Testing Methodologies

To ensure all generated data can withstand rigorous legal and technical scrutiny, compliance testing must adhere to strict technological baselines:

Approved Federal Methods: Chemical analysis for PFAS must be performed using testing methods officially approved under Title 40 of the Code of Federal Regulations, Part 40 CFR 136.

State Frameworks: If no specific method for PFAS analysis is formally approved under 40 CFR 136, the permits will explicitly require EPA Method 1633 or 1633A, or otherwise approved method.

Regulatory Reference: The complete, exhaustive inventory of the 40 mandatory target compounds is detailed within Appendix B of this memorandum. This list may be amended as new scientific information becomes available.

Section 4. General Permit Updates by Permit Type

DEEP has integrated rigorous, PFAS-specific monitoring, planning, and reporting obligations into newly reissued and drafted General Permits ("GP").

1. Non-Significant Industrial User (Non-SIU) General Permit

- **Scope:** Authorizes Process and Non-process Wastewater discharges to Publicly Owned Treatment Works ("POTWs") from facilities not classified as Significant Industrial Users ("SIU").
- **PFAS Screening Triggers:** Mandatory for specific industrial wastewater categories, including Printing, Photographic Processing, Water Treatment, Commercial Laundry, Process Building Maintenance (if ammoniated, petroleum or chlorinated solvent-based cleaning agents are used), Noncontact Cooling (if discharges are from vapor degreasers, dry cleaning machines, or other equipment used to cool chlorinated solvent vapors), and Commercial Carwashes, as well as any activity identified by the Department or any discharge where PFAS is "expected present".
- **Analytical Protocol:** Samples must be analyzed for 40 specific PFAS analytes using the method(s) approved by the EPA pursuant to 40 CFR 136 and by a laboratory certified to conduct such test methods. If no such test method is approved by EPA pursuant to 40 CFR 136, PFAS

analyses shall be performed in accordance with EPA Method 1633 or 1633A, or an otherwise approved method.

- **PFAS Source Identification and Reduction Plan:** Facilities matching the screening triggers must develop and implement a formal plan within two (2) years of filing their Notification Form. Plans must evaluate historical and current PFAS sources and implement source reduction techniques (such as operational adjustments or chemical substitutions) to the maximum extent achievable.
- **Reporting:** Permittees must submit an annual PFAS Status Report to DEEP via the online Notification Form portal by July 31st of each calendar year.

2. Significant Industrial User ("SIU") General Permit for Discharges to POTWs

- **Scope:** Regulates industrial discharges to POTWs from facilities classified as SIUs. Also, authorizes dewatering and remediation discharges to POTWs.
- **PFAS Screening Triggers:** Mandatory for specific industrial wastewater categories, including Metal Finishing, Printing, Photographic Processing, Water Treatment, Commercial Laundry, Process Building Maintenance (if ammoniated, petroleum or chlorinated solvent-based cleaning agents are used), Noncontact Cooling (if discharges are from vapor degreasers, dry cleaning machines, or other equipment used to cool chlorinated solvent vapors), and Commercial Carwashes, as well as any activity identified by the Department or any discharge where PFAS is "expected present".
- **Analytical Protocol:** Samples must be analyzed for 40 specific PFAS analytes using the method(s) approved by the EPA pursuant to 40 CFR 136 and by a laboratory certified to conduct such test methods. If no such test method is approved by EPA pursuant to 40 CFR 136, PFAS analyses shall be performed in accordance with EPA Method 1633 or 1633A, or otherwise approved method.
- **PFAS Source Identification and Reduction Plan:** Existing categorized Permittees matching the screening triggers must develop and implement a formal plan within two years of the effective date of the general permit (before December 1, 2026). New categorized Permittees matching the screening triggers must develop and commence a formal plan within two years of the submission of their application form to the Department. Plans must evaluate historical and current PFAS sources and implement source reduction techniques (such as operational adjustments or chemical substitutions) to the maximum extent achievable.
- **Remediation and Dewatering Discharges to POTWs:** To protect municipal sewer infrastructure, biological treatment efficacy, and biosolids quality, DEEP has established a centralized regulatory pathway for managing applicants seeking to discharge PFAS-containing dewatering and remediation wastewater to a POTW. All such discharges must be authorized under the SIU General Permit framework by utilizing *The PFAS Discharge Authorization Form*.

- **The PFAS Discharge Authorization Form**

  Execution of the *PFAS Discharge Authorization Form* is a strict prerequisite before DEEP initiates a technical review of any proposed remediation or dewatering discharge to a POTW under the SIU GP.

  - **Applicant Obligations:** The applicant must fully disclose all known PFAS concentrations, supply complete analytical data for the 40 target analytes, and certify that the Best Available Technology ("BAT") will be actively operated to minimize PFAS concentrations prior to the wastewater entering the municipal sewer system. Permittees will be required to demonstrate "no measurable breakthrough" prior to discharging to the POTW.
  - **Municipal/POTW Certification:** The receiving municipality must formally sign the authorization form. By executing this certification, the municipality acknowledges the potential impacts of the discharge on its final effluent quality, receiving surface waters, and biosolids/sludge management options, and formally accepts responsibility for conveying and treating the wastewater.

3. Discharge of Dewatering and Remediation Wastewater General Permit ("D2R") to Surface and Ground Waters

- **Scope:** Strictly limited to authorizing discharges of dewatering and remediation wastewater directly to surface waters or ground waters.
- **Analytical Protocol:** Samples must be analyzed for 40 specific PFAS analytes using EPA Method 1633A, or otherwise approved method.
- **Screening Criteria:** Required if PFAS is reasonably known or suspected to be present at or directly adjacent to the remediation site.
- **Monitoring Frequency:** If PFAS analytes are positively identified during initial screening, ongoing monitoring must be performed.

4. Draft Comprehensive General Permit (Surface and Ground Water)

- **Scope:** Covers non-contact cooling water, geothermal heat pump, boiler blowdown, hydrostatic testing, hydrant flushing, fire suppression, pressure washing, and water treatment wastewater discharging to surface and ground waters.
- **Analytical Protocol:** Samples must be analyzed for 40 specific PFAS analytes using EPA Method 1633A, or otherwise approved method.
- **Screening Criteria:** Screening is required if emerging contaminants, specifically PFAS, are reasonably known or suspected to be present at the site.

- **Targeted Monitoring:** Explicitly mandates semi-annual PFAS monitoring for the *Water Treatment Wastewater* sub-category across most volumetric flow tiers.

Section 5. Individual Permit Application for Wastewater Discharges from Manufacturing, Commercial, and Other Activities

DEEP is systematically updating the Individual Permit Application for Wastewater Discharges from Manufacturing, Commercial, and Other Activities to integrate PFAS controls directly into standard individual permitting workflows.

1. Application Screening Integration

Once the application updates are finalized, any individual permit application submitted after the transition date must include comprehensive PFAS screening data within the initial filing. This requirement applies to any facility conducting activities listed in Appendix A of this Roadmap or where PFAS sources are known or suspected.

2. Interim Permit Conditions for New Individual Approvals

Until screening data is completely integrated into the initial application process, generally, newly issued individual permits for facilities will contain a standardized interim condition requiring a PFAS Sampling Plan following permit issuance and include a PFAS Source and Reduction Plan. This framework consists of the following milestones. The Department explicitly reserves the right to require routine PFAS monitoring, effluent limits, reporting, and source control requirements as necessary for known or suspected PFAS discharges across all general and individual permits. These requirements will be included in permits on a case-by-case or sector-by-sector basis to prevent the degradation of state waters. The exact permit condition language may vary on a case-by-case basis dependent on circumstances surrounding the discharge (ex. increased sampling to account for seasonal variability, discharge duration, and frequency, etc.).

Milestone Timeline	Regulatory Requirement
Within 30 Days *of Permit Effective Date*	**Hire Qualified Professional:** Retain a consultant with demonstrated, specialized expertise in PFAS sampling protocols and analytical methods, and notify DEEP in writing.

Milestone Timeline	Regulatory Requirement
Within 120 Days *of Permit Effective Date*	**Submit Sampling Plan:** Submit a formal, comprehensive sampling plan for DEEP review and approval, detailing test methods, laboratories, and QA/QC procedures.
Within 30 Days *of Plan Approval*	**Execute Sampling:** Conduct field sampling requiring at least *two separate and distinct samples* analyzed via EPA Method 1633 or 1633A.
Within 30 Days *of Result Receipt*	**Submit Laboratory Results:** Submit all final analytical data in writing to the DEEP Commissioner.

Section 6. Technology-Based Effluent Limits and Interim Treatment Expectations

In the absence of numeric water quality criteria, DEEP reserves the authority to establish TBELs on a case-by-case basis across any permit program—whether the application is for a general or individual permit. TBEL limits are driven by engineering removal capabilities and available treatment technologies rather than receiving water dilution. DEEP is closely following EPA's PFAS Strategic Roadmap and will continue to consider new federal guidance and implement applicable federal and state regulations as they are promulgated.

Interim Treatment Target

Where specific case-by-case TBELs are imposed on a discharge, the interim proposed limit will typically be established as:

"Equivalent to no measurable breakthrough above the analytical detection limit."

Achieving this stringent target requires the deployment of highly efficient redundant treatment trains—such as dual-stage granular activated carbon ("GAC") or robust ion exchange resin systems—specifically engineered to ensure complete contaminant capture prior to effluent discharge.

Because treatment systems are rapidly evolving and a one-size-fits-all approach is rarely effective for complex waste streams, DEEP is receptive to other proven or emerging treatment technologies. Final endpoint expectations and specific design approvals will continue to be established strictly on a case-by-case basis.

Engineering and Operational Expectations

For permittees utilizing carbon adsorption systems to achieve these limits, DEEP requires rigorous operational oversight:

- **Life Expectancy Calculations:** Permittees must mathematically estimate the operational life expectancy of treatment vessels using validated engineering formulas that account for actual flow rates, total carbon mass, and influent PFAS chemical concentrations.
- **Carbon Changeout Triggers:** To prevent breakthrough and subsequent permit violations, operators are required to proactively schedule media replacement at approximately 70–75% of the calculated breakthrough volume.

Section 7. Path Forward and Next Steps

WPED remains dedicated to safeguarding public health and Connecticut's aquatic environments through a logical, phased regulatory rollout. Through this deliberate approach, DEEP ensures regulatory predictability for the business and municipal communities while aggressively mitigating the risks associated with this ubiquitous emerging contaminant. DEEP intends to update the PFAS Roadmap as additional information becomes available.

Appendix A: Industrial Activities with Suspected PFAS Discharges

Appendix B: PFAS Analytes

Resources

NPDES_PFAS_State Memo_December_2022.pdf (epa.gov)

CT-Interagency-PFAS-Task-Force-Action-Plan.pdf

Effluent Guidelines Program Plan 15, January 2023 (epa.gov)

Preliminary Effluent Guidelines Program Plan 16, December 2024 (epa.gov)

Method 1633A Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS (epa.gov)

PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024 | US EPA

Appendix A: Industrial Sectors with Suspected PFAS Discharges

NAICS Code	NAICS Description	SIC Code	SIC Description
812300	Commercial Laundry	3582	Commercial Laundry, Drycleaning, and Pressing Machines
211120	Crude Petroleum Extraction		Crude Petroleum Extraction
211130	Natural Gas Extraction	2819	Industrial Inorganic Chemicals, NEC (recovering sulfur from natural gas)
212221	Gold Ore Mining	1041	Gold Ores
212230	Copper, Nickel, Lead, and Zinc Mining		Natural Gas Extraction
212291	Uranium-Radium-Vanadium Ore Mining	1094	Uranium-Radium-Vanadium Ores
221320	Sewage Treatment Facilities	4952	Sewerage Systems
238320	Painting and Wall Covering Contractors	1721	Painting and Paper Hanging
238320	Painting and Wall Covering Contractors	1799	Special Trade Contractors, Not Elsewhere Classified
313110	Fiber, Yarn, and Thread Mills	2299	Textile goods, Not Elsewhere Classified
313110	Fiber, Yarn, and Thread Mills	2281	Yarn Spinning Mills
313110	Fiber, Yarn, and Thread Mills	2282	Yarn Texturizing, Throwing, Twisting, and Winding Mills
313110	Fiber, Yarn, and Thread Mills	2284	Thread Mills
313110	Fiber, Yarn, and Thread Mills	2298	Cordage and Twine
313210	Broadwoven Fabric Mills	2221	Broadwoven Fabric Mills, Manmade Fiber and Silk
313210	Broadwoven Fabric Mills	2211	Broadwoven Fabric Mills, Cotton
313210	Broadwoven Fabric Mills	2231	Broadwoven Fabric Mills, Wool (Including Dyeing and Finishing)
313220	Narrow Fabric Mills and Schiffli Machine Embroidery	2241	Narrow Fabric and Other Smallware Mills: Cotton, Wool, Silk, and Manmade Fiber
313220	Narrow Fabric Mills and Schiffli Machine Embroidery	2397	Schiffli Machine Embroideries
313230	Nonwoven Fabric Mills	2297	Non-woven Fabrics
313240	Knit Fabric Mills	2257	Weft Knit Fabric Mills
313240	Knit Fabric Mills	2258	Lace and Warp Knit Fabric Mills
313240	Knit Fabric Mills	2259	Knitting Mills, Not Elsewhere Classified
313310	Textile and Fabric Finishing Mills	2262	Finishers of Broadwoven Fabrics of Manmade Fiber and Silk
313320	Fabric Coating Mills	2295	Coated Fabrics, Not Rubberized

NAICS Code	NAICS Description	SIC Code	SIC Description
313320	Fabric Coating Mills	3069	Fabricated Rubber Products, Not Elsewhere Classified
314110	Carpet and Rug Mills	2273	Carpets and Rugs
314910	Textile Bag and Canvas Mills	2394	Canvas and Related Products
314910	Textile Bag and Canvas Mills	2392	House furnishings, Except Curtains and Draperies
314910	Textile Bag and Canvas Mills	2393	Textile Bags
314910	Textile Bag and Canvas Mills	3069	Fabricated Rubber Products, Not Elsewhere Classified
314999	All Other Miscellaneous Textile Product Mills	2392	House furnishings, Except Curtains and Draperies
314999	All Other Miscellaneous Textile Product Mills	2385	Waterproof Outerwear
315210	Cut and Sew Apparel Contractors		
315280	Other Cut and Sew Apparel Manufacturing		
315990	Apparel Accessories and Other Apparel Manufacturing		
316110	Leather & Hide Tanning & Finishing	3111	Leather Tanning and Finishing
316210	Footwear Manufacturing		
316998	All Other Leather Goods & Allied Product Mfg		Other Leather Goods and Allied Product Manufacturing
322110	Pulp Mills	2611	Pulp Mills
322121	Paper (except Newsprint) Mills	2621	Paper Mills
322130	Paperboard Mills	2631	Paperboard Mills
322212	Folding Paperboard Box Manufacturing	2657	Folding Paperboard Boxes, Including Sanitary
322219	Other Paperboard Container Manufacturing	2656	Sanitary Food Containers, Except Folding
322220	Paper Bag and Coated and Treated Paper Manufacturing	2673	Plastics, Foil, and Coated Paper Bags
322220	Paper Bag and Coated and Treated Paper Manufacturing	2672	Coated and Laminated Paper, Not Elsewhere Classified
322220	Paper Bag and Coated and Treated Paper Manufacturing	2671	Packaging Paper and Plastics Film, Coated and Laminated
322230	Stationary Product Manufacturing	2679	Converted Paper and Paperboard Products, Not Elsewhere Classified
323111	Commercial Printing (except Screen and Books)	2752	Commercial Printing, Lithographic

NAICS Code	NAICS Description	SIC Code	SIC Description
323120	Support Activities for Printing	2796	Platemaking and Related Services
324110	Petroleum Refineries	2911	Petroleum Refining
324191	Lubricating Oils and Greases	2992	Lubricating Oils and Greases
325110	Petrochemical Manufacturing	2869	Industrial Organic Chemicals, NEC (aliphatics)
325120	Industrial Gas Manufacturing	2813	Industrial Gas
325130	Synthetic Dye and Pigment Manufacturing	2819	Industrial Inorganic Chemicals, NEC (recovering sulfur from natural gas)
325180	Other Basic Inorganic Chemical Manufacturing	2819	Industrial Inorganic Chemicals, Not Elsewhere Classified
325193	Ethyl Alcohol Manufacturing	2869	Industrial Organic Chemicals, Not Elsewhere Classified
325199	All Other Basic Organic Chemical Manufacturing	2899	Chemicals and Chemical Preparations, Not Elsewhere Classified
325199	All Other Basic Organic Chemical Manufacturing	2869	Industrial Organic Chemicals, Not Elsewhere Classified
325211	Resin and Synthetic Rubber Manufacturing	2821	industrial surfactants, resins, molds, plastics
325211	Plastics Material and Resin Manufacturing	2821	Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers
325212	Synthetic Rubber Manufacturing	2822	Synthetic Rubber
325220	Artificial and Synthetic Fibers and Filaments Manufacturing	2824	Manmade Organic Fibers, Except Cellulosic
325510	Paint and Coating Manufacturing	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
325510	Paint and Coating Manufacturing	2899	Chemical Preparations, NEC (table salt)
325520	Adhesive Manufacturing	2891	Adhesives and sealants
325611	Soap and Other Detergent Manufacturing	2841	Soaps and Other Detergents, Except Specialty Cleaners
325611	Soap and Other Detergent Manufacturing	2844	Perfumes, Cosmetics, and other Toilet Preparations
325612	Polish and Other Sanitation Goods Manufacturing	2842	Specialty Cleaning, Polishing, and Sanitation Preparations
325613	Surface Active Agent Manufacturing	2843	Surface Active Agents, Finishing Agents, Sulfonated Oils, and Assistants
325620	Toilet Preparation Manufacturing	2844	Perfumes, Cosmetics, and other Toilet Preparations
325910	Printing Ink Manufacturing	2893	Printing Ink
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing	3861	Photographic Equipment and Supplies

NAICS Code	NAICS Description	SIC Code	SIC Description
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	2899	Chemicals and Chemical Preparations, Not Elsewhere Classified
326111	Plastics Bag and Pouch Manufacturing	2673	Plastics, Foil, and Coated Paper Bags
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	2671	Packaging Paper and Plastics Film, Coated and Laminated
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	3081	Unsupported Plastics Film and Sheet
326121	Unlaminated Plastics Profile Shape Manufacturing	3089	Plastics Products, Not Elsewhere Classified
326121	Unlaminated Plastics Profile Shape Manufacturing	3082	Unsupported Plastics Profile Shapes
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	3083	Laminated Plastics Plate, Sheet, and Profile Shapes
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	3086	Plastics Foam Products
326199	All Other Plastics Product Manufacturing	3089	Plastics Products, Not Elsewhere Classified
326211	Tire Manufacturing (except Retreading)	3011	Rubber Tires
326299	Other Rubber Product Manufacturing	3061	Molded, Extruded, and Lathe-Cut Mechanical Rubber Goods
327215	Glass Product Manufacturing Made of Purchased Glass	3231	Glass Products Made of Purchased Glass
327310	Cement Manufacturing		Cement manufacturing
331313	Alumina Refining and Primary Aluminum Production		Alumina refining and primary aluminum production
332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing		
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	3479	Coating, Engraving, and Allied Services, NEC (except jewelry, silverware, and flatware engraving and etching)
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring

NAICS Code	NAICS Description	SIC Code	SIC Description
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	3497	Metal Foil and Leaf
333241	Food Product Machinery Manufacturing	3556	Food Products Machinery
333242	Semiconductor Machinery Manufacturing	3559	Special Industry Machinery, Not Elsewhere Classified
333249	Other Industrial Machinery Manufacturing	3841	Surgical and Medical Instruments and Apparatus
333249	Surgical and Medical Instruments and Apparatus		Other industrial machinery manufacturing
333316	Photographic and Photocopying Equipment Manufacturing	3861	Photographic Equipment and Supplies
333318	Other Commercial and Service Industry Machinery Manufacturing	3589	Service Industry Machinery, Not Elsewhere Classified
33351	Metalworking Machine Manufacturing		
333517	Machine Tool Manufacturing	3541	Machine Tools, Metal Cutting Types
333517	Machine Tool Manufacturing	3542	Machine Tools, Metal Forming Types
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing		Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
334310	Audio and Video Equipment Manufacturing		Audio and Video Equipment Manufacturing
334412	Bare Printed Circuit Board Manufacturing	3672	Printed Circuit Boards
334413	Semiconductor and Related Device Manufacturing	3674	Semiconductors and Related Devices
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	3577	Computer Peripheral Equipment, NEC (plotter controllers)
334419	Other Electronic Component Manufacturing	3679	Electronic Components, NEC (other electronic components)
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	3825	Instruments for Measuring and Testing of Electricity and Electrical Signals
335210	Small Electrical Appliance Manufacturing		
335220	Major Household Appliance Manufacturing	3631	Household Cooking Equipment

NAICS Code	NAICS Description	SIC Code	SIC Description
335931	Current-Carrying Wiring Device Manufacturing	3643	Current-Carrying Wiring Devices
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	3629	Electrical Industrial Apparatus, NEC
336412	Aircraft Engine and Engine Parts Manufacturing	3724	Aircraft Engines and Engine Parts
339114	Dental Equipment and Supplies Manufacturing	3843	Dental Equipment and Supplies
339920	Sporting and Athletic Goods Manufacturing	3949	Sporting and Athletic Goods, Not Elsewhere Classified
424690	Other Chemical and Allied Products Merchant Wholesalers	5169	Chemicals and Allied Products, Not Elsewhere Classified
424710	Petroleum Bulk Stations and Terminals	5171	Petroleum Bulk Stations and Terminals
442291	Window Treatment Stores	5719	Miscellaneous Home Furnishings Stores
488119	Other Airport Operations (commercial and civil aviation)	4581	Airports, Flying Fields, and Services[1]
561740	Carpet and Upholstery Cleaning Services	7217	Carpet and Upholstery Cleaning
561990	All Other Support Services		
562111	Solid Waste Collection	4212	Local Trucking Without Storage
562119	Other Waste Collection		
562211	Hazardous Waste Treatment and Disposal		
562212	Solid Waste Landfills	4953	Refuse Systems
562213	Solid Waste Combustors and Incinerators		
562219	Other Nonhazardous Waste Treatment and Disposal		
562991	Septic Tank and Related Services		
611519	Other Technical and Trade Schools[1]		
811192	Car Washes	7542	Carwashes
811420	Reupholstery and Furniture Repair	7641	Reupholstery and Furniture Repair
922160	Fire Protection	9224	Fire Protection
928110	Government establishments of the Armed Forces, including the National Guard, primarily	9711	Establishments of the armed forces and national security[1]

NAICS Code	NAICS Description	SIC Code	SIC Description
	engaged in national security and related activities		

Appendix B: PFAS Analytes

	Target Analyte Name	Analyte Abbreviation	NetDMR Code	CAS Number
Perfluoroalkyl carboxylic acids				
1	Perfluorobutanoic acid	PFBA	51522	375-22-4
2	Perfluoropentanoic acid	PFPeA	51623	2706-90-3
3	Perfluorohexanoic acid	PFHxA	51624	307-24-4
4	Perfluoroheptanoic acid	PFHpA	51625	375-85-9
5	Perfluorooctanoic acid	PFOA	51521	335-67-1
6	Perfluorononanoic acid	PFNA	51626	375-95-1
7	Perfluorodecanoic acid	PFDA	51627	335-76-2
8	Perfluoroundecanoic acid	PFUnA	51628	2058-94-8
9	Perfluorododecanoic acid	PFDoA	51629	307-55-1
10	Perfluorotridecanoic acid	PFTrDA	51630	72629-94-8
11	Perfluorotetradecanoic acid	PFTeDA	51631	376-06-7
Perfluoroalkyl sulfonic acids-Acid Form				
12	Perfluorobutanesulfonic acid	PFBS	52602	375-73-5
13	Perfluoropentansulfonic acid	PFPeS	52610	2706-91-4
14	Perfluorohexanesulfonic acid	PFHxS	52605	355-46-4
15	Perfluoroheptanesulfonic acid	PFHpS	52604	375-92-8
16	Perfluorooctanesulfonic acid	PFOS	52606	1763-23-1
17	Perfluorononanesulfonic acid	PFNS	52611	68259-12-1
18	Perfluorodecanesulfonic acid	PFDS	52603	335-77-3
19	Perfluorododecanesulfonic acid	PFDoS	52632	79780-39-5
Fluorotelomer sulfonic acids				
20	1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	52607	757124-72-4

	Target Analyte Name	Analyte Abbreviation	NetDMR Code	CAS Number
21	1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	52608	27619-97-2
22	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	52609	39108-34-4
Perfluorooctane sulfonamides				
23	Perfluorooctanesulfonamide	PFOSA	51525	754-91-6
24	N-methyl perfluorooctanesulfonamide	NMeFOSA	52641	31506-32-8
25	N-ethyl perfluorooctanesulfonamide	NEtFOSA	52642	4151-50-2
Perfluorooctane sulfonamidoacetic acids				
26	N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	51644	2355-31-9
27	N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	51643	2991-50-6
Perfluorooctane sulfonamide ethanols				
28	N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	51642	24448-09-7
29	N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	51641	1691-99-2
Per- and Polyfluoroether carboxylic acids				
30	Hexafluoropropylene oxide dimer acid	HFPO-DA	52612	13252-13-6
31	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	52636	919005-14-4
32	Perfluoro-3-methoxypropanoic acid	PFMPA	PF002	377-73-1
33	Perfluoro-4-methoxybutanoic acid	PFMBA	PF006	863090-89-5
34	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	52626	151772-58-6
Ether sulfonic acids				
35	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	PF003	756426-58-1
36	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	PF004	763051-92-9
37	Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	52629	113507-82-7

	Target Analyte Name	Analyte Abbreviation	NetDMR Code	CAS Number
Fluorotelomer carboxylic acids				
38	3-Perfluoropropyl propanoic acid	3:3FTCA	PF001	356-02-5
39	2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA	PF007	914637-49-3
40	3-Perfluoroheptyl propanoic acid	7:3FTCA	PF005	812-70-4