

January 3, 2023

Honorable Michael Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: *EPA's Definition of PFAS*

Dear Administrator Regan,

Thank you for your ongoing commitment to address the PFAS crisis and to provide relief and protection for communities across the country whose drinking water has been contaminated by PFAS. EPA has taken several important preliminary steps toward addressing the legacy of widespread PFAS pollution, particularly for PFOA and PFOS. However, as the production, use and disposal of PFAS continues to grow, it is critical that the Agency's policies not repeat previous mistakes of underestimating the scope of the PFAS crisis, or discounting the harm posed by the full class of PFAS.

We are writing today to urge EPA to adopt an Agency-wide science-based definition of PFAS that will ensure that all PFAS, including those with one fully fluorinated carbon atom, or two or more non-adjacent fluorinated carbon atoms, do not spread undetected over the next decade. We ask EPA to adopt a definition of PFAS that is based on the hazard characteristic of persistence that defines the full class of PFAS and is in line with the definition widely used by states of "at least one fully fluorinated carbon atom".¹ Adopting an Agency-wide definition that captures the full scope of PFAS chemicals is critical to meeting the Administration's goals of addressing the PFAS crisis, advancing environmental justice, and restoring scientific integrity to EPA.

As you know, EPA is currently working on a rule under the Toxic Substances Control Act (TSCA) – mandated by Congress in the FY20 National Defense Authorization Act (NDAA) -- that will require reporting on PFAS manufacturing, use, disposal, and exposure. EPA's proposed rule used what the Agency calls a "working definition" of PFAS, which defines PFAS to be a chemical containing two

¹ Such a definition would be consistent with the consensus recommendation released by the Organization of Economic Cooperation and Development (OECD) in 2021: "PFASs are defined as fluorinated substances that contain at least one fully fluorinated methyl or methylene carbon atom (without any H/Cl/Br/I atom attached to it), i.e. with a few noted exceptions, any chemical with at least a perfluorinated methyl group (–CF₃) or a perfluorinated methylene group (–CF₂–) is a PFAS."

OECD. "Reconciling Terminology of the Universe of Per- and Polyfluoroalkyl Substances: Recommendations and Practical Guidance." Series on Risk Management, July 9, 2021.
[https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/CBC/MONO\(2021\)25&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/CBC/MONO(2021)25&docLanguage=En).

adjacent fluorinated carbon atoms, with at least one of them fully fluorinated. The Agency’s “working definition” is too narrow, excluding hundreds, perhaps thousands, of PFAS, including substances that have multiple fluorinated carbon atoms that are not adjacent or that have one fully fluorinated carbon atom. If the working definition is adopted, these excluded PFAS are likely to go undetected, and their releases unreported, depriving the agency and the public of critical exposure information.

The Agency received comments from a range of stakeholders on the proposed rule, urging EPA to adopt a broader definition, such as the “at least one fully fluorinated carbon atom” definition or the consensus definition published by the Organization of Economic Cooperation and Development (OECD).

Commenters seeking the broader definition included drinking water utilities associations (AWWA, AMWA and ACWA), state environmental agencies (ASDWA, NACWA, and ECOS), independent scientists with expertise in PFAS, environmental and health NGOs, and 17 Attorneys General.

While EPA has stated that the “working definition” focuses on chemicals for which there is more likely to be exposure, a definition premised on likelihood of exposure is neither science-based nor health protective. The Agency has offered no data to support its assertion, and some of the PFAS excluded by the “working definition” have already been found in drinking water, including in the Cape Fear River Basin in North Carolina. This is just one example of how a narrow definition fails to capture PFAS currently and historically manufactured. It could also fail to capture PFAS that could be generated in the future, or as byproducts or degradation products in the lifecycle of PFAS manufacture and use.

Widespread environmental contamination and human exposure to some of these PFAS has already been documented.² While the Office of Water used a slightly broader definition of PFAS in its final Contaminant Candidate List 5 (CCL5), it is still insufficient to capture many other PFAS that people may be exposed to. In particular, neither the “working definition” or the definition used for the CCL5 list includes ultra-short chain PFAS that are currently manufactured or created as byproducts or degradants of other chemicals.

EPA’s reliance on narrow definitions is troubling in several respects. If the PFAS Reporting rule is finalized using the EPA’s proposed “working definition” or even a slightly broader definition than EPA, Congress, and the public will be denied essential information that is necessary to understand the scope of, and sources responsible for, the PFAS crisis. EPA, the states, Congress, and the public, cannot craft informed and effective strategies to prioritize and regulate PFAS without this information. In addition, EPA’s “working definition” denies the public information about the large volume of PFAS being disposed of and likely re-distributed into overburdened communities when incinerated. We found data on six PFAS in the initial 2020 TRI dataset that were not labeled by the EPA as PFAS – these PFAS made up around 87% of the total reported PFAS production waste.³ These examples also raise concerns for how

² Pickard, Heidi M., Alison S. Criscitiello, Daniel Persaud, Christine Spencer, Derek C. G. Muir, Igor Lehnherr, Martin J. Sharp, Amila O. De Silva, and Cora J. Young. “Ice Core Record of Persistent Short-Chain Fluorinated Alkyl Acids: Evidence of the Impact From Global Environmental Regulations.” *Geophysical Research Letters* 47, no. 10 (2020): e2020GL087535. <https://doi.org/10.1029/2020GL087535>.

³ Reade, Anna, and Yiliqi. “New EPA Data: Huge Amounts of PFAS Underreported and Burned.” *NRDC* (blog), October 21, 2021. <https://www.nrdc.org/experts/yiliqi/new-epa-data-huge-amounts-pfas-underreported-and-burned-0>

PFAS are being defined, monitored, evaluated and regulated by the Office of Water, the Office of Air and Radiation, and elsewhere in the Agency.

And, because there is no scientific justification for EPA's "working definition" provided – as well as little transparency as to how or when it was developed, or who was involved, both inside and outside the government – it further challenges the Administration's stated goal to restore scientific integrity and credibility at the Agency.

In response to concerns about the Agency's "working definition" EPA staff have noted that OECD recognized that regulatory bodies might opt to take action on smaller subsets of PFAS, not necessarily every substance that meets the PFAS definition. That is irrelevant. The definition of PFAS and the scope of regulations taken to address PFAS pollution are two different matters. The intent to regulate subsets of PFAS does not justify continuing to rely upon a narrow and unprotective definition of PFAS. We recognize that EPA may choose to regulate subsets of the PFAS class for various situations; but it should do so while operating from a common understanding and recognition of the full class.

We are aware that industries, particularly those that manufacture, process, and use PFAS, have argued for excluding some PFAS from the definition. For example, industry interests have promoted the idea that polymers are "safe" and therefore should not be covered by EPA's definition of PFAS. This is wrong in several respects. To industry even PFOA, PFOS, and GenX are "safe." PFAS manufacturers have never acknowledged the threat that their chemicals pose—even when internal documents demonstrate that the companies have been aware of the risks for decades. In addition, industry's claims for the inherent safety of fluoropolymers are unfounded as exposures during fluoropolymer production, use, and disposal have been linked to health harms.⁴ Finally, the production of polymers is a major source of PFAS pollution, especially from the monomers used to create the polymers.⁵ In fact, most of the

⁴ Hays, Hannah L., and Henry Spiller. "Fluoropolymer-Associated Illness: Clinical Toxicology: Vol 52, No 8." *Clinical Toxicology* 52, no. 8 (September 9, 2014): 848–55.

Centers for Disease Control and Prevention. "Severe Acute Respiratory Illness Linked to Use of Shoe Sprays -- Colorado, November 1993." *Morbidity and Mortality Weekly Report* 42, no. 46 (November 26, 1993): 885–87.

Fluoropolymer Division. *Guide to the Safe Handling of Fluoropolymer Resins*. 5th ed. The Plastics Industry Association, 2019.

<https://www.turi.org/content/download/12048/189380/file/Guide%20to%20the%20Safe%20Handling%20of%20Fluoropolymer%20Resins%20v5%2020190130-1.pdf>.

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<https://www.chicagotribune.com/news/ct-xpm-1995-03-26-9503260114-story.html>.

Daniels, Mary. "Stove Fumes Killing Caged Birds." *Chicago Tribune*, March 8, 1986.

<https://www.chicagotribune.com/news/ct-xpm-1986-03-09-8601180125-story.html>.

⁵ Lohmann, Rainer, Ian T. Cousins, Jamie C. DeWitt, Juliane Glüge, Gretta Goldenman, Dorte Herzke, Andrew B. Lindstrom, et al. "Are Fluoropolymers Really of Low Concern for Human and Environmental

contamination in West Virginia and North Carolina is from the DuPont/Chemours facilities' production of fluoropolymers. Thus, information about the production, use and release of polymers is necessary to fully understand the scope of the PFAS crisis and it is essential that fluoropolymers are defined as PFAS.

Others have argued for exempting certain PFAS from the definition based upon their use – in refrigeration, pharmaceuticals, or pesticides, for example. The uses of PFAS may be a relevant consideration for some potential regulatory steps, including prioritizing and focusing regulation within an essential use framework,⁶ but usage is irrelevant to a science-based definition and should not be a basis or excuse for defining PFAS narrowly.

The road to addressing the PFAS crisis and protecting the public will be long and difficult. To achieve the Administration's goals, EPA must adopt a definition of PFAS that informs the agency, Congress, states, and the public about the full scope of PFAS exposure and contamination.

We would welcome the opportunity to speak with you about this critically important health, scientific and environmental justice matter. Please contact Daniel Rosenberg (drosenberg@nrdc.org) for any reply or follow-up to this letter.

Sincerely,

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⁶ Cousins, Ian T., Gretta Goldenman, Dorte Herzke, Rainer Lohmann, Mark Miller, Carla A. Ng, Sharyle Patton, et al. "The Concept of Essential Use for Determining When Uses of PFASs Can Be Phased Out." *Environmental Science: Processes & Impacts* 21, no. 11 (November 13, 2019): 1803–15. <https://doi.org/10.1039/C9EM00163H>.