

<p>(34) 2',5'-Dimethoxyfentanyl (<i>N</i>-(2,5-dimethoxyphenethyl)piperidin-4-yl)-<i>N</i>-phenylpropionamide) .....</p> <p>(45) 3-Furanyl fentanyl (<i>N</i>-(1-phenethylpiperidin-4-yl)-<i>N</i>-phenylfuran-3-carboxamide) .....</p> <p>(50) Isovaleryl fentanyl (3-methyl-<i>N</i>-(1-phenethylpiperidin-4-yl)-<i>N</i>-phenylbutanamide) .....</p> <p>(54) <i>meta</i>-Fluorofentanyl (<i>N</i>-(3-fluorophenyl)-<i>N</i>-(1-phenethylpiperidin-4-yl)propionamide) .....</p> <p>(55) <i>meta</i>-Fluoroisobutyl fentanyl (<i>N</i>-(3-fluorophenyl)-<i>N</i>-(1-phenethylpiperidin-4-yl)isobutyramide). .....</p> <p>(71) <i>ortho</i>-Fluorofuranyl fentanyl (<i>N</i>-(2-fluorophenyl)-<i>N</i>-(1-phenethylpiperidin-4-yl)furan-2-carboxamide) .....</p> <p>(80) <i>para</i>-Methoxyfuranyl fentanyl (<i>N</i>-(4-methoxyphenyl)-<i>N</i>-(1-phenethylpiperidin-4-yl)furan-2-carboxamide) .....</p> <p>(81) <i>para</i>-Methylcyclopropyl fentanyl (<i>N</i>-(4-methylphenyl)-<i>N</i>-(1-phenethylpiperidin-4-yl)cyclopropanecarboxamide) .....</p>	<p>9861</p> <p>9860</p> <p>9862</p> <p>9857</p> <p>9858</p> <p>9863</p> <p>9859</p> <p>9865</p>	<p><b>ENVIRONMENTAL PROTECTION AGENCY</b></p> <p><b>40 CFR Part 302</b></p> <p><b>[EPA-HQ-OLEM-2022-0922; FRL-9064-01-OLEM]</b></p> <p><b>RIN 2050-AH25</b></p> <p><b>Addressing PFAS in the Environment</b></p> <p><b>AGENCY:</b> Environmental Protection Agency (EPA).</p> <p><b>ACTION:</b> Advance notice of proposed rulemaking (ANPRM).</p> <p><b>SUMMARY:</b> The Environmental Protection Agency (EPA or the Agency) is seeking public input and data to assist in the consideration of potential development of future regulations pertaining to per- and polyfluoroalkyl substances (PFAS) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The Agency is seeking input and data regarding potential future hazardous substance designation under CERCLA of: Seven PFAS, besides perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), and their salts and structural isomers, or some subset thereof; precursors (a precursor is a chemical that is transformed into another compound through the course of a degradation process) to PFOA, PFOS, and seven other PFAS; and/or categories of PFAS.</p> <p><b>DATES:</b> Comments must be received on or before June 12, 2023. Under the Paperwork Reduction Act, comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before May 15, 2023.</p> <p><b>ADDRESSES:</b> You may send comments, identified by Docket ID No. EPA-HQ-OLEM-2022-0922, by any of the following methods:</p> <ul style="list-style-type: none"> <li>• <i>Federal eRulemaking Portal:</i> <a href="https://www.regulations.gov">https://www.regulations.gov</a> (our preferred method). Follow the online instructions for submitting comments.</li> <li>• <i>Mail:</i> U.S. Environmental Protection Agency, EPA Docket Center, OLEM Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.</li> <li>• <i>Hand Delivery or Courier:</i> 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).</li> </ul>
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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:** Michelle Schutz, Office of Superfund Remediation and Technology Innovation (5201T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number 703-346-9536; email address: [schutz.michelle@epa.gov](mailto:schutz.michelle@epa.gov) or Linda Strauss, Office of Superfund Remediation and Technology Innovation (5201T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number 202-564-0797; email address: [strauss.linda@epa.gov](mailto: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 this ANPRM and for reference purposes, the EPA defines the following terms and acronyms here:

AFFF Aqueous film forming foam  
 ANPRM Advance Notice of Proposed Rulemaking  
 ATSDR Agency for Toxic Substances and Disease Registry  
 CASRN Chemical Abstracts Service Registry Numbers  
 CDC Centers for Disease Control and Prevention  
 CERCLA Comprehensive Environmental Response, Compensation, and Liability Act  
 DSSTox Distributed Structure-Searchable Toxicity  
 EPA Environmental Protection Agency  
 GenX Trade name for technology platform that uses HFPO-DA and its ammonium salt as a polymerization aid in the production of fluoropolymers  
 HFPO Hexafluoropropylene oxide  
 HFPO-DA Hexafluoropropylene oxide dimer acid  
 IRIS Integrated Risk Information System  
 LCPFAC Long-chain perfluoroalkyl carboxylate  
 NPL National Priorities List  
 NPRM Notice of Proposed Rulemaking  
 OMB Office of Management and Budget  
 PBI Proprietary Business Information  
 PFAS Per- and polyfluoroalkyl substances  
 PFBA Perfluorobutanoic acid  
 PFBS Perfluorobutanesulfonic acid  
 PFDA Perfluorodecanoic acid  
 PFHxA Perfluorohexanoic acid  
 PFHxS Perfluorohexanesulfonic acid  
 PFNA Perfluorononanoic acid

**Signing Authority**

This document of the Drug Enforcement Administration was signed on April 3, 2023, by Administrator Anne Milgram. That document with the original signature and date is maintained by DEA. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DEA Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of DEA. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

**Scott Brinks,**

*Federal Register Liaison Officer, Drug Enforcement Administration.*

[FR Doc. 2023-07576 Filed 4-12-23; 8:45 am]

**BILLING CODE 4410-09-P**

*Instructions:* All submissions received must include the Docket ID No. for this

PFOA Perfluorooctanoic acid  
 PFOS Perfluorooctanesulfonic acid  
 SNUR Significant New Use Rule  
 TSCA Toxic Substances Control Act

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## I. Public Participation

### A. Written Comments

Submit your comments, identified by Docket ID No. EPA-HQ-OLEM 2022-0922, 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. The EPA may publish any comment received to its public docket. Do not submit to EPA's docket at <https://www.regulations.gov> any information you consider to be Proprietary Business Information (PBI) 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. The 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 PBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

For further information and updates on EPA Docket Center services, please visit us online at <https://www.epa.gov/dockets>.

The EPA continues to monitor information carefully and continuously

from the Centers for Disease Control and Prevention (CDC), local area health departments, and our federal partners so that we can respond rapidly as conditions change regarding COVID-19.

## II. What action is the Agency taking?

The Agency is seeking input and data to assist in its consideration of the development of potential future regulations pertaining to designation as hazardous substances under CERCLA of:

- (1) Seven PFAS, besides PFOA and PFOS, and their salts and structural isomers, or some subset thereof, which include:
  - Perfluorobutanesulfonic acid (PFBS), CASRN 375-73-5
  - Perfluorohexanesulfonic acid (PFHxS), CASRN 355-46-4
  - Perfluorononanoic acid (PFNA), CASRN 375-95-1
  - Hexafluoropropylene oxide dimer acid (HFPO-DA), CASRN 13252-13-6 (sometimes called GenX)
  - Perfluorobutanoic acid (PFBA) CASRN 375-22-4
  - Perfluorohexanoic acid (PFHxA) CASRN 307-24-4
  - Perfluorodecanoic acid (PFDA) CASRN 335-76-2;
- (2) Precursors to PFOA, PFOS, and other PFAS listed above; and
- (3) Categories of PFAS.

## III. General Information

### A. Executive Summary

In October 2021, the EPA released the PFAS Strategic Roadmap that presents the EPA's whole-of-agency approach to addressing PFAS and sets timelines by which the Agency plans to take concrete actions to develop new policies to safeguard public health, protect the environment, and hold polluters accountable.<sup>1</sup> The actions described in the PFAS Roadmap, including the National PFAS Testing Strategy,<sup>2</sup> represent important steps to safeguard communities from PFAS contamination. Cumulatively, these actions will build upon one another and lead to more enduring and protective solutions.

The EPA's Office of Land and Emergency Management is responsible for three PFAS Roadmap actions, including:

- Designating PFOA and PFOS as CERCLA hazardous substances. EPA recently published a notice of proposed

<sup>1</sup> U.S. EPA. (2021). PFAS Strategic Roadmap: EPA's Commitments to Section 2021-2024. U.S. Environmental Protection Agency. [https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap\\_final-508.pdf](https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf).

<sup>2</sup> U.S. EPA. National PFAS Testing Strategy. U.S. Environmental Protection Agency. <https://www.epa.gov/assessing-and-managing-chemicals-under-tscas/national-pfas-testing-strategy>.

rulemaking (NPRM), 87 FR 54420, that, if finalized, is expected to increase transparency around PFOA/PFOS releases, offer additional tools that EPA and other government agencies could use to conduct faster cleanups at contaminated sites, and support other actions taken by EPA, other Federal agencies, states, Tribal Nations and international bodies that have set PFOA and PFOS benchmarks and standards and have undertaken PFOA- and PFOS-based regulatory activities and enforcement actions.

- Issuing updated guidance on destroying and disposing of certain PFAS and PFAS-containing materials. The 2020 National Defense Authorization Act required EPA to publish interim guidance on destroying and disposing of PFAS and certain identified non-consumer PFAS-containing materials. It also required EPA to revise that guidance at least every three years, as appropriate. EPA published the first interim guidance in December 2020. Since the publication of the interim guidance, EPA and other agencies have been conducting relevant research on destruction and disposal technologies. EPA anticipates that it will update the guidance no later than the statutory deadline of December 2023.

- Issuing this ANPRM regarding various PFAS under CERCLA. EPA has developed this ANPRM to seek public input regarding potential hazardous substance designation for: (1) Seven PFAS besides PFOA and PFOS; (2) precursors to PFOA, PFOS, and seven other PFAS; and (3) categories of PFAS.

### B. What are PFAS?

PFAS are a class of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their useful properties, including their resistance to water, grease, and stains. Several chemical definitions are used to describe PFAS in the scientific community, but it is generally recognized that there are potentially thousands of different PFAS, some of which have been more widely used and/or studied than others. Some PFAS, such as PFOA and PFOS, have been shown to be environmentally persistent, bioaccumulative, and harmful to human health and the environment at certain exposure levels.

PFAS can be present in water, soil, air, and food as well as materials found in homes and workplaces, including:

Drinking water—in public drinking water systems and private drinking water wells;

Soil and water—at landfills, disposal sites, and sites and potential or existing CERCLA or RCRA facilities;

Fire extinguishing foam—aqueous film forming foam (AFFF) is used for fighting certain types of fires, including burning petroleum. Some of these foams contain multiple PFAS. PFAS can be found in groundwater and surface water at airports, military bases and other facilities where PFAS containing firefighting extinguishing foam was or is used for training and incident response;

Manufacturing and chemical production facilities that produce or use PFAS—for example at fluoropolymer production facilities, chrome plating, electronics, and certain textile and paper manufacturers;

Food—for example in fish caught from water contaminated with PFAS and dairy products derived from livestock exposed to PFAS;

Food packaging—for example in grease resistant papers, fast food containers and wrappers, microwave popcorn bags, pizza boxes, and candy wrappers;

Household products and dust—for example in stain and water-repellant treatments for carpets, upholstery, clothing, and other fabrics, cleaning products, non-stick cookware, paints, varnishes, and sealants; and

Personal care products—for example in some shampoos, dental floss, and cosmetics.

### C. What is the purpose of this notice?

In this ANPRM, EPA is seeking input and data to assist in the potential development of future regulations pertaining to the designation of hazardous substances under section 102(a) of CERCLA, which authorizes the EPA Administrator to promulgate regulations designating as hazardous substances such elements, compounds, mixtures, solutions, and substances which, when released into the environment, may present substantial danger to the public health or welfare or the environment. Specifically, this ANPRM seeks public input regarding the possible designation of: (1) Seven PFAS besides PFOA and PFOS; (2) precursors to PFOA, PFOS, and certain other PFAS; and/or (3) categories of PFAS.

In EPA's NPRM designating PFOA and PFOS as hazardous substances, the Agency noted that evidence indicates that these chemicals may present substantial danger to public health or welfare or the environment when released into the environment, thereby warranting designation under section 102(a) of CERCLA. In reaching this determination, the EPA considered a

number of criteria, including adverse human health effects and mobility, persistence, and prevalence, in addition to other factors. As mentioned in the NPRM, it is not necessary to have information on all of these criteria for EPA to designate a PFAS compound as a hazardous substance under CERCLA. EPA is requesting information on these factors in this ANPRM since it may be relevant and to guide public input.

In evaluating whether to designate additional PFAS as hazardous substances, different levels of information may exist for individual compounds or categories of PFAS with regards to adverse human health effects, mobility, persistence, prevalence, and other factors. Some of this information is presented on EPA's Comptox Dashboard.<sup>3</sup> EPA is seeking public input and additional information pertaining to these factors that the Agency could consider in evaluating whether these PFAS may present substantial danger to the public health or welfare or the environment.

EPA is not reopening for public comment or otherwise proposing to modify any proposed or existing regulatory actions through this ANPRM.

## IV. Statutory Background

On September 6, 2022, the EPA published an NPRM designating PFOA and PFOS as hazardous substances pursuant to section 102(a) of CERCLA. In the "Background" section of the NPRM, 87 FR 54420, the Agency described the role and function of CERCLA and its authority to address the release or potential threat of a release of hazardous substances, pollutants, and/or contaminants. This ANPRM is soliciting public input to inform the EPA's consideration of the potential development of future regulations pertaining to additional PFAS, PFAS precursors, and/or categories of PFAS. Given the similarity of the issues of concern in this ANPRM and the NPRM the EPA encourages interested readers to refer to the NPRM's "Background" section for a detailed understanding of the statutory context for today's action.

Regarding CERCLA liability and enforcement, EPA is already separately developing a CERCLA PFAS enforcement discretion and settlement policy and seeking individual public input on CERCLA PFAS enforcement/liability concerns through two public listening sessions. The public input will be reviewed and considered by EPA in drafting the policy.

<sup>3</sup> U.S. EPA, Comptox Chemicals Dashboard, U.S. Environmental Protection Agency <https://comptox.epa.gov/dashboard/>.

## V. What information is EPA seeking?

### A. Request for Public Input Regarding Potential Future Hazardous Substance Designation of Seven Other PFAS

As previously discussed, EPA recently issued an NPRM, that, if finalized, would designate PFOA and PFOS and their salts and structural isomers as CERCLA hazardous substances. EPA is considering whether to initiate a future action that would potentially designate the following additional, seven PFAS and their salts and structural isomers or some subset thereof, as hazardous substances under CERCLA:

- Perfluorobutanesulfonic acid (PFBS), CASRN 375-73-5;
- Perfluorohexanesulfonic acid (PFHxS), CASRN 355-46-4;
- Perfluorononanoic acid (PFNA), CASRN 375-95-1;
- Hexafluoropropylene oxide dimer acid (HFPO-DA), CASRN 13252-13-6 (sometimes called GenX);
- Perfluorobutanoic acid (PFBA) CASRN 375-22-4;
- Perfluorohexanoic acid (PFHxA) CASRN 307-24-4; and
- Perfluorodecanoic acid (PFDA) CASRN 335-76-2.

EPA is soliciting information relevant to whether these compounds may present substantial danger to public health or welfare or the environment. For example, the Agency requests information concerning the characteristics of these compounds, such as mobility, persistence, prevalence, and other characteristics, that would supplement the existing toxicity data for these compounds. Although PFAS is a large class of chemical substances, these seven compounds were identified based on the availability of toxicity information previously reviewed by EPA and other Federal agencies. In April 2021 and 2022, EPA issued the final human health toxicity assessment for PFBS [*Human Health Toxicity Values for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (CASRN 29420-49-3)*],<sup>4</sup> Gen X chemicals [*Final Human Health Toxicity Values for Hexafluoropropylene Oxide (HFPO) Dimer Acid and its Ammonium Salt, CASRN 13252-*

<sup>4</sup> U.S. EPA (2021). Human Health Toxicity Values for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (CASRN 29420-49-3). U.S. Environmental Protection Agency, Washington, DC. <https://efpub.epa.gov/ncea/risk/recordisplay.cfm?deid=350888>.

12–6 and CSRN 62037–80–3],<sup>5</sup> and PFBA [IRIS Toxicological Review of Perfluorobutanoic Acid (PFBA) and Related Salts].<sup>6</sup> In May 2021, the Agency for Toxic Substances and Disease Registry (ATSDR) released the final *Toxicological Profile for Perfluoroalkyls*, which includes minimal risk levels for PFOA, PFOS, PFHxS and PFNA.<sup>7</sup> EPA's Integrated Risk Information System (IRIS) program is currently developing human health toxicity assessments of PFHxA, PFNA, PFDA, and PFHxS.<sup>8</sup>

To inform EPA's decision whether to potentially designate PFBS, PFHxS, PFNA, HFPO–DA, PFBA, PFHxA, and PFDA, or some subset thereof, as hazardous substances in a possible future action, EPA is soliciting responses to the following questions and requests for the PFAS listed above, and requests that commentors provide supporting information and specific scientific literature citations regarding applicable information where appropriate:

1. Please identify additional relevant information in published scientific literature or data regarding the environmental fate and transport (mobility, persistence, or other relevant chemical and physical properties) and environmental prevalence that would assist EPA in making determinations regarding potential designation as a hazardous substance.

2. Are there other PFAS EPA could consider designating as hazardous substances in a possible future rulemaking? If so, please provide references to any published, scientific information on the toxicity of these other PFAS in addition to the information requested in question one for those substances.

3. Please provide available information that EPA could consider in preparing an economic analysis of the

potential direct and indirect costs and benefits, including impacts on small entities, associated with a potential rulemaking designating any of the above-mentioned compounds as hazardous substances. Although CERCLA section 102(a) precludes EPA from taking cost into account in the designation of a hazardous substance, the Agency is requesting this information to inform its understanding of the potential costs and benefits associated with any potential future regulatory action.

*B. Request for Public Input Regarding Potential Future Hazardous Substance Designation of Precursors to PFOA, PFOS, and PFAS Listed in V.A.*

EPA is also considering whether to initiate a future action that would potentially designate precursors to PFOA, PFOS, and possibly the seven PFAS and their salts and isomers, or some subset thereof, listed in Section V.A, of this **SUPPLEMENTARY INFORMATION** section, as hazardous substances. Thus, EPA is soliciting input regarding information that will assist the Agency in identifying compounds that degrade to these PFAS through environmental processes such as biodegradation, photolysis, and hydrolysis.

An example of how EPA has addressed precursors previously is the 2020 Significant New Use Rule (SNUR) for long-chain perfluoroalkyl carboxylate (LCPFAC) PFAS which included salts and precursors of these perfluorinated carboxylates. EPA explained, "LCPFAC precursors may be simple derivatives of perfluorooctanoic acid (PFOA) and higher homologues or certain polymers that may degrade to PFOA or higher homologues," 85 FR 45109 (July 27, 2020).

To inform EPA's decision-making regarding the potential designation of precursors to PFOA, PFOS, and possibly the seven PFAS, or some subset thereof, listed in Section V.A as hazardous substances, EPA is soliciting responses to the following questions and requests on the topics described below and requests that commentors provide supporting information and specific scientific literature citations regarding applicable information where appropriate:

4. Please identify information in published scientific literature or data regarding the environmental degradation of substances to PFOA, PFOS, PFBS, PFHxS, PFNA, HFPO–DA, PFBA, PFHxA, and/or PFDA.

5. What factors, if any, regarding degradation time and environmental conditions (e.g., aqueous vs. arid, anaerobic vs. aerobic, available

nutrients) should be considered in identifying the appropriate precursor compounds?

6. Please provide relevant information or data in published scientific literature that characterizes the environmental prevalence of PFOA, PFOS, PFBS, PFHxS, PFNA, HFPO–DA, PFBA, PFHxA, and/or PFDA from the degradation of associated precursors

7. With respect to the preceding questions, please identify names and Chemical Abstracts Service Registry Numbers (CASRNs) or Distributed Structure-Searchable Toxicity (DSSTox) substance identifier for substances that EPA should consider as precursor compounds.

8. Available standard analytical methods, such as SW–846 Method 8327 or Method 533, may not include all precursors to PFOA, PFOS, PFBS, PFHxS, PFNA, HFPO–DA, PFBA, PFHxA, and/or PFDA. Furthermore, the development of additional methods may be limited by the availability of chemicals standards. Given these limitations, please provide information regarding how precursors could be measured in environmental samples. Additionally, please comment on whether and how EPA should consider the availability of analytical methods when determining whether to designate precursors as CERCLA hazardous substances.

9. Please provide available information that EPA could consider in preparing an economic analysis of the potential direct and indirect costs and benefits, including impacts on small entities, associated with a potential rulemaking designating these precursors as CERCLA hazardous substances. Although CERCLA section 102(a) precludes EPA from taking cost into account in the designation of a hazardous substance, the Agency is requesting this information to inform its understanding of the potential costs and benefits associated with any potential future regulatory action.

*C. Request for Public Input Regarding Potential Future Designation, or Designations, of Categories of PFAS as Hazardous Substances*

EPA is considering whether to initiate a future action that would potentially designate groups or categories of PFAS as hazardous substances. A group or category refers to a set of PFAS that share one or more similar characteristics. Characteristics of interest could include, but are not limited to, chemical structure (e.g., carbon chain length, functional group), physical and chemical properties, mode

<sup>5</sup> U.S. EPA (2021). Human Health Toxicity Values for GenX Chemicals, Hexafluoropropylene Oxide (HFPO) Dimer Acid and its Ammonium Salt, (CASRN 13252–12–6 and CSRN 62037–80–3). U.S. Environmental Protection Agency, Washington, DC. <https://www.epa.gov/chemical-research/human-health-toxicity-assessments-genx-chemicals>.

<sup>6</sup> EPA (2022). IRIS Toxicological Review of Perfluorobutanoic Acid (PFBA) and Related Salts (Final Report). U.S. Environmental Protection Agency, Washington, DC. <https://www.epa.gov/chemical-research/iris-toxicological-review-perfluorobutanoic-acid-pfba-and-related-salts-final>.

<sup>7</sup> ATSDR (2021). Toxicological profile for perfluoroalkyls: final. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry. <https://www.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=1117&tid=237>. 13See Office of Regulatory Enforcement.

<sup>8</sup> U.S. EPA. IRIS Program Outlook. <https://www.epa.gov/iris/iris-program-outlook>.

of toxicological action, precursors or degradants, or co-occurrence.

EPA's 2020 SNUR for LCPFAC provides an example of a category based on chemical structure. In the SNUR, the LCPFAC category is defined as follows, where  $5 < n < 21$  or  $6 < m < 21$ :

a.  $\text{CF}_3(\text{CF}_2)_n\text{-COO-M}$  where  $M = \text{H}^+$  or any other group where a formal dissociation can be made;

b.  $\text{CF}_3(\text{CF}_2)_n\text{-CH=CH}_2$ ;

c.  $\text{CF}_3(\text{CF}_2)_n\text{-C(=O)-X}$  where X is any chemical moiety;

d.  $\text{CF}_3(\text{CF}_2)_m\text{-CH}_2\text{-X}$  where X is any chemical moiety, and

e.  $\text{CF}_3(\text{CF}_2)_m\text{-Y-X}$  where Y = non-S, non-N heteroatom and where X is any chemical moiety.

In addition to the structures identified above, "the category also includes the salts and precursors of these chemical substances. The precursors may be simple derivatives of PFOA and higher homologues or polymers that contain or may degrade to PFOA or higher homologues. These precursors include long-chain fluorotelomers." [80 FR 2885] [FRL-9915-63]. Thus, EPA's 2020 SNUR for LCPFAC included certain PFAS based on their chemical structure as well as other PFAS based on whether they degrade to the targeted LCPFACs.

To inform EPA's decision whether to designate certain groups or categories of PFAS as hazardous substances, EPA is soliciting responses to the following questions and requests, and requests that commentors provide supporting information and specific scientific literature citations regarding applicable information where appropriate:

10. Please identify published scientific literature that can inform whether categories of PFAS could or could not be designated as hazardous substances. This could include, for example, scientific data or information on the similarities or differences of a specific characteristic among PFAS. This could also include scientific data and information on the relationship between different characteristics, such as the relationship between chemical structure and specific chemical, physical, or toxicological properties.

11. Is there other information that EPA should consider when determining whether to designate one or more categories of PFAS as hazardous substances? Please provide comment on the extent to which EPA could include related PFAS in a given category (*e.g.*, structural isomers and/or salts).

12. Please provide available information that EPA could consider in preparing an economic analysis of the potential costs and benefits, including impacts on small entities, associated with a potential rulemaking designating categories of PFAS as hazardous substances. Although CERCLA section 102(a) precludes EPA from taking cost into account in the designation of a hazardous substance, the Agency is requesting this information to inform its understanding of the potential costs and benefits associated with any potential future regulatory action.

#### VI. Request for Comment and Additional Information

EPA is seeking comment on all questions and topics described in this ANPRM and requests that you submit any other information, which may not be specifically mentioned in this notice, that you believe is important for EPA to consider in connection with these questions and topics. At the same time, EPA does not plan to consider comments that are beyond the scope of the questions and topics described in this ANPRM. EPA requests that commenters making specific recommendations include supporting documentation where appropriate.

Instructions for providing written comments are provided under **ADDRESSES**, including how to submit any comments that contain PBI.

#### VII. What are the next steps EPA will take?

EPA intends to carefully review all comments and information received in response to this ANPRM. Once that review is completed, EPA would supplement the collected information, as appropriate, with information that the Agency has obtained independently, to determine whether a future rulemaking should address the designation of additional PFAS or precursors as CERCLA hazardous substances or whether one or more categories of PFAS can be designated as CERCLA hazardous substances.

#### VIII. Statutory and Executive Order Reviews

Under Executive Order 12866 (58 FR 51735; October 4, 1993) and Executive Order 13563 (76 FR 3821; January 21, 2011), this action was submitted to the OMB for review. Any changes made in response to OMB recommendations have been documented in the docket for

this action. Because this action does not impose or propose any requirements, and instead seeks comments and suggestions for the Agency to consider in possibly developing a subsequent proposed rule, other statutory and Executive Order reviews that apply to rulemaking do not apply to this action. Should EPA subsequently determine to pursue a rulemaking, EPA will address the statutes and Executive Orders applicable to the rulemaking.

Nevertheless, the Agency welcomes comments and/or information that would help the Agency to assess any of the following: the potential impact of a possible future rule on small entities pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*); potential impacts on Federal, state, or local governments pursuant to the Unfunded Mandates Reform Act (2 U.S.C. 1531-1538); federalism implications pursuant to Executive Order 13132, entitled *Federalism* (64 FR 43255; November 2, 1999); availability of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act of 1995, Public Law 104-113; tribal implications pursuant to Executive Order 13175, entitled *Consultation and Coordination with Indian Tribal Governments* (65 FR 67249; November 6, 2000); environmental health or safety effects on children pursuant to Executive Order 13045, entitled *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885; April 23, 1997) and EPA's *2021 Policy on Children's Health*; energy effects pursuant to Executive Order 13211, entitled *Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use* (66 FR 28355; May 22, 2001); Paperwork burdens pursuant to the Paperwork Reduction Act (44 U.S.C. 3501); or human health or environmental effects on minority or low-income populations pursuant to Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629; February 16, 1994). The Agency will consider such comments during the development of any subsequent proposed rulemaking.

**Michael S. Regan,**  
Administrator.

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