Submitted via Regulations.gov

December 29, 2025

Re: Comments on Proposed Rollbacks to the PFAS Data Reporting and Recordkeeping Rule
Docket ID: EPA–HQ–OPPT–2020-0549-0311

Dear Administrator Zeldin:

The undersigned are scientists with expertise in environmental chemistry, human exposure, toxicology, epidemiology, and the fate and transport of per- and polyfluoroalkyl substances (PFAS). Our work collectively spans decades of laboratory research, field monitoring, biomonitoring, and health studies. We are dedicated to better understanding the use and impacts of PFAS and deriving solutions to reduce serious adverse human and environmental health outcomes as a result of PFAS exposure.

We write to express serious concern regarding proposed rollbacks to the PFAS Reporting and Recordkeeping Rule[1] actions proposed by the United States Environmental Protection Agency ("EPA") under section 8(a)(7) of the Toxic Substances Control Act ("TSCA"),[2] which would dramatically curtail the scope and utility of the reporting and recordkeeping requirements for PFAS chemicals manufactured in (including imported into) the United States.

As scientists who rely on high-quality, comprehensive data to understand PFAS exposures and associated health and environmental risks, we strongly disagree with EPA's assertion that the information proposed for exclusion is of limited value. To the contrary, the proposed changes would eliminate precisely the types of data that are most critical for advancing PFAS science, identifying real-world exposure pathways, and protecting public health. The proposed rule would reduce reported information by more than 97 percent,[3] fundamentally undermining Congress's clear intent in directing EPA to collect PFAS data from all manufacturers and importers since 2011.

We emphasize that meaningful progress in PFAS research has repeatedly depended on expanding the scope of chemicals and pathways considered. For example, many PFAS now recognized as environmentally detectable and biologically relevant were not identified until researchers deliberately changed analytical approaches and examined PFAS exposure sources

[1] U.S. EPA (2025). Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act Under the Toxic Substances Control Act (TSCA), Proposed Rule. 90 FR 50923.
[2] EPA, Toxic Substances Control Act Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances, Doc. No. EPA-HQ-OPPT-2020-0549 (Jun. 2021), https://www.regulations.gov/document/EPA-HQ-OPPT-2020-0549-0001.– 86 Fed. Reg. 33,926 (June 28, 2021).
[3] https://www.newsweek.com/epa-seeks-comment-loosen-decade-forever-chemical-reporting-11038546

that had previously gone uncharacterized.[4] Regulatory decisions that reduce disclosure on PFAS exposure could contribute to delays in detection, exposure characterization, and public health response.

For these reasons, we urge EPA to withdraw the proposed rollbacks to the PFAS Reporting and Recordkeeping Rule and to retain comprehensive reporting requirements consistent with congressional intent and scientific best practices. In addition, we urge EPA to define PFAS using a definition that is scientifically sound and consistent with widely-supported definitions that have been included in federal and state laws regulating PFAS.

I. EPA's Proposal to Narrow Reporting Requirements on PFAS Will Undermine Scientific Research

PFAS as a class pose dangers to human and environmental health. Due to the presence of the highly stable fully fluorinated carbon moieties, PFAS are either extremely resistant to environmental degradation – or transform into other highly persistent PFAS. Studies have shown that some PFAS take thousands of years to fully degrade. Their highly persistent nature further enables PFAS to accumulate in the environment, including in water, sediment, soil, and plants.[5] Multiple lines of scientific evidence suggest that many PFAS can contribute to a wide range of adverse health outcomes, including cancer, endocrine disruption, reproductive harm, and immunosuppression.[6]

Due to these shared characteristics, many of us co-authored a scientific global perspective of the studied human and environmental health harms posed by PFAS in which we recommend wide adoption of a "class-based approach to managing the human and environmental risks associated with all PFAS, including polymers."[7] EPA's proposal to reduce PFAS reporting requirements will severely undermine the scientific infrastructure needed to address PFAS as a class of thousands of chemicals with evolving uses and exposures.

Even if EPA believes that it does not currently need certain PFAS data for its regulatory agenda, that rationale ignores the broader scientific and public health purposes of the reporting rule. Data obtained through the reporting rule could be used to support independent academic research, state and local government investigations, community exposure assessments, and future

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[4] Pelch, K. E., McKnight, T., & Reade, A. (2023). 70 analyte PFAS test method highlights need for expanded testing of PFAS in drinking water. The Science of the total environment, 876, 162978. https://doi-org.ucsf.idm.oclc.org/10.1016/j.scitotenv.2023.162978

[5] Kwiatkowski, C. F.; Andrews, D. Q.; Birnbaum, L. S.; Bruton, T. A.; DeWitt, J. C.; Knappe, D. R. U.; Maffini, M. V.; Miller, M. F.; Pelch, K. E.; Reade, A.; Soehl, A.; Trier, X.; Venier, M.; Wagner, C. C.; Wang, Z.; Blum, A. Scientific Basis for Managing PFAS as a Chemical Class. Environ. Sci. Technol. Lett. 2020, 7 (8), 532– 543, DOI: 10.1021/acs.estlett.0c002

[6] Pelch, K., Reade, A., Kwiatkowski, C., Schultz, K., Varshavsky, J., Cavalier, H., … Wolffe, T. (2021, June 7). PFAS Health Database: A Systematic Evidence Map. https://doi.org/10.17605/OSF.IO/F9UPX; Fenton, S. E.; Ducatman, A.; Boobis, A.; DeWitt, J. C.; Lau, C.; Ng, C.; Smith, J. S.; Roberts, S. M., Per- and Polyfluoroalkyl Substance Toxicity and Human Health Review: Current State of Knowledge and Strategies for Informing Future Research. Environ. Toxicol. Chem. 2021, 40 (3), 606-630; Kwiatowski et al, 2020 note 5 *supra.*

[7] Kwiatowski et al, 2020 note 5 *supra.*

regulatory and remediation efforts. These data are foundational for exposure assessment and longitudinal studies examining PFAS trends over time.

For example, EPA's proposal to eliminate reporting by importers of PFAS-containing articles would create a significant gap in understanding PFAS exposure sources. For many PFAS, imports of finished articles, such as textiles, food contact materials, electronics, medical devices, and consumer products, are a significant source of PFAS entering the United States. These articles are well-documented contributors to human exposure through direct contact with skin, ingestion or inhalation of contaminated household dust, ingestion of contaminated food,[8] and exposure to environmental releases as a result of product use and disposal.[9]

Our research has documented PFAS in environmental samples and in human blood.[10] However, source attribution can be challenging,[11] especially without information on the volume and types of PFAS-containing articles entering US commerce.[12] Data characterizing PFAS in imported articles is essential for reconstructing exposure pathways, interpreting biomonitoring data, and identifying sources contributing to contamination in communities and ecosystems. EPA's proposed revisions to the PFAS Reporting and Recordkeeping Rule would only narrow critical information on PFAS exposure sources that scientists need to more accurately link PFAS exposures to observed health and environmental outcomes.

Similarly, EPA's proposal to eliminate or reduce reporting requirements for PFAS as impurities, PFAS formed as byproducts, PFAS manufactured for research and development, and the establishment a 0.1% *de minimis* reporting threshold for PFAS in mixtures and articles will also

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[8] DeLuca, N. M., Minucci, J. M., Mullikin, A., Slover, R., & Cohen Hubal, E. A. (2022). Human exposure pathways to poly- and perfluoroalkyl substances (PFAS) from indoor media: A systematic review. Environment international, 162, 107149. https://doi-org.ucsf.idm.oclc.org/10.1016/j.envint.2022.107149

[9] Guelfo, J. L., Ferguson, P. L., Beck, J., Chernick, M., Doria-Manzur, A., Faught, P. W., Flug, T., Gray, E. P., Jayasundara, N., Knappe, D. R. U., Joyce, A. S., Meng, P., & Shojaei, M. (2024). Lithium-ion battery components are at the nexus of sustainable energy and environmental release of per- and polyfluoroalkyl substances. *Nature communications*, *15*(1), 5548. https://doi-org.ucsf.idm.oclc.org/10.1038/s41467-024-49753-5;

[10] Wallis, D. J., Barton, K. E., Knappe, D. R. U., Kotlarz, N., McDonough, C. A., Higgins, C. P., Hoppin, J. A., & Adgate, J. L. (2023). Source apportionment of serum PFASs in two highly exposed communities. *The Science of the total environment*, *855*, 158842. https://doi-org.ucsf.idm.oclc.org/10.1016/j.scitotenv.2022.158842; Kotlarz, N., McCord, J., Collier, D., Lea, C. S., Strynar, M., Lindstrom, A. B., Wilkie, A. A., Islam, J. Y., Matney, K., Tarte, P., Polera, M. E., Burdette, K., DeWitt, J., May, K., Smart, R. C., Knappe, D. R. U., & Hoppin, J. A. (2020). Measurement of Novel, Drinking Water-Associated PFAS in Blood from Adults and Children in Wilmington, North Carolina. *Environmental health perspectives*, *128*(7), 77005. https://doi-org.ucsf.idm.oclc.org/10.1289/EHP6837; Cheng, L., Teagle, S., Enders, J. R., Weed, R. A., Nichols, H. B., Knappe, D. R. U., & Hoppin, J. A. (2025). Historical Blood Serum Samples from Wilmington, North Carolina: The Importance of Ultrashort-Chain Per- and Polyfluoroalkyl Substances. *Environmental science & technology*, *59*(43), 23125–23135. https://doi-org.ucsf.idm.oclc.org/10.1021/acs.est.5c08146

[11] Kotlarz, N., Guillette, T., Critchley, C., Collier, D., Lea, C. S., McCord, J., Strynar, M., Cuffney, M., Hopkins, Z. R., Knappe, D. R. U., & Hoppin, J. A. (2024). Per- and polyfluoroalkyl ether acids in well water and blood serum from private well users residing by a fluorochemical facility near Fayetteville, North Carolina. *Journal of exposure science & environmental epidemiology*, *34*(1), 97–107. https://doi-org.ucsf.idm.oclc.org/10.1038/s41370-023-00626-x.

[12] Salvatore, D., Mok, K., Garrett, K. K., Poudrier, G., Brown, P., Birnbaum, L. S., Goldenman, G., Miller, M. F., Patton, S., Poehlein, M., Varshavsky, J., & Cordner, A. (2022). Presumptive Contamination: A New Approach to PFAS Contamination Based on Likely Sources. Environmental science & technology letters, 9(11), 983–990. https://doi-org.ucsf.idm.oclc.org/10.1021/acs.estlett.2c00502.

curtail critical data that can be used to evaluate PFAS exposures and hazards. Reporting on PFAS byproducts and impurities is particularly critical for advancing PFAS science and protecting public health. Many PFAS detected in environmental media and human biomonitoring studies are not intentionally produced chemicals, but rather impurities, transformation products, or byproducts formed during manufacturing and industrial processes. The absence of transparent information about these substances has been a major contributor to persistent gaps in understanding PFAS in our environment. Comprehensive reporting of PFAS byproducts and impurities would substantially improve the ability of scientists to detect, characterize, and trace these chemicals in the environment and to assess their potential health impacts.

In addition, *de minimis* thresholds based solely on concentration will not account for production volumes, repeated use, and cumulative exposures that may occur across multiple sources. PFAS resulting from these uses are not incidental or irrelevant; due to their persistence and mobility, PFAS released into the environment even at very low concentrations will result in widespread and long-lasting contamination that is difficult or impossible to remediate.[13] Scientific advances in PFAS detection have consistently shown that PFAS, even at low levels, contribute meaningfully to human exposures[14] and adverse health outcomes.[15]

The information EPA proposes to eliminate is foundational for advancing scientific research that expands our understanding of sources of environmental PFAS contamination, real-world PFAS exposures, and their associated health risks. By substantially narrowing the scope of required reporting, EPA's proposal would preclude the generation of critical data needed to strengthen detection methods, environmental fate and transport modeling, and epidemiologic and toxicological studies that seek to link complex exposure profiles with adverse health outcomes.

II. EPA's Definition of PFAS in the Proposed Revisions to the TSCA Section 8(a)(7) Rule Does Not Include All PFAS.

When regulatory agencies gather data on PFAS, they should use a consistent and comprehensive definition of PFAS to ensure that they gather information on all PFAS and avoid missing key data on unknown or newer PFAS, as well as PFAS breakdown- or by-products. EPA's revised

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[13] Kwiatowski et al, 2020 note 5 *supra.*

[14] Wallis, D. J., Barton, K. E., Knappe, D. R. U., Kotlarz, N., McDonough, C. A., Higgins, C. P., Hoppin, J. A., & Adgate, J. L. (2023). Source apportionment of serum PFASs in two highly exposed communities. *The Science of the total environment*, *855*, 158842. https://doi-org.ucsf.idm.oclc.org/10.1016/j.scitotenv.2022.158842; Kotlarz, N., McCord, J., Collier, D., Lea, C. S., Strynar, M., Lindstrom, A. B., Wilkie, A. A., Islam, J. Y., Matney, K., Tarte, P., Polera, M. E., Burdette, K., DeWitt, J., May, K., Smart, R. C., Knappe, D. R. U., & Hoppin, J. A. (2020). Measurement of Novel, Drinking Water-Associated PFAS in Blood from Adults and Children in Wilmington, North Carolina. *Environmental health perspectives*, *128*(7), 77005. https://doi-org.ucsf.idm.oclc.org/10.1289/EHP6837

[15] Rylander, L., Lindh, C. H., Hansson, S. R., Broberg, K., & Källén, K. (2020). Per- and Polyfluoroalkyl Substances in Early Pregnancy and Risk for Preeclampsia: A Case-Control Study in Southern Sweden. Toxics, 8(2), 43. https://doi.org/10.3390/toxics8020043; Tanner, E. M., Hallerbäck, M. U., Wikström, S., Lindh, C., Kiviranta, H., Gennings, C., & Bornehag, C.-G. (2020). Early prenatal exposure to suspected endocrine disruptor mixtures is associated with lower IQ at age seven. Environment International, 134, 105185. https://doi.org/10.1016/j.envint.2019.105185

PFAS definition in the PFAS Reporting and Recordkeeping Rule, copied below, is scientifically unsupported, does not include all PFAS, and denies the Agency critical information about PFAS:

> **"Any use of the term "PFAS" or "perfluoroalkyl or polyfluoroalkyl substance" refers to chemical substances that meet the structural definition of PFAS codified at 40 CFR 705.3. PFAS is defined as including at least one of these three structures:**
> - **R-(CF_2)-CF(R′)R″, where both the CF_2 and CF moieties are saturated carbons;**
> - **R-CF_2 OCF_2 -R′, where R and R′ can either be F, O, or saturated carbons; and**
> - **CF_3 C(CF_3)R′-R″, where R′ and R″ can either be F or saturated carbons."[16]**

EPA did not identify any scientific support for this proposed definition in the revised PFAS Reporting and Recordkeeping Rule. It is particularly concerning that EPA's proposed definition excludes many high production volume PFAS due to its unduly narrow requirements. For example, polyvinylidene fluoride (PVDF), a fluoropolymer that EPA has previously identified as a PFAS[17] and that is widely used to line plastic shipping containers,[18] does not meet EPA's proposed definition due to its alternating fully fluorinated carbon structure.

The proposed definition also excludes other high production volume fluorinated chemicals, such as many hydrofluorocarbon ("HFC") and hydrofluoroolefin ("HFO") refrigerant compounds, even though they have been categorized as PFAS by the European Union ("EU"), the Organisation for Economic Co-operation and Development ("OECD"), and 24 U.S. states.[19] This concern is compounded by the fact that the exclusion of HFCs and HFOs from the proposed regulatory definition makes it harder (if not impossible) to track their environmental breakdown products, particularly those that are PFAS themselves and also fall outside of the proposed definition. For example, trifluoroacetic acid ("TFA") is a common HFC and HFO degradation product that poses risk to human and ecological receptors[20] and has been widely recognized as a PFAS by the EU, OECD,[21] 24 U.S. states[22] and the California Department of Toxic Substances

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[16] U.S. EPA (2025). Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Data Reporting and Recordkeeping Under the Toxic Substances Control Act Under the Toxic Substances Control Act (TSCA), Proposed Rule. 90 FR 50923.

[17] https://yosemite.epa.gov/sab/sabproduct.nsf/708FDD305E55DC7E8525829C005F9EB4/$File/PFAS+Presentation+SAB.pdf; https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=541095&Lab=CEMM

[18] Currently, PVDF is not reportable under the Toxics Release Inventory under EPCRA.

[19] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202501988; https://www.saferstates.org/resource/pfas-definition-factsheet/

[20] Several of us have co-authored a rebuttal to industry comments in which we highlighted health concerns posed by TFA, and we refer readers to that rebuttal for the details of these concerns: Response to "Comment on Scientific Basis for Managing PFAS as a Chemical Class." Carol F. Kwiatkowski, David Q. Andrews, Linda S. Birnbaum, Thomas A. Bruton, Jamie C. DeWitt, Detlef R.U. Knappe, Maricel V. Maffini, Mark F. Miller, Katherine E. Pelch, Anna Reade, Anna Soehl, Xenia Trier, Marta Venier, Charlotte C. Wagner, Zhanyun Wang, and Arlene Blum. Environmental Science & Technology Letters 2021 8 (2), 195-197. DOI: 10.1021/acs.estlett.1c00049

[21] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202501988

[22] https://www.saferstates.org/resource/pfas-definition-factsheet/

Control and others,[23] but falls outside of EPA's proposed definition because it only possesses one fully fluorinated carbon. Like other PFAS, TFA is highly persistent and mobile in the environment, and has also been linked to adverse health and ecological effects, including skin and eye damage, harm to aquatic life,[24] and concerns regarding potential liver, immune, reproductive, and developmental harm.[25] Without accurate and robust reporting and recordkeeping of HFCs and HFOs, accurate environmental tracking of PFAS breakdown products like TFA is not possible.

In addition, EPA's overly narrow proposed definition creates opportunity and incentive for the chemical industry to evade future regulatory requirements by manufacturing chemicals that possess the characteristics associated with PFAS but fall outside of EPA's narrow definition. DuPont and now Chemours, the leading manufacturers of PFAS in the United States, have been studying such compounds for nearly a decade.[26] The chemical industry has a long history of tweaking PFAS chemistry to evade regulation, including the recent manufacturing shift from long-chain PFAS (like PFOA and PFOS) to shorter-chain "replacement" PFAS that were erroneously assumed to be less problematic, and now pose widespread environmental contamination issues, threatening human and ecological health.[27]

III. EPA Should Adopt a Scientifically-Supported Definition of PFAS and Use this Definition in All EPA Rulemakings.

Rather than use the PFAS definition in the proposed TSCA rule, we recommend that EPA adopt a science-based PFAS definition,[28] such as that used in existing state PFAS regulations in the US, which is consistent with the widely-accepted OECD consensus definition, or the OECD definition itself:

1) **A substance with at least one fully fluorinated carbon;[29] a definition that has been used by 24 US states, the Department of Defense, and Congress.**

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[23] https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/11/Product-Chemical-Profile-for-Treatments-with-PFASs.pdf

[24] Kwiatkowski et al, note 5 *supra.*

[25] https://echa.europa.eu/documents/10162/6f4a2076-7221-67a3-64f7-c67cc307f59c

[26] https://www.sciencedirect.com/science/article/pii/S0022113911003782; https://www.sciencedirect.com/science/article/pii/S002211391400044X

[27] Mei Sun et al., *Legacy and Emerging Perfluoroalkyl Substances Are Important Drinking Water Contaminants in the Cape Fear River Watershed Of North Carolina*, 3 Env't Sci. & Tech. Letters 415 (2016), https://pubs.acs.org/doi/full/10.1021/acs.estlett.6b00398; Xianming Zhang et al., *Source Attribution of Poly- and Perfluoroalkyl Substances (PFASs) in Surface Waters from Rhode Island and the New York Metropolitan Area*, 3 Env't Sci. & Tech. Letters 316 (2016), https://pubs.acs.org/doi/abs/10.1021/acs.estlett.6b00255.

[28] https://www.saferstates.org/wp-content/uploads/Scientists-Statement-on-Defining-PFAS.pdf

[29] This definition has been used by 24 US states, the Department of Defense, and Congress. *See* https://www.saferstates.org/resource/pfas-definition-factsheet/

2) **The 2021 OECD definition: "fluorinated substances that contain at least one fully fluorinated methyl or methylene carbon atom (without any H/Cl/Br/I atom attached to it)."[30]**

These definitions offer several benefits over the draft and proposed EPA definition. First, these definitions cover all fluorinated chemicals that share common characteristics of PFAS, including persistence in the environment. Applying one of these definitions across all EPA rulemakings in a uniform and consistent manner will help to avoid confusion about which chemicals are considered PFAS and eliminate potential loopholes that incentivize the production of chemicals that fall outside of regulatory definitions but still possess physicochemical characteristics of PFAS and behave like PFAS in the environment.

Second, using one of these definitions in the context of regulations that require submission of information will expand the data EPA receives about use of, and exposures to, PFAS in the United States. EPA's Comptox Database now indicates that there are over 12,000 PFAS,[31] and only 175 of these are subject to recordkeeping and reporting requirements under the Toxics Release Inventory (TRI);[32] PVDF and HFCs are not among the 175 PFAS subject to these reporting requirements. Adopting OECD's PFAS definition in the proposed 8(a)(7) rule would enable information gathering for PFAS (like PVDF and HFCs) that currently fall through regulatory cracks and could pose widespread exposure risks to humans.

Third, several federal and state laws have already employed these broader definitions of PFAS. For example, the National Defense Authorization Act for Fiscal Year 2020 defined PFAS as "perfluoroalkyl and polyfluoroalkyl substances that are man-made chemicals with at least one fully fluorinated carbon atom."[33] Since 2019, 24 states have passed laws using similar, broad definitions of PFAS including California,[34] Colorado,[35] Maine,[36] Vermont,[37] and Washington.[38] It would create needless confusion if EPA's new regulatory actions adopted different definitions of PFAS than those already in place in federal and state laws.

IV. Conclusion and Recommendations

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[30] OECD (2021), Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance, OECD Series on Risk Management, No. 61, OECD Publishing, Paris. Available at: https://www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/terminology-per-and-polyfluoroalkyl-substances.pdf. Note: EPA scientists were members of the OECD group that prepared this definition.

[31] PFAS Master List of PFAS Substances (Version 2), EPA, https://comptox.epa.gov/dashboard/chemical_lists/pfasmaster (last updated Aug. 10, 2021).

[32] https://www.epa.gov/sites/default/files/2021-01/documents/tri_non-cbi_pfas_list_1_8_2021_final.pdf

[33] https://congress.gov/116/plaws/publ92/PLAW-116publ92.pdf , see TITLE II. SEC 322.C.3

[34] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB1044

[35] http://leg.colorado.gov/sites/default/files/2019a_1279_signed.pdf

[36] http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1043&item=1&snum=129

[37] https://legislature.vermont.gov/Documents/2022/Docs/ACTS/ACT036/ACT036%20As%20Enacted.pdf

[38] http://lawfilesext.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Passed%20Legislature/5135-S.PL.pdf?q=20210811124919

As PFAS scientists, we emphasize that the proposed exclusions would significantly impair our collective ability to understand PFAS exposures and harms. We submit these comments to ensure that the scientific record clearly reflects the importance of comprehensive PFAS reporting for protecting public health and advancing environmental science.

For these reasons, we urge EPA to withdraw the proposed rollbacks to the PFAS Reporting and Recordkeeping Rule and to retain comprehensive reporting requirements consistent with congressional intent and scientific best practices. At a minimum, EPA should:

1. Retain all reporting requirements for PFAS in the original rule, including reporting requirements for PFAS-containing articles and imports, PFAS manufactured for research and development purposes, and PFAS impurities and byproducts.
2. Reject the proposed 0.1% de minimis exemption for PFAS in mixtures and articles.
3. Adopt a broad, science-based definition of PFAS.

Respectfully submitted,

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