

# Recent Actions on PFAS by U.S. EPA's Office of Land and Emergency Management

**ECOS Fall Meeting, September 4, 2024**

**Cliff Villa, U.S. EPA Office of Land and Emergency Management**

**§ 260.10 Definitions.**

\* \* \* \* \*

*Hazardous waste* means a hazardous waste as defined in § 261.3 of this chapter, except that, for purposes of §§ 264.101 and 270.14(d), “hazardous waste” means a waste that is subject to the requirements of RCRA section 3004(u) and (v) as provided in 40 CFR 261.1(b)(2).

\* \* \* \* \*

**PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE**

■ 3. The authority citation for part 261 is revised to read as follows:

**Authority:** 42 U.S.C 6903(5), 6905, 6912(a), 6921, 6922, 6924(u), 6924(v), 6924(y), 6928(h), and 6938.

■ 4. Section 261.1 is amended by revising the first sentence of paragraph (b)(2) and paragraphs (b)(2)(i) and (ii) to read as follows:

**§ 261.1 Purpose and scope.**

\* \* \* \* \*

(b)(2) This part identifies only some of the materials which are solid wastes and hazardous wastes under sections 3004(u) and (v), 3007, 3008(h), 3013, and 7003 of RCRA. \* \* \*

(i) In the case of sections 3007 and 3013, and in the case of activities, such as investigation and analysis, conducted to determine the need for and the extent of remediation necessary under sections 3004(u) and (v) and 3008(h), EPA has reason to believe that the material may be a solid waste within the meaning of section 1004(27) of RCRA and a hazardous waste within the meaning of section 1004(5) of RCRA; or

(ii) in the case of section 7003, and in the case of activities conducted for purposes of remediation under sections 3004(u) and (v) and 3008(h), including remediation conducted as an interim measure, the statutory elements are established.

\* \* \* \* \*

that, for purposes of § 270.14(d), “hazardous waste” means a waste that is subject to the requirements of RCRA section 3004(u) and (v) as provided in 40 CFR 261.1(b)(2).

\* \* \* \* \*

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**BILLING CODE 6560–50–P**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 261 and 271**

**[EPA–HQ–OLEM–2023–0278; FRL–9248–01–OLEM]**

**RIN 2050–AH26**

**Listing of Specific PFAS as Hazardous Constituents**

**AGENCY:** Environmental Protection Agency (EPA)

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA or the Agency) is proposing to amend its regulation under the Resource Conservation and Recovery Act (RCRA) by adding nine specific per- and polyfluoroalkyl substances (PFAS), their salts, and their structural isomers, to its list of hazardous constituents. These nine PFAS are perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorobutanesulfonic acid (PFBS), hexafluoropropylene oxide-dimer acid (HFPO–DA or GenX), perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), perfluorodecanoic acid (PFDA), perfluorohexanoic acid (PFHxA), and perfluorobutanoic acid (PFBA). EPA’s criteria for listing substances as hazardous constituents under RCRA require that they have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms. EPA reviewed and evaluated key

cleanup through the RCRA corrective action process at RCRA treatment, storage, and disposal facilities.

**DATES:** Comments must be received on or before April 8, 2024.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA–HQ–OLEM–2023–0278, by any of the following methods:

- **Federal eRulemaking Portal:** <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.

- **Mail:** U.S. Environmental Protection Agency, EPA Docket Center, OLEM Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

- **Hand Delivery or Courier:** EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center’s hours of operations are 8:30 a.m.–4:30 p.m., Monday–Friday (except Federal Holidays).

**Instructions:** All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the “Public Participation” heading of the **SUPPLEMENTARY INFORMATION** section of this document. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** Narendra Chaudhari, Office of Resource Conservation and Recovery (5304T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number 202–566–0495; email address: [Chaudhari.narendra@epa.gov](mailto:Chaudhari.narendra@epa.gov).

**SUPPLEMENTARY INFORMATION:**

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# RCRA Hazardous Constituents proposed rule

Chromatography (CIC). EPA-821-D-22-0202. Office of Research and Development, Cincinnati, OH. April 2022. Available at [https://www.epa.gov/system/files/documents/2022-04/draft-method-1621-for-screening-of-in-aqueous-matrices-by-cic\\_0.pdf](https://www.epa.gov/system/files/documents/2022-04/draft-method-1621-for-screening-of-in-aqueous-matrices-by-cic_0.pdf).

(lxxxvii) USEPA. 2022b. Drinking Water Contaminant Candidate List 5—Final. *Federal Register*. Vol. 87, No. 218, p. 68060, November 14, 2022.

(lxxxviii) USEPA. 2023. Comptox Chemicals Dashboard v2.3.0. <https://comptox.epa.gov/dashboard/chemical-lists/PFASSTRUCT> [accessed January 24, 2024] PFAS Structure Lists.

(lxxxix) Wong, C. & Coffin, S. 2022. *Standard Operating Procedures for Extraction and Measurement by Infrared Spectroscopy of Microplastic Particles in Drinking Water*. California State Water Resources Control Board, May 27, 2022. Available at [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/documents/microplastics/swb-mp1-rev1.pdf](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/microplastics/swb-mp1-rev1.pdf).

Jennifer L. McLain,  
Director, Office of Ground Water and Drinking Water.

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#### ENVIRONMENTAL PROTECTION AGENCY

#### 40 CFR Parts 260, 261, and 270

[EPA-HQ-OLEM-2023-0085; FRL-9247-01-OLEM]

RIN 2050-AH27

#### Definition of Hazardous Waste Applicable to Corrective Action for Releases From Solid Waste Management Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

**SUMMARY:** This proposed rule would amend the definition of hazardous waste applicable to corrective action to address releases from solid waste management units at RCRA-permitted treatment, storage, and disposal facilities and make related conforming amendments, thereby providing clear regulatory authority to fully implement the Resource Conservation and Recovery Act (RCRA) statutory requirement that permitted facilities conduct corrective action to address releases not only of substances listed or identified as hazardous waste in the regulations but of any substance that meets the statutory definition of hazardous waste. The proposed rule would also provide notice of EPA's interpretation that the statutory definition of hazardous waste applies to

corrective action for releases from solid waste management units at permitted and interim status facilities.

**DATES:** Comments must be received on or before March 11, 2024.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA-HQ-OLEM-2023-0085, by any of the following methods:

- **Federal eRulemaking Portal:** <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.
- **Mail:** U.S. Environmental Protection Agency, EPA Docket Center, RCRA Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- **Hand Delivery/Courier:** EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m.–4:30 p.m., Monday–Friday (except Federal Holidays).

**Instructions:** All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Submit your comments, identified by Docket ID No. EPA-HQ-OLEM-2023-0085, at <https://www.regulations.gov> (our preferred method), or the other methods identified in the **ADDRESSES** section of this document. Once submitted, comments cannot be edited or removed from the docket. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Barbara Foster, Program Information and Implementation Division, Office of Resource Conservation and Recovery (5303T) Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington DC, 20460, 202-566-0382, [foster.barbar@epa.gov](mailto:foster.barbar@epa.gov).

#### SUPPLEMENTARY INFORMATION:

##### I. Authority

These regulations are promulgated under the authority of sections 2002(a), 3004(u) and (v), and 3008(h) of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6912(a), 6924(u) and (v), and 6928(h).

##### II. Background

###### A. Overview of RCRA Corrective Action Requirements Applicable to Releases From Solid Waste Management Units

The 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) expanded EPA's authority to address releases of hazardous waste and constituents at RCRA treatment, storage, and disposal facilities.

Sections 3004(u) and (v) of RCRA, added to the statute by HSWA, provided for corrective action requirements at permitted facilities. Section 3004(u) directed EPA to require corrective action for "all releases of hazardous waste or constituents from any solid waste management unit" at permitted hazardous waste treatment, storage, or disposal facilities regardless of the time at which waste was placed in the units. Section 3004(v) directed EPA to require that corrective action be taken beyond facility boundaries where necessary to protect human health and the environment unless facility owners/operators demonstrate to the Agency's satisfaction that, despite their best efforts, they were unable to obtain the necessary permission to undertake off-site corrective action.

Section 3008(h), also added by HSWA, provided EPA authority to require corrective action for "a release of hazardous waste into the environment from a facility" authorized to operate under interim status.

###### B. Brief History of Regulatory Actions Implementing HSWA and Leading to This Proposed Rule

Prior to HSWA, regulatory requirements for corrective action to address releases of hazardous waste and constituents were limited in scope. The regulations in 40 CFR part 264 Subpart F imposed requirements on owners and

# RCRA Statutory Definition of Hazardous Waste proposed rule

**ENVIRONMENTAL PROTECTION  
AGENCY**

**40 CFR Part 302**

[EPA-HQ-OLEM-2019-0341; FRL-7204-03-OLEM]

RIN 2050-AH09

**Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA” or “Superfund”), the Environmental Protection Agency (EPA) is designating two per- and polyfluoroalkyl substances (PFAS)—perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), including their salts and structural isomers—as hazardous substances. The Agency reached this decision after evaluating the available scientific and technical information about PFOA and PFOS and determining that they may present a substantial danger to the

Avenue NW, Washington, DC 20460; telephone number 202-564-0797; email address: *strauss.linda@epa.gov*.

**SUPPLEMENTARY INFORMATION:** *Acronyms and Abbreviations:* We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of the preamble and for reference purposes, EPA defines the following terms and acronyms here:

AFFF Aqueous film-forming foam  
ARARs Applicable or Relevant and Appropriate Requirements  
ATSDR Agency for Toxic Substances and Disease Registry  
CDC Centers for Disease Control and Prevention  
CASRN Chemical Abstracts Service Registry Number  
COC Contaminant of Concern  
CDR Chemical Data Reporting  
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
CFR Code of Federal Regulations  
DoD Department of Defense  
DOE Department of Energy  
EA Economic Analysis  
ECF Electrochemical fluorination  
EJ Environmental justice  
EPA Environmental Protection Agency  
EPCRA Emergency Planning and Community Right-to-Know Act  
EU European Union  
FAA Federal Aviation Administration  
FDA Food and Drug Administration

SNURs Significant New Use Rules  
TEPC Tribal Emergency Planning Committee  
TERC Tribal Emergency Response Commission  
TRI Toxic Release Inventory  
TSCA Toxic Substances Control Act  
UCMR Unregulated Contaminant Monitoring Rule  
UMRA Unfunded Mandates Reform Act  
U.S. United States  
WWTP Wastewater treatment plant

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# CERCLA Hazardous Substances final rule



ASSISTANT ADMINISTRATOR FOR ENFORCEMENT AND COMPLIANCE ASSURANCE  
WASHINGTON, D.C. 20460

April 19, 2024

EPA does not intend to pursue entities where equitable factors do not support seeking response actions or costs under CERCLA, including, but not limited to, community water systems and publicly owned treatment works, municipal separate storm sewer systems, publicly owned/operated municipal solid waste landfills, publicly owned airports and local fire departments, and farms where biosolids are applied to the land. For these same parties, EPA can use CERCLA statutory authorities when appropriate to enter into settlements that provide contribution protection from third party claims for matters addressed in the settlement.

the liver and heart, and immune and developmental damage to infants and children.

On August 17, 2023, EPA announced a new National Enforcement and Compliance Initiative (NECI) to address exposure to PFAS.<sup>2</sup> NECIs are intended to focus on the most serious and widespread environmental problems facing the United States. PFAS is no exception. Due to the toxicity and persistence of PFAS chemicals, and the breadth and scope of PFAS contamination throughout the country, addressing PFAS contamination is a significant priority for EPA.

EPA now has designated two types of PFAS, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).<sup>3</sup> The rule designating PFOA and PFOS as hazardous

# **Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances— Version 2 (2024)**

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*INTERIM GUIDANCE FOR PUBLIC COMMENT  
APRIL 8, 2024*

# Interim Guidance on PFAS Destruction & Disposal (April 2024):

Second update of Interim Guidance covers –

- Destruction and Disposal (D&D) technologies
- Emerging D&D technologies
- Assessment of potential impacts on communities, including potentially vulnerable populations
- EPA's PFAS research program and research needs

**Guidance to be used as a resource.** No requirements for states or others.

# D&D Technologies

- Includes the following information, where available, on thermal treatment, landfills, and underground injection:
  - Types of treatment within the technology “class”
  - Ability to destroy/contain PFAS, and control measures for PFAS if not destroyed
  - Potential for releases
  - Testing and monitoring
  - Uncertainties/unknowns and prioritized research needs
  - Technology and infrastructure considerations



# Emerging D&D Technologies

- Presents a Technology Evaluation Framework for evaluating and selecting a technology
  - Based on technology, material, analytical methods, efficacy, community considerations & regulatory requirements
  - Can also be used by technology developers and vendors as an outline for information-sharing

# Impacts on Potentially Vulnerable Populations

- Interim guidance includes considerations for potentially vulnerable populations living near likely D&D sites
  - Defines properties of vulnerability and potential for disproportionate impacts (e.g., EJ concerns)
  - Describes how to consider vulnerable populations when assessing the potential impact of releases
  - Provides links to EPA's tools for developing risk assessments that incorporate vulnerability

# Research Needs on PFAS D&D

- Interim guidance identifies broad areas where further research needed:
  - Better characterize PFAS-containing materials targeted for D&D
  - Improve understanding of the performance of PFAS D&D methods
- Specific research needs were prioritized as *high*, *medium*, or *low* to help inform future versions of this guidance
- EPA, DoD, and others are conducting relevant research in these areas. EPA seeks collaborative access to facilities to generate additional data to address information gaps
- For information about EPA's PFAS research visit: [www.epa.gov/pfas](http://www.epa.gov/pfas)

# Research Needs on PFAS D&D

EPA.GOV/NEWSROOM

## EPA Awards Nearly \$1.5 Million to Clarkson University to Develop and Demonstrate Technology to Detect and Degrade PFAS

**Contact:** EPA Press Office ([pres@epa.gov](mailto:pres@epa.gov))

**WASHINGTON** – Today, August 27, 2024, the U.S. Environmental Protection Agency is announcing \$1,499,979 in research funding to Clarkson University to develop and demonstrate nanosensor technology to detect, monitor and degrade PFAS in groundwater and surface water that may be used as drinking water sources.

“Advances in nanosensor technology can lead to innovative approaches and critical solutions for PFAS removal,” said **Chris Frey, Assistant Administrator for EPA’s Office of Research and Development**. “This research grant will improve our ability to find and address PFAS, which will in turn better protect communities and the environment from PFAS exposures.”

PFAS are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their useful

# Next Steps

- EPA is now accepting public comments on the interim guidance
- For your comments to be considered in a future version of the interim guidance, please upload them to the docket by October 15, 2024
- EPA will issue third update of guidance before end of 2026

## Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances— Version 2 (2024)

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*INTERIM GUIDANCE FOR PUBLIC COMMENT  
APRIL 8, 2024*

The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. This guidance is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.