DOW – 1.3.13

New York State Department of Environmental Conservation, Division of Water

Division of Water Technical and Operational Guidance Series

Issuing Authority: Mark Klotz Director, Division of Water Signature:_____	**Title: Permitting Strategy for Implementing Guidance Values for PFOA, PFOS, and 1,4-Dioxane**
Date Issued: Proposed - June 2021	**Latest Date Revised:**
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***** N O T I C E *****

This document has been developed to provide Department staff with guidance on how to ensure compliance with the statutory and regulatory requirements, including case law interpretations, and to provide consistent treatment of similar situations. This document may also be used by the public to gain technical guidance and insight regarding how Department staff may analyze an issue and factors in their consideration of particular facts and circumstances. This guidance document is not a fixed rule under the State Administrative Procedures Act subsection 102(2)(a)(I). Furthermore, nothing set forth herein prevents staff from varying from this guidance as the specific facts and circumstances may dictate, provided staff's actions comply with applicable statutory and regulatory requirements. This document does not create any enforceable rights for the benefit of any party.

I. Summary:

This guidance outlines the Department's prioritization strategy for incorporating the guidance values (GVs) for Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D) into State Pollutant Discharge Elimination System (SPDES) discharge permits. This guidance will take effect when the GVs are issued.

II. Policy:

Pursuant to Section 402[1] of the Clean Water Act (CWA), New York administers the approved State Pollutant Discharge Elimination System (SPDES) program in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70, as well as 6 NYCRR Parts 621 and 750. Through the SPDES program, DOW administers the programs

[1] CWA § 402(b); 33 U.S.C. § 1342(b)

and procedures required to control discharges to the state's water resources in accordance with the CWA.
It is the policy of the Department that, where applicable, permits issued for discharges to the state's waters shall comply with effluent limitations. 6 NYCRR § 750-1.11(a). Specifically, 6 NYCRR § 750-1.11(a)(5) provides that a SPDES permit can include conditions necessary to meet guidance values. The GVs for PFOA, PFOS, and 1,4-D are included in an addendum to Technical and Operational Guidance Series (TOGS) 1.1.1 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. The GVs are a translation of New York State's narrative water quality standards for toxic and other deleterious substances, 6 NYCRR § 703.2, and are derived using the same methodology to establish water quality standards. 6 NYCRR Part 702.

III. Purpose and Background:

The purpose of this guidance is to establish an implementation policy to incorporate the GVs developed by the Department for PFOA, PFOS, and 1,4-D into SPDES permits.

PFOA, PFOS, and 1,4-D are relatively ubiquitous in the environment due to their historical widespread use and persistence. PFOA and PFOS have been used in a wide variety of consumer and industrial products as surface coatings and/or protectants because of their nonstick properties. Although their releases have been declining since companies began phasing out their production and use in the early 2000s, trace amounts are still being observed in imported goods as impurities.[2] In addition, because of their anti-degradation properties, these contaminants remain a concern from industries that had historically used these chemicals in their production. Research further indicates that these compounds bioaccumulate in various organisms, including fish and humans.[3] 1,4-D has been largely used as a solvent stabilizer for chemical processing but can also be found as a purifying agent in the manufacturing of pharmaceuticals as well as a contaminant in ethoxylated surfactants commonly used in consumer cosmetics, detergents, and shampoos.[4] Its use as a solvent stabilizer has since been terminated, but it currently remains a purifying agent for the pharmaceutical industry as well as a by-product present in many consumer goods.[5] Research indicates that this chemical does not bioaccumulate in the food chain.[4]

The Department has identified Standard Industrial Classification (SIC) codes where PFOA, PFOS, and 1,4-D are expected to be present at levels considered to be environmentally significant (Appendix A & B). There are currently no federally established technology-based standards related to these three contaminants. However, the Department is aware of treatment

[2] ATSDR, Toxicological Profile for Perfluoroalkyls, Draft for Public Comment, US Dept of Health and Human Services, June 2018.
[3] USEPA, Technical Fact Sheet – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA), November 2017.
[4] ATSDR, Toxicological Profile for 1,4-Dioxane, US Dept of Health and Human Services, April 2012.
[5] USEPA, Technical Fact Sheet – 1,4-Dioxane, November 2017.

technologies currently available which are capable of achieving the expected effluent limitations to be derived from the GVs that can be implemented by facilities.

IV. Responsibility:

Administration of this guidance document is handled by Division of Water's Bureau of Water Permits in Central Office. Implementation of the guidance is handled by Central Office and Regional permit writing staff.

V. Procedure:

The Department will prioritize incorporation of the GVs for PFOA, PFOS and 1,4-D into SPDES permits for discharges of industrial wastewaters from facilities identified as "priority facilities." Priority facilities, for the purposes of this document, will be defined as any facility that includes on the NY-2C application one or more of the SIC codes listed in Appendix A or B in this document and that is located within a HUC 12 watershed of a drinking water supply (Class A, AA, A-Special, AA-Special, GA, and GSA ambient waters in New York State). This targeted approach initially focuses on specific industrial discharges presenting the greatest threat to human health. The industrial data collected as part of this process will inform how these GVs may be applied to other SPDES permitted facilities, including Publicly Owned Treatment Works (POTWs).

Procedures for determining prioritization differ for new and existing priority facilities. If a new facility determines it meets the criteria to be a priority facility, then it will need to disclose on their SPDES permit application (1) information concerning the potential for PFOA, PFOS and/or 1,4-D contaminants to be present in their discharge and (2) sampling and reporting of discharge levels for PFOA, PFOS, and/or 1,4-D. Based on this information, the Department will establish effluent limitations and incorporate them into the SPDES permit in accordance with established procedures and guidance. Existing priority facilities will receive a Request for Information from the Department requiring (1) disclosure of the information concerning the potential for PFOA, PFOS and/or 1,4-D contaminants to be present in their discharge and (2) sampling and reporting of discharge levels for PFOA, PFOS, and/or 1,4-D. The Department will use this information to determine if there is cause to modify their SPDES permits (6 NYCRR § 750-2.1(i)) and will adjust the existing facility's Environmental Benefit Permit Strategy (EBPS) scores in accordance with TOGS 1.2.2 for permit modification accordingly. When a facility reaches priority status per the EBPS, the permittee will be required to submit a full application for technical review and the Department will establish effluent limitations in accordance with established procedures and guidance. If PFOS or PFOA are detected in any analysis required by the Department, repeat analysis will be required and must include all analytes contained in the approved analytical method for the detected contaminant.

Consistent with 6 NYCRR § 750-1.14, compliance schedules may be applied to achieve the new effluent limit(s). The compliance schedule should include time to develop and implement a pollutant minimization program (PMP). The purpose of a PMP is to track down the sources of

PFOA, PFOS, and 1,4-D and to isolate their waste streams from other waste streams to minimize the need for additional end-of-pipe treatment. This phased implementation of the GVs using pollutant minimization programs and compliance schedules is expected to control costs to permittees while focusing permitting efforts to maximize public health benefits.

In cases where a release of PFOA, PFOS, or 1,4-D is the result of an emergency and/or spill, the clean-up effort will be handled through the Department's Division of Environmental Remediation spill clean-up protocols and will not be handled through the SPDES permitting program.

This guidance does not preclude the use of the PFOA, PFOS and 1,4-D GVs at sources other than the industrial categories identified as potential sources in Appendices A and B. If further analysis determines a significant source of concern and/contamination exists elsewhere, this guidance may be applied. This guidance will take effect when the GVs are issued.

VI. Related References:

TOGS 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations
TOGS 1.2.1: Industrial Permit Writing
TOGS 1.2.2: Administrative Procedures and Environmental Benefit Permit Strategy for Individual SPDES Permits
TOGS 1.3.1: Total Maximum Daily Loads & Water Quality-Based Effluent Limits

Appendix A

SIC Codes considered for potential primary sources of PFOA/PFOS in wastewater stream[6]

Industry Description	SIC code
Broadwoven Fabric Mills	2221
Broadwoven Fabric Finishers	2262
Carpet/Rug Manufacturing	2273
Coated Fabrics	2295
Non-woven Fabrics	2297
Textile Goods	2299
Waterproof Outerwear	2385
House Furnishings	2392
Paper Mills	2621
Sanitary Food Containers	2656
Packaging Paper and Plastics Film	2671
Coated and Laminated Paper	2672
Plastics, Foil, and Coated Paper Bags	2673
Commercial Printing	2752
Platemaking and Related Services	2796
Plastics Materials, Synthetic Resins, and Non-vulcanizable Elastomers	2821
Manmade Organic Fibers	2824
Specialty Cleaning, Polishing, and Sanitation Preparations	2842
Perfumes, Cosmetics, and other Toilet Preparations	2844
Paints, Varnishes, Lacquers, Enamels, and Allied Products	2851
Industrial Organic Chemicals	2869

[6] Source of data: NYSDEC Division of Environmental Remediation, NYSDEC Pollution Prevention Unit, EPA nationwide report of ICIS data

Classified	2899
Petroleum Refining	2911
Lubricating Oils and Greases	2992
Unsupported Plastics Film and Sheet	3081
Unsupported Plastics Profile Shapes	3082
Laminated Plastics Plate, Sheet, and Profile Shapes	3083
Plastics Products	3089
Aluminum Sheet, Plate, and Foil	3353
Electroplating, Plating, Polishing, Anodizing, and Coloring	3471
Metal Foil and Leaf	3497
Laundromats - Commercial	3582
Service Industry Machinery	3589
Guided Missiles and Space Vehicles	3761
Surgical and Medical Instruments and Apparatus	3841
Photographic Equipment and Supplies	3861
Manufacturing Industries, not elsewhere classified	3999
Airports	4581
Landfills	4953
Chemicals and Allied Products	5169
Petroleum Bulk Storage	5171
PBS Wholesalers	5172
Mics Home Furnishing Stores	5719
Carpet and Upholstery Cleaning	7217
Car washes	7542
Commercial Physical and Biological Research	8731
Fire Training Facilities/Fire Protection	9224
Air and Water Resource and Solid Waste Management	9511

National Security	9711
Non-classifiable Establishments	9999

Appendix B

SIC codes considered for potential primary sources of 1,4-D in wastewater stream[7]

Industry Description	SIC Code
Heavy Construction, not elsewhere classified	1629
Excavation Work	1794
Special Trade Contractors, not elsewhere classified	1799
Textiles	2299
Paper Mills	2621
Coated and Laminated Paper	2672
Plastics Materials, Synthetic Resins, and Non-vulcanizable Elastomers	2821
Synthetic Rubber	2822
Manmade Organic Fibers	2824
Medicinal Chemicals and Botanical Products	2833
Pharmaceutical Preparations	2834
Soap and Other Detergents (manufacturing)	2841
Specialty Cleaning, Polishing, and Sanitation Preparations	2842
Perfumes, Cosmetics, and other Toilet Preparations	2844
Paints, Varnishes, Lacquers, Enamels, and Allied Products	2851
Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments	2865
Industrial Organic Chemicals	2869
Pesticides and Ag Chemicals, not elsewhere classified	2879
Adhesives and Sealants	2891
Printing Inks	2893
Chemicals and Chemical Preparations (antifreeze production)	2899
Lubricating Oils and Greases	2992
Unsupported Plastics Film and Sheet	3081

[7] Source of data: NYSDEC Division of Environmental Remediation, NYSDEC Pollution Prevention Unit, Suffolk County Department of Health, EPA nationwide report of ICIS data

Steel Works, Blast Furnaces, and Rolling Mills	3312
Steel Pipe and Tubes	3317
Steel Springs, except wire	3493
Laundromats - Commercial	3582
Magnetic and Optical Recording Media (magnetic tape production)	3695
Guided Missiles and Space Vehicles	3761
Guided Missile and Space Vehicle Propulsion Units, etc.	3764
Surgical and Medical Instruments and Apparatus (cellulose acetate and triacetate membrane production)	3841
Photographic Equipment and Supplies	3861
Airports (aircraft deicing)	4581
Electric Services	4911
Landfills	4953
Sanitary Services, not elsewhere classified	4959
Chemicals and Allied Products, not elsewhere classified	5169
Operators of Non-residential Buildings	6512
Hotels and Motels	7011
Laundromats - Coin	7215
Car Wash (detergents, waxes, brake cleaning, rust removal products, etc.)	7542
Photographic Industry (film cement) Motion Picture and Video Tape Production	7812
Medical Laboratory (tissue preservation)	8071
Laboratory (Bray's solution/biological research and tissue preservation)	8731
Air and Water Resource and Solid Waste Management	9511
National Security	9711
Non-classifiable Establishments	9999