

February 3, 2023

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

Submitted via Regulations.gov

Re: Comments on Proposed Changes to Reporting Requirements for Per- and Polyfluoroalkyl Substances and to Supplier Notifications for Chemicals of Special Concern; Community Right-to-Know Toxic Chemical Release Reporting, Docket No. EPA-HQ-TRI-2022-0270

Dear Administrator Regan:

These comments are submitted on behalf of the National PFAS Contamination Coalition, Sierra Club, and Union of Concerned Scientists (collectively, “Commenters”) in response to the U.S. Environmental Protection Agency’s (“EPA’s” or the “Agency’s”) proposed changes to reporting requirements for per- and polyfluoroalkyl substances (“PFAS”) and to supplier notifications for chemicals of special concern (“Proposed Rule”).¹ The Proposed Rule would modify EPA’s regulations so that: (1) the per- and polyfluoroalkyl substances that are listed on the Toxics Release Inventory (“TRI”) pursuant to sections 7321(b) and 7321(c) of the National Defense Authorization Act for Fiscal Year 2020 (“2020 NDAA”)² would be listed as “chemicals of special concern”—making them ineligible for the *de minimis* concentration or alternate threshold exemptions; and (2) the supplier notification provisions in EPA’s TRI regulations would apply to all chemicals of special concern even at *de minimis* concentrations.

We support the changes included in the Proposed Rule, which would close reporting loopholes that have drastically limited the information provided by PFAS manufacturers and users, significantly undermining the purpose of TRI reporting.³ The Proposed Rule would

¹ Changes to Reporting Requirements for Per- and Polyfluoroalkyl Substances and to Supplier Notifications for Chemicals of Special Concern; Community Right-to-Know Toxic Chemical Release Reporting, 87 Fed. Reg. 74,379 (proposed Dec. 5, 2022) (“Proposed Rule”).

² National Defense Authorization Act for Fiscal Year 2020, Pub. L. No. 116-92, § 7321, 133 Stat. 1198, 2277–81 (2019) (“2020 NDAA”).

³ We strongly urge EPA not to use the term “burden-reduction” tools or options to describe the *de minimis* concentration and alternate threshold loopholes, as the Proposed Rule does in multiple places. *E.g.*, 87 Fed. Reg. at 74,379–80. Describing these illegal loopholes as tools for reducing the burdens on PFAS polluters callously disregards the needs and experiences of PFAS-contaminated communities across the country that are suffering serious disease and death

finally correct the illegal approach to the TRI listing of PFAS that EPA adopted in three prior rulemakings,⁴ at least for the subset of PFAS already on the TRI and for future PFAS added to the TRI pursuant to NDAA section 7321(c). In addition, it would ensure that the supplier notification requirements in EPA’s TRI regulations apply to all mixtures and trade name products containing chemicals of special concern without exempting chemicals that are present at concentrations that EPA’s TRI regulations define as *de minimis*.

While we support the main goals of the Proposed Rule, we have also identified several critical respects in which EPA must strengthen its approach to reporting PFAS to the TRI to ensure that communities, researchers, and regulators have the full array of information about the manufacture, processing, use, and release of all PFAS that EPA is authorized to require under section 313 of the Emergency Planning and Community Right-to-Know Act (“EPCRA”).⁵ We urge EPA to make these additional modifications in this rulemaking or, if necessary to avoid delay in finalizing the Proposed Rule by November 30, 2023,⁶ in one of the upcoming, legally required rulemakings regarding the listing of additional PFAS to the TRI.

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because they were exposed to PFAS for years without even knowing these chemicals were in their drinking water and air. The primary burden that needs to be considered and reduced is the one on contaminated communities, not on the responsible polluters.

⁴ The three prior rulemakings that added PFAS to the TRI with major reporting loopholes are: Implementing Statutory Addition of Certain Per- and Polyfluoroalkyl Substances; Toxic Chemical Release Reporting, 85 Fed. Reg. 37,354 (June 22, 2020); Implementing Statutory Addition of Certain Per- and Polyfluoroalkyl Substances (PFAS) to the Toxics Release Inventory Beginning With Reporting Year 2021, 86 Fed. Reg. 29,698 (June 3, 2021); and Implementing Statutory Addition of Certain Per- and Polyfluoroalkyl Substances (PFAS) to the Toxics Release Inventory Beginning With Reporting Years 2021 and 2022, 87 Fed. Reg. 42,651 (July 18, 2022). Together these rules are referred to as the “PFAS TRI Codification Rules.”

⁵ 42 U.S.C. § 11023 (establishing the TRI).

⁶ EPCRA section 313 provides that “[a]ny revision made on or after January 1 and before December 1 of any calendar year shall take effect beginning with the next calendar year.” 42 U.S.C. § 11023(d)(4). Accordingly, Commenters strongly urge EPA to finalize a rule that removes the PFAS TRI reporting loopholes by November 30, 2023.

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INTERESTS OF COMMENTERS

The National PFAS Contamination Coalition (“NPCC”), which currently has 30 member groups in 17 states, was formed in June 2017 by local leaders from around the country whose community drinking water sources are contaminated by PFAS. Many NPCC leaders, as well as their children and other close family members, have suffered from cancer and other serious health problems linked to PFAS exposure. One of the NPCC member organizations is Merrimack Citizens for Clean Water, which was founded in 2017 by residents of Merrimack, New Hampshire after it was revealed that a Saint-Gobain Performance Plastics facility was emitting PFAS into the air and had been contaminating the town’s drinking water supply for almost two decades. The PFAS concentrations in their water were so high that the town had to shut down two of six public water wells, and subsequent blood testing of residents revealed that their bodies had PFAS levels more than double the nationwide average. Clean Cape Fear is another NPCC member organization, founded in 2017 by residents in North Carolina after learning that a Chemours facility in Fayetteville dumped large quantities of PFAS into the Cape Fear River—the primary source of drinking water for nearly 500,000 people in southeastern North Carolina. PFAS levels in the Cape Fear River basin are among the highest in the nation; a study conducted by Environmental Working Group that tested tap water PFAS levels in sites across the nation found that Brunswick County had the highest PFAS levels at 185.9 parts per trillion (“ppt”).⁷ Residents of the Merrimack and Cape Fear River basin communities—as well as other NPCC member communities—are deeply frustrated by the lack of industry accountability. They want accurate and transparent data on PFAS releases in order to better protect their health and environment. Eliminating exemptions such as the *de minimis* concentration exemption is a necessary first step in providing them with the tools needed to advocate for remediation of—and protection from—the PFAS contamination that has harmed their homes and families.

Sierra Club is a national environmental nonprofit with 67 state-based chapters and approximately 837,000 members across the United States. Sierra Club and its members rely on TRI data to better understand environmental releases of toxic substances. Information on PFAS uses, industries, relevant environmental media, and facility releases would enable Sierra Club to identify communities where PFAS exposures are most intense; to alert and inform residents, environmental leaders, and elected officials who have a stake in shaping regulations; and to advocate for health-protective regulations on a national and state level. The limited scope of TRI

⁷ Sydney Evans et al., *PFAS Contamination of Drinking Water Far More Prevalent Than Previously Reported*, Env’t Working Grp. (Jan. 23, 2020), https://www.ewg.org/research/national-pfas-testing?can_id=76d7540358ba74a04e43c2f8374a77c8&email_referrer=email_869879&email_subject=alert-chemours-issues-statement-regarding-potential-threat-to-drinking-water-for-downstream-residents&link_id=4&source=email-alert-chemours-issues-statement-regarding-potential-threat-to-drinking-water-downstream (“In the 43 samples where PFAS was detected, the total level varied from less than 1 part per trillion, or ppt, in Seattle and Tuscaloosa, Ala., to almost 186 ppt in Brunswick County, N.C.”).

data hinders many of Sierra Club’s initiatives. For instance, Sierra Club has found it difficult to identify and alert communities that could be impacted by nearby incinerators receiving concentrated PFAS waste. Members of Sierra Club also live by known PFAS manufacturing facilities—such as Solvay in West Deptford, New Jersey and Dupont Chambers Works in Deepwater, New Jersey. Being fully informed about PFAS releases would better allow Sierra Club members to advocate for themselves and their families and push for stronger safeguards against exposure to PFAS.

The Union of Concerned Scientists (“UCS”) is a national not-for-profit membership organization with the mission of conducting scientific analysis and research in the public interest and representing the interests of the scientific community before all levels of government. UCS scientists and analysts research and write reports on science-based policy matters so that the public is well informed and so that communities have scientifically sound information that they can use in their fights for clean air, clean water, and healthy environments. A key goal of these reports is ensuring that justice and equity inform the implementation of science-based solutions. Over the last several years, UCS has written two reports and numerous blog posts about PFAS contamination.⁸ In addition, UCS scientists and analysts work directly with heavily polluted communities to develop information, such as pollution maps, that they can use to apprise the community of dangers and to engage in local advocacy. However, exemptions from requirements to report to the TRI limit UCS’s ability to provide complete information to impacted communities. As a science-based advocacy organization, UCS has a direct interest in ensuring that federal databases utilized by researchers include all legally required information.

COMMENTS

A. Commenters Support EPA’s Proposed Elimination of the De Minimis Concentration and Alternate Threshold Exemptions.

Commenters strongly support EPA’s goal of ensuring that: (1) the “manufacture[], process[ing] or otherwise use[]”⁹ of PFAS in *any* concentration in a mixture is considered when a facility determines whether it has met the threshold for TRI reporting; and (2) environmental releases of PFAS in *any* concentration as part of a mixture must be reported to the TRI. Because PFAS contamination from industrial sources nearly always occurs as complex aqueous mixtures,

⁸ *A Toxic Threat: Government Must Act Now on PFAS Contamination at Military Bases*, UCS (Sept. 25, 2018), <https://www.ucsusa.org/resources/toxic-threat-pfas-contamination-military-bases>; Anita Desikan et al., UCS, *Abandoned Science, Broken Promises: How the Trump Administration’s Neglect of Science Is Leaving Marginalized Communities Further Behind* 13 (Oct. 2019), <https://www.ucsusa.org/sites/default/files/2019-10/abandoned-science-broken-promises-web-final.pdf> (“Nearly 40,000 more low-income households and approximately 300,000 more people of color live within five miles of a site contaminated with PFAS . . .”).

⁹ 42 U.S.C. § 11023(a). Pursuant to EPCRA section 313(a), these are the activities that are relevant to determining whether a facility has met the threshold quantity that triggers annual reporting of TRI-listed chemicals. 42 U.S.C. § 11023(a). *Id.*

rather than individual chemicals,¹⁰ finalizing the Proposed Rule and eliminating the *de minimis* concentration exemption is vitally important.

The *de minimis* concentration exemption significantly limits the information that is reported to the TRI, by providing that

[i]f a toxic chemical is present in a mixture of chemicals at a covered facility and the toxic chemical is in a concentration in the mixture which is below 1 percent of the mixture, or 0.1 percent of the mixture in the case of a . . . carcinogen, a person is not required to consider the quantity of the toxic chemical present in such mixture when determining whether an applicable threshold has been met [in order to trigger the requirement to report] or determining the amount of release to be reported.¹¹

Ensuring that PFAS at even low concentrations count toward the TRI threshold and are included in the environmental releases that must be reported is essential because even low concentrations of PFAS in a mixture can add up to a high total volume of PFAS if the mixture is manufactured, processed, used, or released in high volumes.

Moreover, even if the total volume of PFAS released is “low,” it can still contribute to significant threats to public health and the environment because PFAS are toxic at extraordinarily low levels.¹² Indeed, EPA recently issued interim drinking water health advisories—levels above which a drinking water contaminant may harm human health—at 0.004 parts per trillion for PFOA and 0.02 ppt for PFOS.¹³ These extremely low levels are trillions of

¹⁰ See, e.g., Shoji Nakayama et al., *Perfluorinated Compounds in the Cape Fear Drainage Basin in North Carolina*, 41 Env’t Sci. & Tech. 5271 (2007), <https://pubs.acs.org/doi/abs/10.1021/es070792y>; Krista A. Barzen-Hanson et al., *Discovery of 40 Classes of Per- and Polyfluoroalkyl Substances in Historical Aqueous Film-Forming Foams (AFFFs) and AFFF-Impacted Groundwater*, 51 Env’t Sci. & Tech. 2047 (2017), <https://pubs.acs.org/doi/abs/10.1021/acs.est.6b05843>.

¹¹ 40 C.F.R. § 372.38(a).

¹² See, e.g. Philippe Grandjean, *Serum Vaccine Antibody Concentrations in Children Exposed to Perfluorinated Compounds*, 307 JAMA 391 (2012), <https://doi.org/10.1001/jama.2011.2034>; Esben Budtz-Jørgensen & Philippe Grandjean, *Application of Benchmark Analysis for Mixed Contaminant Exposures: Mutual Adjustment of Perfluoroalkylate Substances Associated with Immunotoxicity*, 13 PLoS One Article No. e0205388 (2018), <https://doi.org/10.1371/journal.pone.0205388>.

¹³ EPA, EPA/822/R-22/003, *Interim Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA)*, CASRN 335-67-1 (June 2022) (“Interim PFOA Advisory”) (submitted herewith), <https://www.epa.gov/system/files/documents/2022-06/interim-pfoa-2022.pdf>; EPA, EPA/822/R-22/004, *Interim Drinking Water Health Advisory: Perfluorooctane Sulfonic Acid (PFOS)*, CASRN 1763-23-1 (June 2022) (“Interim PFOS Advisory”) (submitted herewith), <https://www.epa.gov/system/files/documents/2022-06/interim-pfos-2022.pdf>.

times lower than the one part per hundred (1 percent) that is considered *de minimis* under EPA's TRI rules (or even the one part per thousand that is considered *de minimis* for carcinogens).¹⁴ The fact that PFAS are toxic at such low levels compels EPA to eliminate the reporting exemption for *de minimis* concentrations of PFAS.¹⁵

For these same reasons, Commenters also strongly support the goal of ensuring that facilities that manufacture, process, or otherwise use PFAS submit an annual report that includes *all* of the information required by EPCRA section 313(g). Accordingly, we support the proposal to make PFAS listed on the TRI pursuant to 2020 NDAA sections 7321(b) and (c) ineligible for EPA's alternate threshold exemption. This exemption overrides EPCRA section 313(f)—which sets reporting thresholds of 10,000 pounds and 25,000 pounds per year for manufacturers and processors, respectively—by creating an “alternate threshold” of 1,000,000 pounds per year if the facility certifies it releases 500 pounds or less of the chemical over a year.¹⁶ Under EPA's rule, if the facility states that it is eligible for the alternate threshold, it can circumvent the requirement to submit a form containing the detailed information required by EPCRA section 313(g), and instead may submit a barebones certificate stating that it is eligible for the alternative threshold. This barebones certificate contains no information about environmental releases.¹⁷ In essence, this allows facilities to release up to 500 pounds of a toxic chemical per year without having to notify EPA or the public. However, an environmental release of PFAS in an amount up to 500 pounds (which is deemed low enough to permit use of the alternate threshold exemption) could be extremely dangerous to human health and the environment. Accordingly, EPA should not allow any releases (or disposals, treatments, combustion, or transfers) of TRI-listed PFAS to be hidden from public view as the alternate threshold exemption allows.

¹⁴ 40 C.F.R. § 372.38(a).

¹⁵ Not only are PFAS toxic at extremely low levels, they are resistant to environmental degradation and may bioaccumulate to dangerous levels in living organisms. For example, the State of Minnesota linked high levels of PFAS contamination of fish in a lake to a nearby chrome-plating facility. The state estimated that the two largest hard chrome platers in the state might use one or more pounds of PFAS per year, but most are using 1 gram or less. Nonetheless it concluded that if this small amount were released to a modest size lake, over time it would likely result in exceedances of the state's Water Quality Criteria for fish consumption. *See* Minn. Pollution Control Agency, Comments on Addition of Certain Per- and Polyfluoroalkyl Substances: Community Right-to-Know Toxic Chemical Release Reporting, Docket No. EPA-HQ-TRI-2019-0375-0057, at 4 (Jan. 30, 2020) (submitted herewith), <https://www.regulations.gov/comment/EPA-HQ-TRI-2019-0375-0057>.

¹⁶ 40 C.F.R. § 372.27(a).

¹⁷ *Id.* § 372.95.

B. The Illegal Exemptions to TRI Reporting for Listed PFAS Have Resulted in Significant Underreporting of PFAS Uses and Releases.

Despite Commenters' high hopes and Congress's intent that NDAA section 7321 would result in significant new information about PFAS releases and their sources, PFAS releases reported to the TRI in the years 2020 and 2021 have been minimal, and do not reflect the true scope of industry PFAS usage in the United States. EPA has admitted that underreporting of PFAS releases to the TRI in 2020 was, in part, due to the *de minimis* concentration exemption.¹⁸ In 2020, the first year that facilities were required to report since the addition of 172 PFAS to the TRI by the 2020 NDAA, only 91 reports were submitted.¹⁹ These reports came from 39 facilities across the country that manufactured, processed, or otherwise used a TRI-listed PFAS. The number of individual PFAS chemicals reported in the 91 reports comprise only a quarter of the 172 added to the TRI at that time.²⁰ These figures are unexpectedly low given the volume of PFAS manufactured, imported into, and used in the United States. Similarly, nine reports were made using the alternate threshold reporting form, allowing these facilities to withhold critical information.²¹ In 2021, the number of reports and facilities only marginally increased, with 45 facilities submitting a total of 92 reports that pertain to only 26% of the reportable PFAS that year.²² Eleven reports were made using the alternate threshold reporting form.²³

The inadequacy of existing TRI data on PFAS is further shown by the vast discrepancies between what was reported to the TRI and what is reflected in other publicly available data

¹⁸ EPA, *PFAS Strategic Roadmap: EPA's Commitments to Action 2021–2014*, at 12, 23 n.iv (Oct. 2021) (“2021 PFAS Roadmap”) (submitted herewith), https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf; EPA *Releases Preliminary Data for 2021 Toxics Release Inventory Reporting*, EPA, <https://www.epa.gov/chemicals-under-tsca/epa-releases-preliminary-data-2021-toxics-release-inventory-reporting> (last updated Dec. 13, 2022) (submitted herewith) (“Because PFAS are used at low concentrations in many products, the elimination of the *de minimis* exemption would result in a more complete picture of the releases and other waste management quantities for these chemicals.”).

¹⁹ Earthjustice, *2020 TRI Data: Report and Recommendations Regarding PFAS* (Dec. 13, 2021), https://earthjustice.org/sites/default/files/files/2021.12.13_2020_pfas_tri_summary_report_comp_lete_data.pdf; see TRI Basic Data File for Year 2020, EPA: TRI, <https://www.epa.gov/toxics-release-inventory-tri-program/tri-basic-data-files-calendar-years-1987-present> (choose “2020”; then click download; and then filter for PFAS chemicals”) (last visited Feb. 1, 2023).

²⁰ See TRI Basic Data File for Year 2020, EPA: TRI, <https://www.epa.gov/toxics-release-inventory-tri-program/tri-basic-data-files-calendar-years-1987-present> (choose “2020”; then click download; and then filter for PFAS chemicals”) (last visited Feb. 1, 2023).

²¹ *Id.* (showing that nine facilities in 2020 reported using Form As).

²² See TRI Basic Data File for Year 2021, EPA: TRI, <https://www.epa.gov/toxics-release-inventory-tri-program/tri-basic-data-files-calendar-years-1987-present> (choose “2021”; then click download; and then filter for PFAS chemicals”) (last visited Feb. 1, 2023).

²³ *Id.* (showing that eleven reports in 2021 used Form As).

sources.²⁴ For example, in 2021, EPA released shipment manifests submitted by facilities under the Resource Conservation and Recovery Act that detail the transfer of waste containing PFAS chemicals—some of which are listed to the TRI.²⁵ In one example of potential non-reporting, three facilities operated by Republic Services²⁶ received and otherwise used in 2020 approximately 335,000 pounds of waste containing reportable PFAS. They also received 11.7 million pounds of waste containing aqueous film forming foam (“AFFF”), a mixture that very likely included one or more PFAS. However, none of these three facilities reported to the 2020 TRI. In August of 2021, Earthjustice sent a formal inquiry to Republic Services about why it did not report to the TRI.²⁷ As AFFF often contains PFAS—some of which are TRI-listed—below a concentration of 1%, facilities such as Republic Services may have been relying on the *de minimis* concentration exemption as their basis for not reporting to the TRI. This example shows the dangers of allowing the *de minimis* concentration exemption to apply to mixtures containing PFAS. Even one-thousandth—a percentage well below the threshold for the *de minimis* concentration exemption—of 11.7 million pounds is approximately 12,000 pounds of PFAS that could have been potentially released into the environment without the public’s awareness—an alarming number considering that PFAS are known to cause harm from drinking water exposures at the parts per quadrillion level.²⁸

Additionally, known PFAS manufacturers and emitters reported nothing to the TRI in either 2020 or 2021. One such facility is Saint-Gobain Performance Plastics in Merrimack, New Hampshire, where residents, many of whom belong to Commenter NPCC’s member group Merrimack Citizens for Clean Water, are currently suffering the adverse health effects of PFAS contamination. This is a direct result of the facility’s historical—and ongoing—releases of PFAS into drinking water and air, including air emissions that exceed the ambient air limits set by the New Hampshire Department of Environmental Services.²⁹ Moreover, this facility is under

²⁴ See Sharon Lerner, *Massive Quantities of PFAS Waste Go Unreported to EPA*, Intercept (Aug. 5, 2022), <https://theintercept.com/2022/08/05/pfas-waste-epa-afpp-us-ecology/> (“Over the past year, Gartner and her staff have compared filings under the Resource Conservation and Recovery Act, which requires reporting of hazardous waste, with records from the TRI. The results showed that several companies that reported receiving hazardous PFAS waste under the law did not report the waste to the TRI.”); see also *PFAS Analytic Tools*, EPA, <https://echo.epa.gov/trends/pfas-tools> (last updated Jan. 12, 2023).

²⁵ *PFAS Analytic Tools*, EPA, <https://echo.epa.gov/trends/pfas-tools> (last updated Jan. 12, 2023).

²⁶ For reporting year 2020, these facilities belonged to U.S. Ecology, which was acquired by Republic Services in 2020.

²⁷ Letter from Sierra Club to Jon Vander Ark, CEO, Republic Servs., Inc. (Aug. 2, 2022) (submitted herewith).

²⁸ See Interim PFOA Advisory; Interim PFOS Advisory.

²⁹ *Air Emission Sources*, N.H. Dep’t of Env’t Servs., <https://www.pfas.des.nh.gov/air> (last visited Jan. 30, 2023) (“Upon review of the emissions detected [in 2004], Saint-Gobain reported to NHDES that the emissions from the entire facility were predicted to exceed the ambient air limits (AALs) established in [regulations].”); Maria Hoplamazian, *N.H. Lawmakers and Community Advocates Call on State Regulators to Shut Down Saint-Gobain Facility in*

investigation for its prior misrepresentations to state regulators and the public about its use of PFAS,³⁰ making it even more important for EPA to confirm that the facility is fulfilling the reporting obligations imposed on it by Congress. The Merrimack community is in dire need of accurate information about PFAS releases into their air and water and were counting on TRI reporting to provide them with that information. But Saint-Gobain has reported nothing to the TRI, leaving the community in the dark.³¹ It is possible that the *de minimis* concentration exemption is giving Saint-Gobain an excuse not to report—either because the facility truly falls within the illegal exemption or it is improperly invoking it knowing that enforcement is doubtful. Either way, the *de minimis* concentration exemption appears to be undermining the information that flows to residents of Merrimack and regulators in New Hampshire and elsewhere. Saint-Gobain is but one example: PFAS contamination crises are being reported across the country.³² Yet facilities in those communities that are known to manufacture, process, or otherwise use (e.g., dispose of) PFAS are either not fulfilling their statutory obligations to report to the TRI or are being allowed to not report due to loopholes as well as other codified shortcomings of current TRI reporting requirements (e.g., limited list of reportable PFAS).³³

The limited scope of TRI PFAS reports from the past two years alongside existing documentation of PFAS use from manufacturers, processors, and disposers suggests that there is widespread failure to submit reports for TRI-listed PFAS. Regulators may be hard-pressed to determine whether facilities that invoked the *de minimis* concentration loophole as justification for non-reporting did so validly, or whether they did so even in cases where it does not apply, knowing they would be unlikely to be caught because of the difficulty in determining the concentration of PFAS in mixtures that were processed, used, or released in the past.³⁴

Merrimack, N.H. Pub. Radio (Nov. 30, 2021), <https://www.nhpr.org/nh-news/2021-11-30/nh-saint-gobain-merrimack-close-advocates-pfas>.

³⁰ Tom Perkins, ‘*They All Knew*’: Textile Company Misled Regulators About Use of Toxic PFAS, *Documents Show*, Guardian (Aug. 5, 2022), <https://www.theguardian.com/environment/2022/aug/05/saint-gobain-textile-company-toxic-pfas>.

³¹ TRI Basic Data File for Year 2020, EPA: TRI, <https://www.epa.gov/toxics-release-inventory-tri-program/tri-basic-data-files-calendar-years-1987-present> (choose “2020”; then click download; and then filter for PFAS chemicals”) (last visited Feb. 1, 2023) (containing no reports from Saint-Gobain covering PFAS).

³² David Q. Andrews & Olga V. Naidenko, *Population-Wide Exposure to Per- and Polyfluoroalkyl Substances from Drinking Water in the United States*, 7 *Env’t Sci. & Tech. Letters* 931 (2020), <https://pubs.acs.org/doi/10.1021/acs.estlett.0c00713> (estimating that over 200 million people likely receive water contaminated with PFOA and PFOS).

³³ Earthjustice, *2020 TRI Data: Report and Recommendations Regarding PFAS* 3 (Dec. 13, 2021), https://earthjustice.org/sites/default/files/files/2021.12.13_2020_pfas_tri_summary_report_complete_data.pdf; see also *infra* Part H.

³⁴ See *EPA Releases Preliminary Data for 2021 Toxics Release Inventory Reporting*, EPA, <https://www.epa.gov/chemicals-under-tsca/epa-releases-preliminary-data-2021-toxics-release->

Regulators may be hard-pressed to determine whether facilities that invoked the *de minimis* concentration loophole as justification for non-reporting did so validly, or whether they did so even in cases where it does not apply, knowing they would be unlikely to be caught because of the difficulty in determining the concentration of PFAS in mixtures that were processed, used, or released in the past.³⁵ Exemptions, such as for *de minimis* concentrations, must be closed, as they allow millions of pounds of PFAS to continue to go unreported,³⁶ depriving communities of information that could help them protect the health and safety of themselves and their families.³⁷

C. EPA Should Acknowledge the Illegality of Allowing PFAS to be Subject to the *De Minimis* Concentration and Alternate Threshold Loopholes.

Not only is it critically important to eliminate the *de minimis* concentration and alternate threshold exemptions so that communities, scientists, and regulators obtain full information about PFAS releases, as explained above, but eliminating these exemptions is required in order to comply with NDAA sections 7321(b) and (c) and EPCRA section 313. By indicating that the Proposed Rule is discretionary, EPA is leaving the door open to future administrations reverting to the loophole-ridden reporting regime created by the PFAS TRI Codification Rules. We, therefore, urge EPA to acknowledge in the final rule that the previously adopted PFAS TRI Codification Rules are not consistent with NDAA sections 7321(b) and (c).

[inventory-reporting](#) (last updated Dec. 13, 2022) (“EPA conducted outreach to facilities that had filed CDR reports for the TRI-listed PFAS but had not filed TRI reports for the same PFAS. All facilities contacted claimed that concentrations of PFAS were below the TRI 1% *de minimis* level that is currently in place for PFAS as their reason for not submitting TRI reports for the PFAS”).

³⁵ See *EPA Releases Preliminary Data for 2021 Toxics Release Inventory Reporting*, EPA, <https://www.epa.gov/chemicals-under-tsca/epa-releases-preliminary-data-2021-toxics-release-inventory-reporting> (last updated Dec. 13, 2022) (“EPA conducted outreach to facilities that had filed CDR reports for the TRI-listed PFAS but had not filed TRI reports for the same PFAS. All facilities contacted claimed that concentrations of PFAS were below the TRI 1% *de minimis* level that is currently in place for PFAS as their reason for not submitting TRI reports for the PFAS.”).

³⁶ For example, correspondence between EPA and Marine Corps Base Camp LeJeune indicates that the facility used approximately 1,361,000 gallons of aqueous film-forming foam containing PFOA and PFOS at concentrations below the EPA *de minimis* concentration level and did not report this PFAS use to the TRI. See E-mail from MCIEAST-MCB CAMLEJ Main Facility, to EPA (Apr. 6, 2022) (submitted herewith).

³⁷ Additionally, EPA should continue to improve TRI reporting for PFAS by using existing data and documentation to investigate why known PFAS manufacturers and processors, such as Saint-Gobain and Republic Services, have failed to report.

1. The Proposed Rule is legally compelled.

The Proposed Rule is a necessary correction to the PFAS TRI Codification Rules, which violate the 2020 NDAA and EPCRA section 313 to the extent they made reporting of the listed PFAS subject to the *de minimis* concentration and alternate threshold exemptions.³⁸

These rules purported to codify NDAA sections 7321(b) and (c), pursuant to which Congress directly added two sets of PFAS to the TRI (“statutorily listed PFAS”) and set an initial reporting threshold for these PFAS of 100 pounds.³⁹ At the time the 2020 NDAA was adopted, neither the *de minimis* concentration⁴⁰ nor the alternate threshold⁴¹ exemptions applied to any chemical on the TRI with reporting thresholds of 100 pounds or less.⁴² In addition, nothing in the 2020 NDAA indicates that Congress intended for the *de minimis* concentration or the alternate threshold exemptions to apply to the statutorily listed PFAS. It was arbitrary and capricious, and contrary to law, for EPA to treat the statutorily listed PFAS differently than all of the other toxic chemicals on the TRI with a 100-pound reporting threshold by making them subject to the *de minimis* concentration and alternate threshold exemptions.⁴³

In addition, the PFAS TRI Codification Rules run afoul of EPCRA section 313, which requires reporting whenever a facility manufactures, processes, or uses a listed chemical “in quantities exceeding the toxic chemical threshold quantity established in subsection (f) during

³⁸ The reasons that the PFAS TRI Codification Rules are illegal are explained in detail in the litigation filed by Commenters challenging these rules in the U.S. District Court for the District of Columbia and is summarized briefly below. *See* Amended Complaint, *Nat’l PFAS Contamination Coal. v. EPA*, No. 22-132 (D.D.C. Nov. 4, 2022), ECF No. 20 (submitted herewith). The Court has stayed this litigation through July 31, 2023 due to the pendency of this rulemaking; in its Order staying the litigation, the Court indicated that its decision was based—at least in part—on the fact EPA was on track to finalize this rulemaking by November 30, 2023. Order at 7, *Nat’l PFAS Contamination Coal. v. EPA*, No. 22-132 (D.D.C. Jan. 4, 2023), ECF No. 26 (explaining that Commenters are unlikely to be harmed by a limited stay of proceedings because “the Court has no reason to believe that [EPA’s] proposed schedule,” which contemplates finalizing the rule by November 30, 2023, “is unlikely to hold”).

³⁹ 15 U.S.C. § 8921(b)(2)(A), (c)(2)(A). As of today, there are 189 statutorily listed PFAS. Pursuant to 15 U.S.C. § 8921(c), additional PFAS will be added to the TRI when EPA takes any one of a set of specified actions for that PFAS.

⁴⁰ 40 C.F.R. § 372.28.

⁴¹ *Id.* § 372.27.

⁴² *See id.* § 372.38(a)(2).

⁴³ Because the 2020 NDAA required the statutorily listed PFAS to be treated in the same manner as the other chemicals listed with thresholds of 100 pounds or lower, the addition of these PFAS to the chemicals of special concern list must occur simultaneous with their listing to the TRI. *See* 87 Fed. Reg. at 74,384 (“EPA requests comment on whether the addition of these PFAS to the chemicals of special concern list should occur upon addition to the TRI . . .”).

the preceding calendar year.”⁴⁴ In limited circumstances, EPCRA grants EPA authority to establish a threshold that is different than the one set in subsection (f)(1),⁴⁵ but it does not grant EPA the authority to alter *what counts toward* that threshold—which is precisely what the *de minimis* concentration exemption seeks to do. This exemption is therefore not permitted by EPCRA section 313.

The alternate threshold rule is also not permitted by EPCRA section 313 because it allows covered facilities to avoid providing the information that they must report pursuant to EPCRA section 313(g)(1), based on certifications related to manufacture, processing, or otherwise use of a chemical at thresholds far higher than those set by EPCRA section 313(f)(1). While EPA is permitted to alter the threshold that triggers reporting, it may only do so where the revised threshold “shall obtain reporting on a substantial majority of total releases of the chemical at all facilities subject to [TRI reporting] requirements.”⁴⁶ However, EPA has no way of knowing if the alternate threshold of one million pounds per year when releases are less than 500 pounds⁴⁷ would always ensure reporting on a substantial majority of total releases. The alternate threshold exemption therefore falls outside the narrow set of exemptions EPA is authorized to allow, and it is not permitted by EPCRA.

Not only are these loopholes lacking in specific authorization in EPCRA section 313, but a *de minimis* concentration exemption runs counter to the broad community-right-to-know purpose of this provision, which is effectuated in large part by requiring facilities to report “[t]he annual quantity of the toxic chemical entering each environmental medium.”⁴⁸ And even if agencies may sometimes create *de minimis* exceptions without explicit authority, as the D.C. Circuit Court of Appeals has explained, an agency’s authority to create statutory exceptions based on an “implied *de minimis* authority” is available only “when the burdens of regulation yield a gain of trivial or no value.”⁴⁹ Applying this D.C. Circuit holding here dooms the *de*

⁴⁴ 42 U.S.C. § 11023(a).

⁴⁵ See 42 U.S.C. § 11023(f)(2).

⁴⁶ *Id.*

⁴⁷ 40 C.F.R. § 372.27(a).

⁴⁸ *Id.* § 11023(g)(1)(C)(iv). The “definite article ‘the’ particularizes the subject which it precedes,” in contrast to the “indefinite or generalizing force of ‘a.’” *In re Cardelucci*, 285 F.3d 1231, 1234 (9th Cir. 2002) (quoting Black’s Law Dictionary 1477 (6th ed. 1990)). When “the” precedes a collective or plural noun, it is equivalent to “all.” *E.g.*, *Dutcher v. Matheson*, 840 F.3d 1183, 1194 (10th Cir. 2016); *Kaufman v. Allstate N.J. Ins. Co.*, 561 F.3d 144, 155 (3d Cir. 2009); *Frazier v. Pioneer Ams. LLC*, 455 F.3d 542, 546 (5th Cir. 2006). Accordingly, the phrase “the annual quantity of the toxic chemical entering each environmental medium” means all of the quantity or the entire quantity. Allowing a *de minimis* exemption is at odds with this reading of the law.

⁴⁹ *Waterkeeper All. v. EPA*, 853 F.3d 527, 530 (D.C. Cir. 2017) (quoting *Pub. Citizen v. FTC*, 869 F.2d 1541, 1556 (D.C. Cir. 1989)) (striking down exemption to emergency release reporting

de minimis exception, as implementing the plain terms of EPCRA section 313—meaning no *de minimis* concentration exemption is available—would yield clear value in the form of increased information to communities, researchers, and regulators.

In sum, the PFAS TRI Codification Rules run afoul of the 2020 NDAA and the plain language of EPCRA insofar as they add the statutorily listed PFAS to the Code of Federal Regulations in a manner that subjects their reporting to the *de minimis* concentration and alternate threshold exemptions.⁵⁰

2. The final rule should acknowledge that this rulemaking is not discretionary.

In the preamble to the Proposed Rule, EPA acknowledges that application of the *de minimis* concentration and alternate threshold exemptions to the statutorily listed PFAS is inconsistent with Congress’s concern that these chemicals are toxic at very low levels, evinced by its establishment of a 100-pound reporting threshold.⁵¹ However, EPA does not acknowledge that this “inconsistency” signals that the 2020 NDAA does not allow EPA to apply the *de minimis* concentration and alternate threshold exemptions to the statutorily listed PFAS. In the section of the preamble to the Proposed Rule entitled “Why is the Agency taking this action?,” EPA does not acknowledge that it is required to make these modifications to comport with the 2020 NDAA or EPCRA. By not acknowledging the legal flaws in the PFAS TRI Codification Rules, EPA is indicating that the Proposed Rule is a matter of discretion; it appears to take the position that nothing prohibits the *de minimis* concentration and alternate threshold exemptions from applying to PFAS despite the language of NDAA sections 7321(b) and (c), EPCRA section 313, and Congress’s concern for “small quantities.” Characterizing this rulemaking as discretionary is inaccurate and leaves it vulnerable to efforts by a future administration to reinstate the reporting loopholes. To provide a full and accurate justification for its rule, EPA should state in the final rule that the 2020 NDAA does not permit application of the *de minimis* concentration or alternate threshold exemption to the PFAS that were statutorily added to the TRI with 100-pound reporting thresholds.

requirement in EPCRA section 304 because it was not permitted by EPCRA and could not be authorized under the agency’s *de minimis* authority).

⁵⁰ For the same reasons that the *de minimis* concentration and alternate threshold reporting exemptions are not permitted for PFAS, they are not permitted for any TRI-listed substance. We recognize that the agency need not resolve this in the context of this rulemaking.

⁵¹ See 87 Fed. Reg. at 74,382 (“The NDAA set a 100-pound reporting threshold for PFAS added by sections 7321(b) and 7321(c), which indicates a concern for small quantities of such PFAS. EPA is therefore proposing to determine that the availability of certain [loopholes] are not justified for these chemicals as the availability of these tools is inconsistent with a concern for small quantities.”).

D. EPA Should Ensure That No PFAS—including Those Listed in the Future—are Subject to the *De Minimis* Concentration or Alternate Threshold Exemptions.

EPA proposes to move all PFAS included on the TRI pursuant to NDAA sections 7321(b) and (c) to the chemicals of special concern list and to include PFAS added to the TRI pursuant to these sections in the future to the chemicals of special concern list. We agree that PFAS automatically added to the TRI pursuant to NDAA sections 7321(b) and (c) in the future should be listed in a manner that makes them ineligible for the *de minimis* concentration or alternate threshold exemptions, and we agree that designating these substances as chemicals of special concern will accomplish that result. However, we are concerned that EPA's approach only addresses PFAS that have been, or will be, listed on the TRI pursuant to NDAA sections 7321(b) and (c), leaving the door open to these loopholes applying to PFAS added to the TRI in the future because they meet the listing criteria in EPCRA section 313(d)(2). We strongly urge EPA to ensure that the *de minimis* concentration and alternate threshold loopholes do not apply to *any* PFAS listed on the TRI, whether they are listed by the 2020 NDAA or by other means, since EPA's rationales for closing the loopholes apply to all PFAS. EPA should accomplish this by adding all PFAS to the chemicals of special concern list and in doing so, EPA should clarify that any chemical with hazard characteristics that raise concerns at low levels is eligible for inclusion on the chemicals of special concern list. We also urge EPA to adopt a scientifically supported definition of PFAS that will provide clarity as to what substances are added by the triggering events set forth in NDAA section 7321.

1. EPA should define PFAS as a chemical with at least one fully fluorinated carbon atom.

In its proposed rule, EPA solicits comment on its interpretation that a definition of PFAS is unnecessary to the rulemaking. We disagree. This rulemaking will govern the future listing of chemicals that are identified as a "perfluoroalkyl or polyfluoroalkyl substance" and that meet the criteria in NDAA section 7321. Because EPA cannot implement NDAA section 7321(c) without first knowing the universe of "PFAS" that could be listed to the TRI under this provision, it must include a definition of PFAS in this rulemaking. As explained below, the definition it adopts should be taken from the text of the 2020 NDAA.

In justifying its decision not to propose a definition of PFAS for this rulemaking, EPA states:

sections 7321(b) and (c) identify EPA activities involving PFAS that would cause a PFAS to be added to the TRI list. The activities described by sections 7321(b) and (c) indicate whether they pertain to a PFAS, and thus a separate determination of whether or not the covered activity involves a PFAS is not necessary.⁵²

⁵² 87 Fed. Reg. at 74,384.

As EPA explains, this rule would apply to chemicals that are added in the future to the TRI pursuant to NDAA section 7321(c).⁵³ NDAA section 7321(c), which is forward-looking and contemplates ongoing listings, provides that individual PFAS are automatically included in the TRI on January 1 of the calendar year following a specified triggering event. That is, chemicals are listed under this provision if two conditions are met: (1) the chemical is a PFAS, and (2) a triggering event for that PFAS has occurred. While NDAA section 7321(c) describes the activities that constitute a triggering event for listing, they do not define what a PFAS is. The activities described in NDAA section 7321(c)—including, for example, finalizing a toxicity value—can occur with respect to any number of chemicals, whether they are PFAS or not, but the activity only becomes an event that triggers listing on the TRI if the activity is done to a PFAS. A definition of PFAS is therefore necessary to determine whether the activity applies to a PFAS and therefore constitutes a triggering event. Without a definition of PFAS, it would not be clear to regulated entities, researchers, or the public whether a particular chemical is included on the TRI upon the occurrence of a triggering event. EPA should therefore adopt a definition of PFAS as part of this rulemaking.

While NDAA section 7321 does not define PFAS, the 2020 NDAA elsewhere adopts the frequently used definition for PFAS: a “chemical[] with at least one fully fluorinated carbon atom.”⁵⁴ This definition is not only scientifically supported but is consistent with that used in the laws of many states.⁵⁵ EPA should define PFAS as “chemicals with at least one fully fluorinated carbon atom”⁵⁶ and should use this definition to guide its addition of future-listed PFAS to the chemicals of special concern list.

⁵³ See *id.* (“EPA has concluded that it is appropriate for all PFAS added to the TRI list under [NDAA sections 7321(b) and 7321 (c)] to be added to the chemicals of special concern list upon listing.”); *id.* at 74,387 (proposing to amend 40 C.F.R. § 372.28 to list PFAS added by NDAA sections 7321(b)(1) and (c)(1)).

⁵⁴ 2020 NDAA § 332(c)(3); see also *id.* § 329(b)(2) (defining “polyfluoroalkyl substance” as “a man-made chemical containing a mix of fully fluorinated carbon atoms, partially fluorinated carbon atoms, and nonfluorinated carbon atoms”).

⁵⁵ See S. 1044, 2019 Leg., Reg. Sess. (Cal. 2020); H.R. 19-1279, 72nd Gen. Assemb., Reg. Sess. (Colo. 2019); H.R. 1043, 129th Leg., Reg. Sess. (Me. 2019); S. 20, 2021 Gen. Assemb., Reg. Sess. (Vt. 2021); S. 5135, 66th Leg., Reg. Sess. (Wash. 2019); see also Letter from Daniel Rosenberg, Nat. Res. Def. Council, et al., to Adm’r Michael Regan, EPA (Jan. 3, 2023) (submitted herewith) (urging 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’”).

⁵⁶ 2020 NDAA § 332(c)(3).

2. EPA’s final rule should acknowledge that all PFAS have common characteristics that qualify them as chemicals of special concern upon listing to the TRI.

EPA should treat all PFAS—whether listed to the TRI by NDAA sections 7321(b) or (c), or because they meet the criteria set forth in EPCRA section 313(d)(2)—alike and commit to add all future PFAS to the chemicals of special concern list because all PFAS share common characteristics that make them hazardous at low levels. In its Proposed Rule, EPA explains that it is proposing to close the loopholes applicable to the PFAS listed pursuant to NDAA sections 7321(b) and (c) because the use of these loopholes is “inconsistent with a concern for small quantities” of these PFAS.⁵⁷ The characteristics that make even small quantities of PFAS concerning—including their high persistence in the environment and their extreme mobility—is not unique to those listed pursuant to NDAA sections 7321(b) and (c) but is shared by the class of PFAS chemicals. Because all PFAS may be dangerous at small quantities, they should all be treated the same way for the purposes of listing on the TRI.

As EPA explains, “due to the strength of the carbon-fluorine bonds, many PFAS can be very persistent in the environment,” allowing PFAS to build up over time and making “even small releases . . . of concern.”⁵⁸ Thus, “permitting reporting facilities to continue to rely on the [reporting exemptions] . . . would eliminate reporting on potentially significant quantities of the listed PFAS.”⁵⁹ That reasoning—that even small releases of PFAS are concerning—applies not only to the PFAS that are listed pursuant to NDAA sections 7321(b) and (c), and for which Congress assigned a reporting threshold of 100 pounds, but to all PFAS. The carbon-fluorine bond—“one of the strongest ever created by man”—that makes PFAS extremely persistent in the environment and difficult to break down or remediate is a uniform characteristic among PFAS.⁶⁰ Indeed, “[t]he most consistent feature within the class of PFAS is that their perfluorocarbon moieties do not break down, or do so very slowly under natural conditions, which is why PFAS are often termed ‘forever chemicals.’”⁶¹ While PFAS vary in size, structure, and chemical composition, “all PFAS either are extremely persistent in the environment and biota or partially transform into extremely persistent PFAS.”⁶² Due to their common chemical characteristics,

⁵⁷ 87 Fed. Reg. at 74,382.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *The Federal Role in the Toxic PFAS Chemical Crisis: Hearing Before the Subcomm. On Fed. Spending Oversight & Emergency Mgmt. of the S. Comm. on Homeland Sec. & Gov’t Affs.*, 115th Cong. 7 (2018), <https://www.govinfo.gov/content/pkg/CHRG-115shrg33955/pdf/CHRG-115shrg33955.pdf> (testimony of Linda S. Birnbaum, Director, Nat’l Inst. Env’t Health Scis. & Nat’l Toxicology Program); *see also* 87 Fed. Reg. at 74,382.

⁶¹ Carol F. Kwiatkowski et al., *Scientific Basis for Managing PFAS as a Chemical Class*, 7 *Env’t Sci. & Tech. Letters* 532, 533 (2020), <https://pubs.acs.org/doi/pdf/10.1021/acs.estlett.0c00255>. A perfluorocarbon moiety—also referred to as a perfluoroalkyl moiety—is a carbon atom from which all bonded H atoms have been replaced with F atoms.

⁶² *Id.* at 535.

scientists have recommended that the thousands of chemicals known as PFAS should be managed as a single chemical class.⁶³

As EPA recognizes in its Proposed Rule, the persistence of PFAS makes even small releases concerning.⁶⁴ And as EPA also recognizes, the loopholes are not consistent with the federal government's concern for small quantities of PFAS:

- The de minimis concentration exemption “could allow significant quantities of [TRI-listed] PFAS to be excluded from TRI reporting by facilities,” resulting in reporting exclusions that are “inconsistent with a concern for small quantities of PFAS.”⁶⁵
- The use of Form A with the alternate threshold exemption “would be inappropriate” given that it “would exclude information on some releases” and “even small quantities of PFAS may result in elevated concentrations in the environment.”⁶⁶
- The use of range reporting “could reduce data accuracy,” which is important for PFAS “even when the quantities are relatively small, since concern may be tied to even small quantities of a substance.”⁶⁷

Moreover, many, if not all, of the PFAS that have been studied are linked to adverse health outcomes.⁶⁸ It is appropriate to assume that other PFAS will behave similarly. Indeed, short-chain PFAS are associated with similar health effects as long-chain PFAS.⁶⁹ Nor do these harms appear solely at high levels of exposure: Recent studies link adverse health effects in both

⁶³ *Id.*

⁶⁴ See 87 Fed. Reg. at 74,382.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ See Petition to Revoke the Approval of PFAS Granted Through Low-Volume Exemptions of Premanufacture Notice Requirements of TSCA, from Earthjustice on behalf of Advance Carolina et al., to EPA 10–11 (Oct. 13, 2022) (“PMN LVE Petition”), <https://fingfx.thomsonreuters.com/gfx/legaldocs/byvrjzwlqve/PFAS%20PETITION.pdf> (reviewing and citing studies).

⁶⁹ Cheryl Hogue, *Short-Chain and Long-Chain PFAS Show Similar Toxicity*, *US National Toxicology Program Says*, Chem. & Eng’g News (Aug. 24, 2019), <https://cen.acs.org/environment/persistentpollutants/Short-chain-long-chain-PFAS/97/i33>; Justin M. Conley et al., *Adverse Maternal, Fetal, and Postnatal Effects of Hexafluoropropylene Oxide Dimer Acid (GenX) from Oral Gestational Exposure in Sprague-Dawley Rats*, 127 *Env’t Health Persps.* Article No. 037008 (2019), <https://doi.org/10.1289/EHP4372>; Kwiatkowski et al., *supra* note 61.

humans⁷⁰ and wildlife⁷¹ to low-dose PFAS exposures that reflect those occurring from the environment. Further, many PFAS are known to cause cancer, immunotoxicity, reproductive and developmental harm, and other serious health effects, including health risks at or below the lowest measurable exposure level.⁷²

Not only are PFAS highly persistent and toxic, but they are also extremely mobile in the environment and can leach into groundwater, run off into water bodies, deposit into soil and are mobile in that soil, and disperse in the wind in dust particulates.⁷³ This high mobility means that they are ubiquitous in the environment, and individuals can be exposed through multiple pathways. A significant source of exposure to PFAS is contaminated drinking water, which is

⁷⁰ See Bo-Yi Yang et al., *Low-Level Environmental Per- and Polyfluoroalkyl Substances and Preterm Birth: A Nested Case-Control Study Among a Uyghur Population in Northwestern China*, 14 *Exposure & Health* 793 (2022), <https://doi.org/10.1007/s12403-021-00454-0>; Che-Jang Chang et al., *Per- and Polyfluoroalkyl Substance (PFAS) Exposure, Maternal Metabolomic Perturbation, and Fetal Growth in African American Women: A Meet-in-the-Middle Approach*, 158 *Env't Int'l Article No.* 106964 (2022), <https://doi.org/10.1016/j.envint.2021.106964>; Cristina Canova et al., *PFAS Concentrations and Cardiometabolic Traits in Highly Exposed Children and Adolescents*, 18 *Int'l J. Env't Rsch. & Pub. Health Article No.* 12881 (2021), <https://doi.org/10.3390/ijerph182412881>; Qian Yao et al., *Associations of Paternal and Maternal Per- and Polyfluoroalkyl Substances Exposure with Cord Serum Reproductive Hormones, Placental Steroidogenic Enzyme and Birth Weight*, 285 *Chemosphere Article No.* 131521 (2021), <https://doi.org/10.1016/j.chemosphere.2021.131521>; Dan Luo et al., *Associations of Prenatal Exposure to Per- and Polyfluoroalkyl Substances with the Neonatal Birth Size and Hormones in the Growth Hormone/Insulin-Like Growth Factor Axis*, 55 *Env't Sci. & Tech.* 11859 (2021), <https://doi.org/10.1021/acs.est.1c02670>.

⁷¹ See Carolyn A. Sonter et al., *Biological and Behavioral Responses of European Honey Bee (*Apis Mellifera*) Colonies to Perfluorooctane Sulfonate Exposure*, 17 *Integrated Env't Assessment & Mgmt.* 673 (2021), <https://doi.org/10.1002/ieam.4421>; see also Jianchen Sun et al., *Influence of Perfluoroalkyl Acids and Other Parameters on Circulating Thyroid Hormones and Immune-Related MicroRNA Expression in Free-Ranging Nestling Peregrine Falcons*, 770 *Sci. Total Env't Article No.* 145346 (2021), <https://doi.org/10.1016/j.scitotenv.2021.145346>.

⁷² See PFAS Tox Profile at 7–21; Question 12, Q&A in *Questions and Answers: Drinking Water Health Advisories for PFOA, PFOS, GenX, Chemicals and PFBS*, EPA, <https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs#q12> (last updated Dec. 14, 2022); PFAS-Tox Database (2021), <https://pfastoxdatabase.org/>.

⁷³ See PFAS Tox Profile at 3; Emiliano Panieri et al., *PFAS Molecules: A Major Concern for the Human Health and the Environment*, 10 *Toxics* 1, 8 (2022), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8878656/pdf/toxics-10-00044.pdf> (explaining that PFAS's "high mobility renders their environmental distribution ubiquitous due to leaching into groundwater, run-off into streams and oceans, wind dispersion through dust particulates and wet/dry deposition into soils").

particularly concerning for populations residing near manufacturing facilities.⁷⁴ And due to their persistent nature and high mobility in water, PFAS undergo a process called global distillation, or the “grasshopper effect,” that causes PFAS in the environment to migrate to polar regions over time.⁷⁵ Global ocean current patterns represent a significant pathway for this long-range transport of PFAS to the Arctic; for example, an estimated two to twelve metric tons of PFOA are transported to the Arctic every year,⁷⁶ and recent studies have detected the replacement PFAS GenX in remote Arctic waters.⁷⁷

The concern for small quantities of a given PFAS thus results from the chemical characteristics of PFAS. Because all PFAS share the carbon-fluorine bond that makes them so persistent—and thus harmful in small quantities—and can be reasonably assumed to have similar adverse health effects, all should be treated in the same manner for the purposes of TRI reporting. That is, EPA should treat like chemicals alike and list any PFAS added to the TRI—including those added in the future because they meet the criteria in EPCRA section 313 (d)(2)—to the chemicals of special concern list. And given that small quantities of all PFAS pose a concern, EPA should set the reporting threshold for any PFAS listed to the TRI at less than 100 pounds. EPA should further make all PFAS listed to the TRI ineligible for the illegal loopholes, which EPA has repeatedly found to be inconsistent with a concern for small quantities of a chemical. Doing so will ensure that PFAS that are added to the TRI in the future are treated in a consistent manner and provide regulatory clarity and certainty to industry and the public alike.

3. In the final rule, EPA should make clear that chemicals belong on the chemicals of special concern list whenever they pose a hazard at low levels, regardless of whether they are persistent, bioaccumulative, and toxic substances (“PBTs”).

In its final rule, EPA should make clear that any chemical that poses a hazard at low levels may be a “chemical of special concern” within the meaning of its TRI regulations,

⁷⁴ See PFAS Tox Profile at 3; David Q. Andrews & Olga V. Naidenko, *Population-Wide Exposure to Per- and Polyfluoroalkyl Substances from Drinking Water in the United States*, 7 Env’t Sci. & Tech. Letters 931 (2020), <https://pubs.acs.org/doi/10.1021/acs.estlett.0c00713> (estimating that over 200 million people likely receive drinking water contaminated with PFOA and PFOS).

⁷⁵ Samuel Byrne et al., *Exposure to Polybrominated Diphenyl Ethers and Perfluoroalkyl Substances in a Remote Population of Alaska Natives*, 231 Env’t Pollution 387 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6945979/pdf/nihms-967862.pdf>.

⁷⁶ Konstantinos Prevedouros et al., *Sources, Fate and Transport of Perfluorocarboxylates*, 40 Env’t Sci. & Tech. 32 (2006), <https://doi.org/10.1021/es0512475>.

⁷⁷ Hanna Joerss et al., *Transport of Legacy Perfluoroalkyl Substances and the Replacement Compound HFPO-DA through the Atlantic Gateway to the Arctic Ocean—Is the Arctic a Sink or a Source?*, 54 Env’t Sci. & Tech. 9958 (2020), <https://pubs.acs.org/doi/abs/10.1021/acs.est.0c00228>.

regardless of whether it is persistent, bioaccumulative, and toxic.⁷⁸ The PFAS that are currently listed or will be listed in the future may or may not be PBTs, but they all share characteristics that make them hazardous at low levels and should therefore be classified as chemicals of special concern. The rationale for disallowing the *de minimis* concentration and alternate threshold loopholes applies with equal force to any chemical that presents a particular concern at low levels, including but not limited to PFAS, and EPA should exercise its authority to classify such chemicals as chemicals of special concern and lower their reporting threshold to well below the default thresholds. To this end, in its final rule, EPA should not only make explicit that the chemicals of special concern list may include *any* chemical that presents a special concern but also that EPA has the authority to decide what chemicals qualify for this designation.

The authority to lower thresholds is expressly set forth in EPCRA. Indeed, in enacting EPCRA, Congress contemplated that some chemicals would warrant listing at levels that are lower than the default thresholds and included section 313(f)(2), which provides that “[t]he Administrator may establish a threshold amount for a toxic chemical different from the [default] amount.”⁷⁹ The only limitation on this discretion is that the “revised threshold shall obtain reporting on a substantial majority of total releases of the chemical at all facilities subject to the requirements of this section.”⁸⁰ As EPA explained in its initial rule establishing the chemicals of special concern list, this section “clearly authorizes EPA to lower thresholds,” not only to raise them.⁸¹

Exercising the authority to designate as chemicals of special concern all chemicals that pose risks at low levels, including very persistent chemicals like PFAS, is consistent with EPA’s rule establishing the chemicals of special concern list. Though EPA initially included only PBTs on that list, there is nothing in the statutory text of EPCRA that limits it to such chemicals. The purpose of the initial rulemaking that created the chemicals of special concern list was “to capture information on significantly smaller quantities of releases and other waste management associated with these chemicals.”⁸² Thus, EPA adopted lowered thresholds for the initial set of chemicals of special concern with the recognition that “as the TRI program has evolved over time and as communities identify areas of special concern, thresholds and other aspects of the

⁷⁸ Contemporaneously with finalizing the Proposed Rule (if not before), EPA should also update its guidance documents and web-based tools to remove any suggestion that the only chemicals that can be chemicals of special concern are PBTs. See, e.g., *Question #409*, Q&A in *TRI: GuideMe*, EPA, https://ordspub.epa.gov/ords/guideme_ext/f?p=guideme:qa:19-409 (last visited Jan. 31, 2023) (“The *de minimis* exemption allows covered facilities to disregard certain minimal concentrations of listed non-PBT chemicals in mixtures or trade name products when making threshold determinations and release and other waste management determinations. . . . The *de minimis* exemption does not apply to the PBT chemicals listed at 40 CFR section 372.28.”).

⁷⁹ 42 U.S.C. § 11023(f)(2).

⁸⁰ *Id.*

⁸¹ 64 Fed. Reg. at 58,673.

⁸² *Id.* at 58,727.

EPCRA section 313 reporting requirements may need to be modified to assure the collection and dissemination of relevant, topical information and data.”⁸³ EPA also eliminated the applicability of the *de minimis* concentration and alternate threshold exemptions in part because of the potential for significant adverse events associated with even small quantities of these chemicals.⁸⁴

PFAS and many other chemicals that are not currently listed on the chemicals of special concern list are hazardous in small quantities, and the chemicals of special concern list should include these chemicals as well. As EPA recognizes, the rationale for eliminating these loopholes for the first set of listed chemicals of special concern “applies equally well to PFAS.”⁸⁵ As explained above, all PFAS share common characteristics that make them dangerous at very low levels, regardless of whether that particular PFAS is classified as a PBT (and many PFAS are). Other toxic chemicals that are particularly harmful at low levels include persistent and mobile chemicals, as well as certain carcinogens and potent endocrine disruptors. In its final rule, EPA should make clear that the chemicals of special concern list can include any chemical, including all PFAS, that is hazardous at low levels and that it intends to add future-listed PFAS to that list. EPA should further commence a rulemaking to move all TRI-listed chemicals that pose a concern at small quantities to the chemicals of special concern list and ensure that all future PFAS that are added to the TRI pursuant to EPCRA section 313(d)(2) are placed on that list.

E. Commenters Support the Changes to the Supplier Notification Requirements and Urge EPA to Clarify the Scope of Those Requirements to Ensure Compliance.

Commenters strongly support EPA’s objective of increasing reporting for all chemicals of special concern—including when they are present in trade name products or mixtures at low concentrations—by eliminating the *de minimis* concentration exemption to the Supplier Notification Requirements (“SNR”)⁸⁶ in EPA’s regulations. This is necessary to ensure that covered facilities report all listed chemicals of special concern that are known to be present at the facility. This change will increase information available about TRI-listed chemicals and will

⁸³ *Id.* at 58,668.

⁸⁴ *Id.* at 58,727–28 (“[E]ven minimal releases of persistent bioaccumulative chemicals may result in significant adverse effects and these small quantities can reasonably be expected to significantly contribute to the lower thresholds”); *id.* at 58,728 (“PBT chemicals are different from other toxic chemicals in that they may pose a more significant concern to the environment in much smaller quantities than other toxic chemicals”); *id.* at 58,733 (“Given the persistent and bioaccumulative nature of these chemicals and the need for the public to have information about smaller amounts of these PBT chemicals, EPA believes it would be inappropriate at this time to allow an option that would exclude significant information on some releases and other waste management of these chemicals.”).

⁸⁵ 87 Fed. Reg. at 74,382.

⁸⁶ 40 C.F.R. § 372.45.

align the SNR with (1) the policy of requiring more rigorous reporting of chemicals of special concern, and (2) the legally mandated elimination of reporting loopholes for PFAS.

To further improve reporting of PFAS to the TRI, Commenters urge EPA to clarify in the final rule that manufactured items with the potential to release toxic chemicals under normal processing or use are not subject to the articles exemption of the SNR. We also urge EPA to clarify in the final rule that suppliers are required to provide notice to covered waste management facilities that receive waste containing TRI-listed toxic chemicals so that all covered facilities receive the benefits of the SNR.

1. EPA’s proposal reduces the risk of underreporting chemicals of special concern in trade name products and mixtures.

The SNR requires facilities that manufacture, process, sell, or distribute a mixture or trade name product to (1) covered facilities or (2) any facility that may sell or distribute that mixture or trade name product to facilities covered by the TRI, to notify each person to whom the mixture or trade name product is sold or otherwise distributed about the presence of any TRI-listed toxic chemical in the mixture or product.⁸⁷ However, under current regulations, the SNR does not apply if the TRI-listed chemical is in the mixture or trade name product below the concentration that is deemed *de minimis* in 40 C.F.R. § 372.38(a).⁸⁸ As a result, mixtures and trade name products containing low concentrations of TRI-listed chemicals—including PFAS—can be sold or distributed without notifying or warning facilities that receive these mixtures or products of the presence of toxic chemicals. Accordingly, recipients will likely not account for the presence of toxic chemicals in these mixtures or products during threshold determinations and release reporting, contrary to the informational objective of the regulation and of EPCRA.⁸⁹

Because reporting requirements attach only if listed chemicals are “known to be present” at covered facilities,⁹⁰ supplier notifications are crucial to ensure that covered facilities are properly accounting for all known toxic chemicals present at facilities—including those contained in mixtures and trade name products—when they are determining whether their manufacture, processing, or use of a substance meets the threshold that triggers reporting requirements, and determining the volume of releases that must be reported. EPA promulgated the SNR because “[p]roviding more complete information about mixture composition in particular will give the facility the information it needs to make threshold and release

⁸⁷ *Id.*

⁸⁸ *Id.* § 372.45(d)(1).

⁸⁹ The SNR was promulgated to eliminate instances of underreporting based on uncertainty or lack of knowledge regarding the chemical composition of mixtures or trade name products. *See* Toxic Chemical Release Reporting; Community Right-to-know, 53 Fed. Reg. 4500, 4508 (Feb. 16, 1988) (“EPA recognizes that facilities may not always have full information regarding mixture components.”).

⁹⁰ 42 U.S.C. § 11023(g)(1)(C).

determinations.”⁹¹ However, the availability of the *de minimis* concentration loophole for supplier notifications sabotages this worthy goal by enabling the underreporting of dangerous chemicals that may harm the environment and put entire communities at risk of toxic exposure without any warning, in violation of the right-to-know objectives of EPCRA.

The proposed elimination of the *de minimis* concentration exemption for chemicals of special concern in the SNR removes a longstanding inconsistency in EPA’s approach to this subset of chemicals. It never made sense for EPA to disallow the *de minimis* concentration and alternate threshold exemptions for determining thresholds and reportable releases for chemicals of special concern while allowing the *de minimis* concentration loophole in the context of the SNR. The proposed elimination of the *de minimis* concentration loophole for purposes of supplier notification is crucial to increase public information about toxic chemicals of special concern and ensure that recipients of mixtures and trade name products are aware of the presence of especially harmful substances that carry reporting obligations under EPCRA.⁹² For these reasons, we support EPA’s proposed elimination of the *de minimis* concentration exemption for purposes of supplier notification as a necessary action consistent with EPCRA, the 2020 NDAA, and EPA’s objectives of increasing data on releases and waste management of chemicals of special concern such as PFAS.

2. EPA should clarify that articles that may release toxic chemicals under normal conditions of processing or use are not exempt from supplier notification requirements.

We urge EPA to provide guidance in the final rule (or separately) regarding the SNR provision stating that articles that release, or may release, listed chemicals during normal conditions of processing or use, like many PFAS-containing items, are not exempted from the SNR regulation. In particular, we urge EPA to provide some specific examples of PFAS-containing mixtures and trade name products that may release PFAS into the environment during normal processing or use.

The SNR does not require notifications for mixtures or trade name products that are “[a]n article as defined in § 372.3.”⁹³ And the 40 C.F.R. § 372.3 definition of “article” excludes any item that “release[s] a toxic chemical under normal conditions of processing or use of that item at

⁹¹ 53 Fed. Reg. at 4510.

⁹² In the Proposed Rule, EPA indicated that it considered replacing the *de minimis* concentration exemption with a small quantity exemption. 87 Fed. Reg. at 74,383. We strongly support EPA’s decision not to adopt this approach. The availability of a small quantity exemption in this context has similar risks related to informational and reporting gaps because receiving facilities may not properly account for the total annual aggregated quantity of a toxic chemical of special concern, thereby resulting in underreporting. Underreporting, as explained above, fails to give communities the full disclosure they deserve and are entitled to by law.

⁹³ 40 C.F.R. § 372.45(d)(2)(i).

the facility or establishments.”⁹⁴ Given the breadth of the term “release,”⁹⁵ the strict non-release requirement in the definition of “article,” and the policy of the SNR rule, suppliers must provide notifications to downstream recipients when selling or otherwise distributing articles containing toxic chemicals with the potential to be released during normal processing or use. When crafting the definition of article, EPA noted that the non-release criteria of the term accounts for “the potential for release and exposure during normal end use” or processing.⁹⁶ Thus, mixtures and trade name products that may release toxic chemicals during normal conditions of processing or use are not subject to the exemption and must be disclosed by suppliers. Notification about items that may release toxic chemicals during normal processing or use alerts downstream recipients of the item’s potential for release and exposure. This, in turn, ensures that all covered facilities are aware of the item’s potential for release so they can take steps to “evaluate carefully normal processing and use of an item” for purposes of threshold determinations and reporting.⁹⁷

An adequate downstream flow of information not only serves informational purposes but can be critical in ensuring that recipients are alerted to the presence of dangerous chemicals that could be released during normal processing or use. For instance, an article that contains a TRI-listed PFAS that is released under normal conditions of processing or use can lead to exposure during operations. Informed downstream recipients would be better equipped to take protective measures to mitigate risks of exposure, while taking affirmative steps to carefully evaluate releases in this context for purposes of threshold determinations and release reporting.

Clarifying the limits of the articles exemption under the SNR rule—including by identifying examples of PFAS-containing articles that are not subject to the articles exemption because of the potential for release—will help to ensure better compliance. Further, it is consistent with EPA’s intent to increase reporting on PFAS to have a more complete picture of PFAS uses and releases so regulators can use this information in planning and policy development.

3. EPA should clarify that suppliers are required to provide notice of mixture composition to covered waste management facilities.

If waste management facilities that are subject to reporting requirements do not receive notification about mixture compositions under the SNR of the wastes they receive and

⁹⁴ *Id.* § 372.3.

⁹⁵ *Id.* (“Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any toxic chemical.”). This regulation also defines “establishment” as “an economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed.” *Id.*

⁹⁶ 53 Fed. Reg. at 4507.

⁹⁷ *Id.*

“otherwise use,”⁹⁸ they will be hard-pressed to accurately calculate threshold determinations or reportable releases.⁹⁹ However, this notification about waste containing toxic chemicals is not currently required. As a result, covered facilities that manage waste do not receive the benefits of the downstream flow of information required by the SNR and therefore most likely underreport their releases of PFAS and other TRI-listed chemicals, including chemicals of special concern.

To remedy this major loophole in the TRI rules, EPA should change its interpretation that waste is not a mixture, and waste sent off site is not subject to supplier notification requirements¹⁰⁰ because this interpretation is inconsistent with the SNR. The revised interpretation we seek (either as part of the final rule, or in a separate guidance document or notice) is consistent with EPA’s existing regulations. The SNR requires suppliers to provide notice of mixture compositions to “each person to whom the mixture or trade name product is sold or otherwise distributed from the facility or establishment.”¹⁰¹ Under the regulation, supplier notification must be given to each person that receives a TRI-listed chemical contained in a mixture or trade name product for the purpose of ensuring that covered facilities subject to reporting requirements obtain this information. The universe of recipients includes waste management facilities that receive toxic chemicals in the waste stream. After all, the whole purpose of the SNR is “moving the information about the presence and composition of listed toxic chemicals into the hands of the facilities that must report” under EPCRA section 313.¹⁰² Accordingly, it is imperative for EPA to clarify that the SNR-regulated facilities subject to

⁹⁸ 42 U.S.C. § 11023(a); 40 C.F.R. § 372.3.

⁹⁹ Correspondence between EPA and waste management companies about whether they erred in not reporting to the TRI, which Earthjustice received in response to a Freedom of Information Act request, confirms that waste management companies rely on ignorance of what is in the waste they receive to justify not reporting to the TRI. *See* E-mail from Heritage Thermal Servs., to EPA (Aug. 16, 2021) (submitted herewith) (“Based on the characterization of waste provided to HTS by its customers in accordance with the facility’s waste analysis plan, HTS has no record of receipt for this chemical.”); E-mail from Wayne Disposal Inc., to EPA (Aug. 4, 2021) (submitted herewith) (“Hexafluoropropylene oxide dimer acid was not identified in the waste received.”).

¹⁰⁰ EPA, EPA 740-B-19-040, *Toxics Release Inventory: Supplier Notification Requirements 3*, (Feb. 2020), https://ordspub.epa.gov/ords/guideme_ext/guideme_ext/guideme/file/tri%20guidance%20for%20supplier%20notification%20requirements%20-%20february%202020.pdf (“If your mixture or other trade name product contains one of the EPCRA section 313 chemicals, you are not required to notify your customers . . . [for] waste sent off site for further waste management.”); *see also* EPA, EPA 745-B-19-001, *Emergency Planning and Community Right-to-Know Act – Section 313: EPCRA Section 313 Questions & Answers 2019 Consolidation Document* 164 (Apr. 2019), https://ordspub.epa.gov/ords/guideme_ext/guideme_ext/guideme/file/2019qa.pdf (“EPA’s long-standing interpretation has been that mixture does not include waste.”).

¹⁰¹ 40 C.F.R. § 372.45(a)(3).

¹⁰² 53 Fed. Reg. at 4510.

reporting requirements based on their “otherwise use” of toxic chemicals includes waste management facilities.

This result is fully consistent with EPCRA and EPA’s regulations. “Otherwise use” is broadly defined in regulation as “any use of a toxic chemical”—including in a mixture, trade name product, and waste—that is not covered by the terms “manufacture” or “process.”¹⁰³ It includes disposal, stabilization, or treatment for destruction if the facility conducting these activities received the toxic chemicals from off site for purposes of waste management.¹⁰⁴ Further, the SNR employs capacious terms to delineate the required downstream flow of information about mixture composition. For instance, the regulation expands the SNR to instances beyond linear commercial transactions using the term “otherwise distributed.”¹⁰⁵ Additionally, the regulation uses the terms “mixture” and “trade name product,” which are broad enough to include waste, without limitation. Thus, EPA must clarify that the SNR apply to the shipping of waste to covered waste management facilities.

Applying the SNR to waste containing toxic chemicals would further reduce the risks of underreporting based on lack of knowledge of the presence of toxic chemicals in conformity with the policy of the SNR rule and the overall framework of EPCRA section 313. Accordingly, we urge EPA to clarify in the final rule that (a) the term “otherwise distributed” includes waste sent off site for further waste management and (b) the definitions of “mixture” and “trade name product” include wastes.

F. Commenters Seek a Technical Change That Is a Logical Outgrowth of the Proposed Rule.

EPA should modify the language in the proposed revisions to 40 C.F.R. § 372.45(d) so the final rule reflects the language that is previewed in the preamble to the Proposed Rule, rather than the language set forth in the proposed amendments section of the Federal Register publication.¹⁰⁶ The formulation in the preamble—using the descriptive, non-defining term “which” in connection with the chemicals listed in 40 C.F.R. § 372.28(a)¹⁰⁷—makes clear that a

¹⁰³ 40 C.F.R. § 372.3.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* § 372.45(a)(3).

¹⁰⁶ *Compare* 87 Fed. Reg. at 74,383 (stating in its preamble language that “[t]he revised text” eliminating the use of the *de minimis* exemption for the Supplier Notification Requirements for chemicals of special concern “would read as follows: If a mixture or trade name product contains no toxic chemical in excess of the applicable *de minimis* concentration as specified in 40 CFR 372.38(a) except for chemicals listed under 40 CFR 372.28 *which* are excluded from the *de minimis* exemption.” (emphasis added)), *with id.* at 74,387 (proposing to modify 40 C.F.R. § 372.45 by adding “[i]f a mixture or trade name product contains no toxic chemical in excess of the applicable *de minimis* concentration as specified in § 372.38(a), except for chemicals listed in § 372.28(a) *that* are excluded from the *de minimis* exemption” (emphasis added)).

¹⁰⁷ *Id.* at 74,383.

feature of all of the chemicals listed under 40 C.F.R. § 372.28(a) is that they are excluded from the *de minimis* concentration exemption. In contrast, the phrase “that are excluded from the *de minimis* exemption”¹⁰⁸ could be understood as a defining term and could suggest that the provision is referencing a subset of chemicals listed under 40 C.F.R. § 372.28(a).

G. EPA Should Consider the Significant Benefits Associated with This Action.

In its economic analysis for the Proposed Rule, EPA places a dollar figure on the anticipated costs of the action but not on the benefits.¹⁰⁹ Rather than quantifying the benefits of the Proposed Rule, EPA engages in a thorough and robust qualitative assessment of the benefits to members of the public, researchers, and governmental entities. EPA appropriately relies on these unquantified but significant benefits in its rulemaking, and it should be sure not to give lesser consideration of these benefits in favor of more easily quantifiable data (in this instance, costs to industry) as it proceeds with its rulemaking. Rather, in the preamble to its final rule, EPA should explain the robust benefits associated with the additional information available to communities, researchers, and governments that will result from this rule.

When faced with difficult-to-quantify costs or benefits, agencies are permitted to engage in a qualitative analysis of that cost or benefit.¹¹⁰ Here, EPA appropriately detailed the multitude of benefits associated with the Proposed Rule.¹¹¹ Such benefits include but are not limited to:

¹⁰⁸ *Id.* at 74,387.

¹⁰⁹ EPA estimates that, in the first year of reporting, the incremental costs to industry associated with the rule will be in the range of \$3,064,271 to \$10,114,734, and in subsequent years the incremental costs to industry will be in the range of \$1,459,215 to \$4,816,518. Abt Assocs., *Economic Analysis for the Proposed Changes to Reporting Requirements for Per- and Polyfluoroalkyl Substances and to Supplier Notifications Requirements for Chemicals of Special Concern Community Right-to-Know Toxic Chemical Release Reporting 3-7*, EPA (Nov. 2022) (“Econ. Analysis”), <https://www.regulations.gov/document/EPA-HQ-TRI-2022-0270-0039>. This relatively wide range reflects the uncertainty associated with the number of facilities that will be affected by the rule.

¹¹⁰ See Off. of Mgmt. & Budget, Exec. Off. of the President, *Circular A-4*, at 26–27 (Sept. 17, 2003) (“[S]ome important benefits and costs (e.g., privacy protection) may be inherently too difficult to quantify or monetize given current data and methods. You should carry out a careful evaluation of non-quantified benefits and costs. . . . If you are not able to quantify the effects, you should present any relevant quantitative information along with a description of the unquantified effects, such as ecological gains, improvements in quality of life, and aesthetic beauty.”); cf. *Nicopure Labs, LLC v. FDA*, 266 F. Supp. 3d 360, 406 (D.D.C. 2017) (rejecting arguments that agency did not adequately determine that benefits outweighed costs where agency “provided substantial detail on the benefits of the rule, and the reasons why quantification was not possible” particularly where “there was no statutory duty to quantify the benefits at all,” and observing that even if there were a statutory duty, Supreme Court precedent “does not require that the benefits be quantified in any particular way when compared to the costs”).

¹¹¹ Econ. Analysis at 5-1 to 5-3.

- Creating a more informed public who can use available information to make decisions about where to work and live, make decisions about how to mitigate risks of exposure to toxic chemicals, and advocate for stronger regulation;
- Improving the quality and quantity of available information in the market, which can empower consumers to pressure firms to reduce the use of harmful PFAS in production processes and drive firms to change their behavior in a manner that minimizes the releases of toxic chemicals, ultimately leading to fewer or a lower quantity of toxic chemicals in use;
- Improving the ability of the business community to gauge environmental liabilities, which can inform investment decisions and insurance coverage;
- Improving the information available to researchers and scientists to further their understanding of the risks associated with releases of PFAS, pollution prevention opportunities, and the communities affected by PFAS; and
- Improving government decision making and activities, including by using available information to guide enforcement activities, prioritization, and data coordination, as well as to measure progress in meeting environmental goals.

Although the benefits associated with gathering information are difficult to quantify, they are substantial. EPA should continue to give great weight to these substantial benefits regardless of whether they are monetized and should expressly describe these benefits in the preamble to the final rule.

EPA should also adhere to its well-supported conclusion that “this action is not expected to have a significant adverse economic impact on a substantial number of small entities.”¹¹² EPA made this certification after undertaking an extensive economic analysis, in which it made assumptions—including that each small entity will submit multiple forms—expressly designed to avoid underestimating the impact of the proposed rule on individual small entities.¹¹³ EPA’s analysis showed that no small business is expected to incur annualized cost impacts of more than one percent of its annual revenue; this is true even after a “worst-case scenario” analysis for the smallest firms subject to TRI reporting.¹¹⁴ Because EPA certified that the Proposed Rule, if finalized, will not “have a significant economic impact on a substantial number of small entities,” it need not undergo review by a small business advocacy review panel.¹¹⁵

¹¹² 87 Fed. Reg. at 74,380, 74,386.

¹¹³ See Econ. Analysis at 4-2.

¹¹⁴ See *id.* at 4-6 to 4-20. EPA did not consider firms that had fewer than ten full-time employees, as these firms are not subject to reporting under the TRI. See 42 U.S.C. § 11023(b)(1)(A).

¹¹⁵ 5 U.S.C. § 605(b). Such panels may also be referred to as SBREFA panels for the statute that created them, the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, 110 Stat. 857 (1996).

H. EPA Should Further Expand Reporting of PFAS to the TRI in Forthcoming Rulemakings.

As discussed *supra* in Part B, information reported to the TRI about PFAS in the 2020 and 2021 reporting cycles has been extremely disappointing, which EPA acknowledged in its 2021 PFAS Roadmap and press release announcing the availability of the 2021 TRI data.¹¹⁶ Commenters believe that there are at least five reasons that the listing of some PFAS on the TRI has not provided the public or regulators with the robust PFAS data that is desperately needed—and EPA should address all of these in future rulemakings. First, the PFAS currently listed on the TRI are far from the only PFAS that are being manufactured, processed, or used in the United States. There are approximately 1,200 PFAS on the active TSCA inventory (meaning they may be manufactured/imported, processed, distributed, and used),¹¹⁷ but only 189 of them are on the TRI. Moreover, the majority of these chemicals are subject to Significant New Use Rules (“SNURs”) that limit their use.¹¹⁸ Second, the *de minimis* concentration exemption permits many uses and releases of PFAS to go unreported, as discussed extensively above. Third, there appears to be noncompliance with the TRI mandate for PFAS, and the existence of the *de minimis* concentration exemption helps shield noncompliance from regulators because known users and releasers of PFAS can claim that the TRI-listed PFAS in the mixtures and trade name products they are using and releasing are present below the so-called *de minimis* level, and it is difficult to prove them wrong.¹¹⁹ Fourth, the 100-pound reporting threshold, while lower than for many chemicals, is too high for PFAS given their persistence and mobility as well as the evidence suggesting toxicity at extremely low levels.¹²⁰ And fifth, some facilities that are major users of PFAS are not mandated reporters because they fall outside the Standard Industrial Classification (“SIC”) and North American Industry Classification System (“NAICS”) Codes that are subject to the TRI.¹²¹ For these reasons, closing the *de minimis* concentration exemption

¹¹⁶ EPA, *PFAS Strategic Roadmap: EPA’s Commitments to Action 2021–2014*, at 12, 23 n.iv (Oct. 2021) (“2021 PFAS Roadmap”), https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf (submitted herewith); *EPA Releases Preliminary Data for 2021 Toxics Release Inventory Reporting*, EPA, <https://www.epa.gov/chemicals-under-tsca/epa-releases-preliminary-data-2021-toxics-release-inventory-reporting> (last updated Dec. 13, 2022) (“Because PFAS are used at low concentrations in many products, the elimination of the *de minimis* exemption would result in a more complete picture of the releases and other waste management quantities for these chemicals.”).

¹¹⁷ Dakota Software, *The Persistence of PFAS: The ‘Forever Chemicals’ Coming Under Regulatory Scrutiny*, EHS Daily Advisor (June 5, 2020), <https://ehsdailyadvisor.blr.com/2020/06/the-persistence-of-pfas-the-forever-chemicals-coming-under-regulatory-scrutiny/>.

¹¹⁸ 15 U.S.C. § 8921(b)(1)(E) (directly listing on the TRI any PFAS or class of PFAS subject to two previously issued SNURs); *id.* § 8921(c)(1)(A)(ii) (indicating that one of the trigger events for TRI listing is inclusion in a SNUR).

¹¹⁹ See *supra* Part B.

¹²⁰ See *supra* Part D.2.

¹²¹ 42 U.S.C. § 11023(b)(1)(A); 40 C.F.R. § 372.23.

and making alternate threshold reporting and range reporting unavailable to the TRI-covered PFAS is only a first step to ensuring that communities, researchers, and regulators obtain as complete a set of data on PFAS manufacture, processing, use, and release as EPA is empowered to require under EPCRA section 313. And given that this step is legally mandated, *see supra* Part C, it is a necessary first step for EPA to take to address this problem.

Thus, while this rulemaking is necessary, it is not sufficient. To eliminate all the obstacles to robust TRI reporting on PFAS chemicals, we urge EPA to quickly initiate additional rulemakings to further improve reporting on PFAS. Implementing the 2020 NDAA provides an opportunity to do just that. Therefore, for the reasons detailed below, EPA must swiftly add the entire class of PFAS to the TRI pursuant to NDAA section 7321(d), lower the reporting threshold for all PFAS to under 100 pounds, and ensure that the SIC/NAICS codes of all facilities that use PFAS are subject to TRI reporting.

1. EPA must add PFAS as a class to the TRI pursuant to NDAA section 7321(d) because all PFAS meet the TRI listing criteria.

NDAA section 7321(d) requires EPA to “determine whether” “perfluoroalkyl and polyfluoroalkyl substances and classes of perfluoroalkyl and polyfluoroalkyl substances . . . , including,” *but not limited to*, the list of PFAS and categories of PFAS specified in NDAA section 7321(d)(2), “meet any one of the criteria described in section 11023(d)(2) of title 42 for inclusion in the [TRI].”¹²² EPA was required to make this determination for all PFAS and classes of PFAS by December 20, 2021.¹²³ By no later than December 20, 2023, EPA must add to the TRI all PFAS or classes of PFAS that it determines meet the EPCRA section 313 listing criteria.¹²⁴

As explained above, the weight of the scientific evidence on PFAS compels EPA to add the entire class of PFAS to the TRI pursuant to NDAA section 7321(d). Scientists agree that PFAS—including both long-chain PFAS and their replacements—have the capability to exert similar, serious harm to human and environmental health, and studied PFAS are linked to the health effects identified in EPCRA section 313(d)(2) as criteria for TRI listing.

Listing PFAS as a class to the TRI is consistent with case law delineating the standard governing listing toxic chemicals on the TRI based on chronic effects. In *Troy Corporation v. Browner*, the D.C. Circuit agreed with EPA that a category of chemicals “may be added [to the TRI] based on sufficient evidence that characteristics common to the category give rise to [chronic health] effects.”¹²⁵ The court explained that “EPA was entitled to list a category of

¹²² 15 U.S.C. § 8921(d)(1), (2). The statute exempts from this determination process PFAS that were immediately added to the TRI pursuant to NDAA section 7321(b). *Id.*

¹²³ *Id.* § 8921(d)(1).

¹²⁴ *Id.* § 8921(d)(3).

¹²⁵ *Troy Corp. v. Browner*, 120 F.3d. 277, 288 (D.C. Cir. 1997).

chemicals based on its reasonable determination that a member of the category caused a relevant ill effect and that other members of the category could be expected to exhibit the same characteristics.”¹²⁶ This ruling confirms that EPA’s listing determination of a group of chemicals can be based on scientifically sound inferences derived from the common characteristics of members of such a group.

Given the scientific evidence that PFAS as a class may reasonably be anticipated to cause chronic health effects, the law surrounding listing determinations under EPCRA section 313(d)(2)(B), and the mandates of NDAA section 7321(d), EPA must list the class of PFAS to the TRI by no later than December 20, 2023.¹²⁷

2. EPA should lower the reporting threshold for all PFAS to under 100 pounds and should add the SIC/NAICS codes for all industrial and commercial sectors that use PFAS.

EPA should rapidly move to lower the reporting threshold to under 100 pounds for the class of PFAS pursuant to the 2020 NDAA, which would be consistent with previous practice for lowering threshold levels for chemicals of special concern based on particular health hazards. Pursuant to NDAA sections 3721(b) and (c), EPA must reassess the 100-pound threshold established for all PFAS added to the TRI under those provisions within five years of listing and revise as warranted.¹²⁸ Since EPCRA section 313(f)(2) provides the Agency with broad authority to lower thresholds for toxic chemicals, including classes of chemicals, EPA should adopt the lowest feasible threshold to maximize the information available to consumers, researchers, and regulators.

EPA has previously lowered the reporting threshold for toxic chemicals with characteristics that make them especially concerning, such as the chemicals’ persistence and bioaccumulation tendencies. In 1999, EPA established varying lowered thresholds for chemicals of special concern “based on the chemicals’ potential to persist and bioaccumulate in the environment.”¹²⁹ The threshold for PBT chemicals of special concern was lowered to 100 pounds, except for a subset of PBT chemicals for which the threshold was set at ten pounds, and dioxins and dioxin-like compounds for which the threshold was set at 0.1 grams.¹³⁰

¹²⁶ *Id.* at 290.

¹²⁷ As discussed *supra* Part D.2, PFAS as a class should be added to the chemicals of special concern list. In addition, as discussed *supra* Part D.1, EPA should define PFAS as a “chemical[] with at least one fully fluorinated carbon atom.”

¹²⁸ 15 U.S.C. § 8921(b)(2)(B), (c)(2)(B). There is no reason for EPA to delay revising the threshold downward for all PFAS on the TRI.

¹²⁹ Persistent Bioaccumulative Toxic (PBT) Chemicals; Lowering of Reporting Thresholds for Certain PBT Chemicals; Addition of Certain PBT Chemicals; Community Right-to-Know Toxic Chemical Reporting, 64 Fed. Reg. 58,666, 58,672 (Oct. 29, 1999).

¹³⁰ *Id.*

Previous practice confirms EPA's broad authority to lower reporting thresholds based on specific hazards associated with a category or class of chemicals. Like the subset of chemicals of special concern that are subject to threshold level of under 100 pounds, PFAS share hazard characteristics that warrant a similarly low threshold determination. There is ample evidence showing that this class of chemicals are highly persistent and mobile in environmental media, especially in groundwater, and that many are toxic at low levels.¹³¹

Finally, to ensure the most robust reporting of PFAS to the TRI, EPA should expand TRI reporting requirements for PFAS to all industrial and commercial sectors that manufacture, process, or otherwise use PFAS, including commercial airports. As EPA has acknowledged, "[t]he heart of the Federal Right-to-Know program is its reporting requirements, which are intended to provide a comprehensive picture of the community's and the Nation's exposure to toxic chemicals."¹³² There cannot be such a comprehensive view of PFAS releases and potential exposure if major polluters are excluded from reporting. Communities that live in the shadows of PFAS handlers that are excluded from reporting continue to be denied the full disclosure they deserve.

CONCLUSION

For all of the reasons discussed above, which are supported by the materials submitted along with this comment letter (including the scientific studies cited in this letter and many of the other cited factual materials), Commenters strongly urge EPA to finalize the Proposed Rule as soon as possible. EPA must do so no later than November 30, 2023, so that during the 2024 TRI reporting cycle the *de minimis* concentration and alternate threshold exemptions do not apply to the reporting of PFAS and the *de minimis* concentration exemption does not apply to PFAS, or any chemical of special concern, in the context of supplier notification requirements.

We further urge EPA to include in the final rule the clarifications and modifications discussed above, including:

- (1) acknowledging that the previously adopted PFAS TRI Codification Rules are not consistent with NDAA sections 7321(b) and (c);
- (2) clarifying that any chemical with hazard characteristics that raise concerns at low levels is eligible for inclusion on the chemicals of special concern list;
- (3) adding a scientifically supported definition of PFAS to provide clarity regarding what substances are added by the triggering events set forth in NDAA section 7321(c);
- (4) providing examples of PFAS-containing mixtures or trade name products that may release PFAS during processing or use and thus are not eligible for the articles exemption to the SNR;

¹³¹ See *supra* Part D.

¹³² 64 Fed. Reg. at 58,676.

(5) changing its interpretation that waste is not a mixture and that waste that contains TRI-listed chemicals and is sent off site is not subject to supplier notification requirements; and

(6) modifying the language in the proposed revisions to 40 C.F.R. § 372.45(d) so the final rule reflects the language that is previewed in the preamble to the Proposed Rule, rather than the language set forth in the proposed amendments section of the Federal Register publication.

We also look forward to future rulemakings to improve reporting of PFAS to the TRI, including the rulemakings contemplated by the 2020 NDAA.

Thank you for your work on this important matter. If you have any questions, please feel free to contact Eve Gartner (egartner@earthjustice.org), or Kelly Lester (klester@earthjustice.org).

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Respectfully submitted,

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Sierra Club

Union of Concerned Scientists

*Contributed factual research, analysis and drafting, not legal services or legal advice.