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Myths versus Reality on the Designation of PFOA and PFOS as Hazardous Substances

Myth:

The designation of PFOA and PFOS as hazardous substances is not necessary under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, or “Superfund”) because they are already being addressed as pollutants and contaminants.

Reality:

The designation of PFOA and PFOS as hazardous substances provides several important new tools to the EPA. The designation will help shift responsibility to the polluters to pay for actions required to address releases to the environment.

First, hazardous substance designation would give the EPA authority to compel clean up actions by the polluters. Where such parties refuse to take such action, the designation gives the EPA authority to enforce such actions.

Second, it gives the EPA authority to recover its cleanup costs from polluters related to PFOA and PFOS, which it cannot do under current law. Superfund has always operated under “the polluter pays” principle. The current designation of PFOA and PFOS as “pollutants or contaminants” means that the American taxpayer pays for the necessary work, not the polluting parties. Under the current scheme, EPA cannot order and enforce those orders for polluters to do the required work, nor can it collect funds from those polluters when it takes on the work itself.

Third, hazardous substance designation enables parties, such as municipalities, that have taken on the challenges of cleaning up PFOA and PFOS releases to collect financial contributions from other responsible parties. This provides another mechanism to ensure that those most responsible for the pollution pay their share.

Fourth, hazardous substance designation would allow the EPA to give higher priority to cleaning up sites contaminated with PFOA and PFOS. The EPA regularly evaluates contaminated sites and uses a scoring system to determine whether they should be placed on a list of priority sites called the National Priority List, or NPL. The scoring and ranking system, called the Hazard Ranking System, or HRS, takes into consideration the presence, concentration, and likelihood of exposure to hazardous substances, among other factors. As such, hazardous substance designation would allow the EPA to use exposures to PFOA and PFOS in scoring a site.

Fifth, hazardous substance designation would make it easier for the EPA to investigate and initiate cleanups. Hazardous substance designation triggers **reporting requirements** for releases over a certain threshold. Anytime the hazardous substance is released into the air, land or water in amounts exceeding the threshold, it triggers an investigation and potential cleanup.

Finally, hazardous substance designation would make it easier to address contamination at certain former military bases because parts of section 120 of CERCLA addressing federal facilities apply to hazardous substances but not pollutants or contaminants. For example, under section 120(h)(1), any contract for the sale or other transfer (e.g., leases) of property owned by the United States on which any *hazardous substance* was stored for 1 year or more, known to have been released, or disposed of, shall include a notice of the type and quantity of any hazardous substances on the property and notice of the time at which hazardous substances were stored, released, or disposed on the property. Section 120(h)(3) requires that a transferred deed include certain information about hazardous substances, but not pollutants or contaminants. This means that the Department of Defense will have to re-evaluate certain bases for PFOA and PFOS contamination and address the contamination if found.

Myth:

The designation of PFOA and PFOS will create hundreds of new Superfund sites, resulting in costly cleanups for manufacturers.

Reality:

Cleanups under CERCLA are primarily focused on sites that are a part of the National Priorities List, or NPL. Hazardous substance designation is unlikely to lead to a significant number of new sites on the NPL. The only statutory requirement for NPL updates is that it happen once a year. The reality is that over

the last decade, the EPA has been placing an average of 10 sites or releases as final NPL sites.

Hazardous substance designation will allow the EPA to consider PFOA and PFOS when ranking and scoring sites to determine whether to place them on the NPL under the Hazard Ranking System (HRS) that the EPA uses.

Designating PFOA and PFOS as hazardous substances could affect the HRS scores at some sites, but if there is an increase, it would likely add only a small number of sites to the NPL because the EPA tends to treat NPL listing as a last resort.

Not every eligible site is proposed or added to the NPL list. Sites can be deferred to other authorities, like Resource Conservation Recovery Act corrective action, or to state cleanup programs. For example, the EPA's approach at sites with groundwater contamination is to first look to other federal or state authorities to perform actions to ensure the drinking water is safe.

This is not the first time there have been concerns about new NPL sites. There was a concern that when EPA added Sub-Surface (vapor) Intrusion (SSI) as an exposure pathway in its NPL scoring methodology in 2016 that there would be a plethora of SSI sites listed. The reality is that that has not occurred. Almost all new sites placed on the NPL since then have been because of concerns about exposures to contaminated soil and groundwater, not vapor intrusion.

Myth:

The designation of PFOA and PFOS as CERCLA/Superfund hazardous substances will impose new costs on businesses and industries that will be in \$100s of millions of dollars for Superfund sites

Reality:

There are few direct costs associated with the designation of PFOA and PFOS as hazardous substances. Designation will trigger reporting of releases of the compounds above a certain threshold over a given timeframe. In the case of PFOA and PFOS, this is likely to be 1 pound over 24 hours which are the EPA default thresholds. It is highly unlikely that these thresholds will be exceeded very frequently given that industry started a voluntary phase out of PFOS in 2002 and eliminated PFOA emissions and product content in 2015. PFOA and PFOS are produced internationally and imported into the U.S. However, the EPA's initial

assessment of the potential for releases over the reporting threshold was that it was very low.

The hazardous substance designation will also not create any new requirements in the cleanup process. Cleanups of sites contaminated with PFOA and PFOS will be treated like cleanups of sites contaminated with other hazardous substances, many of which are also manufactured, used, and processed by the same companies that use PFAS.

This argument also assumes that the EPA will be addressing PFOA and PFOS at Superfund sites for the first time after hazardous substance designation. That's not true. The EPA has broad authority to clean up both "hazardous substances" and "pollutants or contaminants" under sections 104(a)-(b) of CERCLA. The EPA currently considers PFOA and PFOS to be pollutants or contaminants. Section 121, which governs remedy selection, also addresses both hazardous substances and pollutants or contaminants. In fact, the EPA is already including PFOA and PFOS in cleanup plans at sites like Saint Gobain in New York and Blades GW in Delaware, where PFOA and PFOS is co-located with other hazardous substances. Some states like New York have also already declared PFOA and PFOS to be hazardous substances under their state Superfund programs. Because PFOA and PFOS are already being addressed under current authority, there will be no new costs at many sites because of the hazardous substance designation.

Furthermore, mere designation does not impose any potential liability on current manufacturers and users of hazardous substances unless there has been a "release." A "release" is defined under CERCLA as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment." 42 U.S.C. § 9601(22).

In practice, EPA usually determines there is a release when the chemicals are released above the reporting quantities it has set or when a report is made to the National Response Center. The reporting quantities are also included in the hazardous substance designation list at 40 C.F.R. § 302.4. Again, because PFOA and PFOS have largely been phased out, it is unlikely that there will be many new releases of PFOA and PFOS.

If users of PFAS chemicals are good stewards and take steps to limit or eliminate releases into the environment, there should be little concern about potential future liability stemming from a CERCLA hazardous substance designation.

By giving the EPA tools to more quickly and effectively cleanup PFOA and PFOS, and thereby reducing exposures to PFOA and PFOS, hazardous substance designation will also result in important health care cost savings. A [recent study](#) identified at least \$5.52 billion in annual disease burden and associated social costs of current exposure to long-chain PFAS, and overall costs could be as high as \$62.6 billion.

Myth:

The designation of PFOA and PFOS as hazardous substances will create very costly liabilities for 1000's of municipal wastewater and drinking water systems and result in endless Superfund litigation

Reality:

The EPA and the Department of Justice at this point in the Superfund Program's 40 plus year history have extensive experience with Superfund litigation, including the exercise of enforcement discretion. Under Section 122(g) of CERCLA, the EPA can, and often does, quickly make "de minimis" settlements with parties that contributed only a small amount to the pollution. 42 U.S.C. § 9622(g). EPA also has the discretion to make "[ability to pay](#)" settlements. A settlement with the EPA creates a contribution shield protecting that party from additional CERCLA liability and removing them from the case. That means other potentially responsible parties at a site are barred from seeking financial contributions from parties that have already settled with EPA. EPA also has discretion to allow delayed payments, payment schedules, and in-kind contributions.

In addition to enforcement discretion, there are also statutory mechanisms to reduce or avoid liability for municipal wastewater and drinking water systems.

For example, PFAS releases subject to and in compliance with National Pollutant Discharge Elimination System, or NPDES, permits have liability protection. Section 107(j) of CERCLA limits liability from "federally permitted releases," including releases subject to NPDES permits. 42 U.S.C. § 9607(j). This provision in CERCLA was Congress' recognition that an entity whose releases are being regulated under the Clean Water Act should not be penalized for those releases under CERCLA. If a release is "federally permitted," and in compliance with those permits there is no CERCLA liability for costs of responding to those releases.

Many wastewater utility permits do not include PFAS but utilities can work with states to update those permits. If wastewater utilities release PFAS in compliance

with an NPDES permit that includes limits on PFAS releases, those utilities would be protected from future liability under CERCLA related to those releases.

Myth:

Designating PFOA and PFOS will lead to 20 or more PFOA/PFOS sites a year being added to the National Priorities List (NPL).

Reality:

The EPA generally views Superfund as the statute of “last resort.” The EPA firsts looks to other federal authorities such as the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), or the Resource Conservation and Recovery Act (RCRA) as preferred avenues for action. It also will work with states to address contamination under delegated federal regulatory programs or under state programs. In those instances, sites will not be added to the National Priorities List, or NPL.

It is relatively rare to add a site to the NPL. The EPA evaluates approximately 500 sites or releases a year for potential inclusion on the National Priorities List (NPL). Over the past decade, the EPA has averaged placing 10 sites a year on the NPL ranging from 4 to 21 sites a year. It is highly doubtful that EPA will significantly increase the number of sites added to the NPL based on this the proposed designation. The potential mix of the types of sites may change as EPA will be able to score PFOA and PFOS exposure under the hazard ranking system process it uses to determine which sites to list. However, the listing process takes years to complete and there are many off-ramps to other authorities.

Superfund NPL listing is also constrained by resource limitations. The EPA’s budget for site assessment is largely dependent on Congressional appropriation and it is unlikely that Congress will significantly increase appropriations because of this designation. Consequently, the number of site assessments or NPL proposals conducted each year is not likely to significantly increase.

The EPA is already working to address PFAS at existing NPL sites. As of June 2020, the EPA had [identified 233 NPL sites](#) contaminated with PFOA and PFOS. In many cases, the EPA will act to address PFOA and PFOS at existing NPL sites, rather than adding new sites to the NPL.

Myth:

Designating PFOA and PFOS as hazardous under CERCLA raises novel legal issues that will result in litigation risks and delay actions on PFOS and PFOA.

Reality:

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) defines “hazardous substance” by reference to the following authorities:

- Clean Water Act (CWA) section 311 (“CWA Hazardous Substances”),
- CWA section 307(a) (“CWA Toxic Pollutants”),
- Clean Air Act (CAA) section 112 (“CAA Hazardous Air Pollutants (HAPs)”)
- Resource Conservation and Recovery Act (RCRA) section 3001 (“RCRA Hazardous Wastes”), and
- Toxic Substance Control Act (TSCA) section 7 (currently no substances are designated under this authority).

CERCLA section 102(a) also gives EPA authority to designate additional hazardous substances for “any element, compound, mixture, solution or substance” not listed in the above statutes, that “when released into the environment may present substantial danger to the public health or welfare or the environment.”

There are currently about 800 CERCLA hazardous substances.

This action is only novel insofar as it is the first time the EPA has used its Section 102(a) authorities, rather than adding substances by reference to other statutes.

However, there is ample evidence that PFOA and PFOS “may present a substantial danger to the public health or welfare or the environment” when released into the environment. Over the last twenty years, the EPA, other federal agencies, state agencies, and leading scientists have amassed a significant body of evidence demonstrating the adverse effects of PFOA and PFOS. PFOA and PFOS are among the most studied chemicals in the world. Based on these serious toxicity concerns, the EPA negotiated voluntary phase-outs of both PFOA and PFOS more than fifteen years ago. On June 15, 2022, EPA released updated health advisory guidelines with new limits for how much PFOA and PFOS are acceptable for

drinking water. These limits lower the 2016 health advisory acceptable levels from 70 parts per trillion (ppt) to 0.02 ppt for PFOA and 0.004 ppt for PFOS. Such a reduction demonstrates the toxicity of these compounds.

Myth:

The designation of PFOA and PFOS will create unprecedented and unfair liability for businesses and industries that act responsibly.

Reality:

Simply using a hazardous substance does not make a company liable under CERCLA. Liability is only imposed when the hazardous substance has been released into the environment, putting human health or the environment at risk. Companies can and do avoid liability by responsibly handling hazardous substances. There are hundreds of CERCLA hazardous substances still in commerce where businesses and industries do not trigger CERCLA liability by their mere use. If a party is using PFOA and PFOS without releasing the chemicals into the environment, they won't trigger liability from use.

For legacy contamination, PFOA and PFOS will be treated no differently than other hazardous substances. As such, there will be no "unprecedented" liability.

The EPA has many tools, including liability exemptions, affirmative defenses, and enforcement discretion – designed to protect responsible businesses and industries.

The EPA has significant enforcement discretion. Under Section 122(g) of CERCLA, the EPA can, and often does, quickly make "de minimis" settlements with parties that contributed only a small amount to the pollution.⁴² U.S.C. § 9622(g). EPA also has the discretion to make "[ability to pay](#)" settlements. A settlement with the EPA creates a contribution shield protecting that party from additional CERCLA liability and removing them from the case. That means other potentially responsible parties at a site are barred from seeking financial contributions from parties that have already settled with EPA. EPA also has discretion to allow delayed payments, payment schedules, and in-kind contributions.

CERCLA also has [liability limits](#) for certain parties, like innocent landowners, contiguous property owners, and bona fide prospective purchasers. These provisions are designed to protect parties who unknowingly purchased contaminated property, are victims of contamination from a neighboring property,

or who plan to purchase a contaminated property and commit to allowing any ongoing removal or remedial actions.

Potentially responsible parties can also protect themselves by taking proactive cleanup actions through state programs. Cleanup is often conducted through state programs instead of under Superfund, which can be quicker, more efficient, and less costly. In some cases, these cleanup programs are voluntary but subject to state oversight. Cleanups satisfactorily conducted under one of these state response programs are subject to an “enforcement bar” under CERCLA, meaning that EPA will not take any Superfund actions against parties involved in the cleanup.

Myth

Hazardous substance designation essentially bans the use of a chemical and prohibits its use for many important and beneficial applications

Reality

Hazardous substance designation under CERCLA does not create a ban. The designation of PFOA and PFOS as hazardous substances under CERCLA, won't affect current practices, or create a “de facto” ban. First, PFOA and PFOS have already been largely abandoned by industry under **a 2006 EPA voluntary stewardship agreement**. There can be no “de facto” ban of substances that are no longer used.

But for the few uses of PFOA and PFOS that remain, hazardous substance designation will not force manufacturers to abandon their use.

There are hundreds of CERCLA hazardous substance still in use such as benzene, TCE, lead, arsenic, asbestos. Of the approximately 800 CERCLA hazardous substances, at least three-quarters, or about 600 likely are still in active use, the Environmental Working Group found in a 2019 **analysis**.

Hazardous substance designation often does not lead companies to make or use less of a hazardous substance. Nearly half of the CERCLA hazardous substances chemicals, or 339, were not only still in production but were also likely produced at high volume. One of the most produced and widely used chemicals in the world – sulfuric acid – has been listed as a CERCLA hazardous substance for more than 40 years.

Myth

EPA will reopen all Superfund sites to investigate for PFOA and PFOS including sites that have been deleted from the NPL or are construction complete which will impose significant cost on responsible parties

Reality

EPA will not reopen all Superfund sites to investigate for PFOA and PFOS. Nor will the designation change the EPA's authority to review sites deleted from the National Priorities List for PFOA and PFOS. Deleted sites are already subject to a statutorily-mandated 5-year review process for as long as contaminants remain at the site that prevent unlimited use or unlimited exposure. The EPA has authority under section 121(c) of CERCLA to investigate and review remedies for both hazardous substances **and pollutants or contaminants**. In fact, the EPA is already reviewing sites likely contaminated with PFOA and PFOS to ensure the remedy in place is sufficient to address these contaminants.

The EPA's experience with other new toxicity values will likely inform its approach to PFOA and PFOS. When toxicity values for contaminants are lowered, the EPA takes a targeted approach, focusing on those types of sites most likely to have used or been impacted by those contaminants. For PFOA and PFOS, the EPA will also likely take a targeted approach. For example, sites that are associated with electroplating activities or that may have received electroplating wastes will be closely scrutinized. Other sites will not receive such scrutiny, such as residential lead contamination sites.

This is a well-established process under the Superfund program and designation of PFOA and PFOS as hazardous substances will have no effect on these assessments. The evaluations typically occur as part of the statutorily-mandated five-year review process at sites with cleanup remedies in place to ensure that those remedies remain protective.

Sites still undergoing cleanup should have already been tested for PFOA and PFOS as contaminants of concern because they are already considered pollutants or contaminants. As of June 2020, the EPA had already identified PFOA and PFOS at [233 NPL sites](#). The Superfund response process will not change at these sites.

Myth

Local facilities that used fire-fighting foam, namely airports and local fire departments will find themselves in endless Superfund litigation.

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Reality

The EPA's approach to CERCLA liability has evolved over the statute's 40-year history, and there are many tools – including liability exemptions, affirmative defenses, and enforcement discretion – designed to distribute liability more equitably. In practice, the major contributors to PFAS pollution pay the lion's share for cleanups.

The EPA has significant enforcement discretion. Under Section 122(g) of CERCLA, the EPA can, and often does, quickly make “de minimis” settlements with parties like local firehouses and airports that contributed only a small amount to the pollution. 42 U.S.C. § 9622(g). EPA also has the discretion to make [“ability to pay”](#) settlements. A settlement with the EPA creates a contribution shield protecting that party from additional CERCLA liability and removing them from the case. That means other potentially responsible parties at a site are barred from seeking financial contributions from parties that have already settled with EPA. EPA also has discretion to allow delayed payments, payment schedules, and in-kind contributions from municipal parties in settlement agreements.

Moreover, there is a long process for listing sites on the National Priorities List, and significant new numbers of airports and local fire stations getting added to the NPL is unlikely. Some airports are already on the NPL because of other hazardous substances, and PFOA and PFOS would likely be added to their existing cleanup plans. Many local fire stations are small, may have used PFAS-based firefighting foams infrequently, and are very unlikely to become new Superfund sites.

Myth

Designation of PFOA and PFOS will impose significant new costs on state and local government.

Reality

CERCLA includes provisions specifically directed at limiting municipal liability. Municipalities are not liable for costs or damages in response to costs related to emergencies created by the release of hazardous substances. 42 U.S.C. § 9607(d)(2). The EPA can reimburse municipalities for temporary emergency

measures. 42 U.S.C. § 9623. Municipalities and other government entities like utilities can also be exempted from liability if they are conducting a cleanup in compliance with a state cleanup program. 42 U.S.C. § 9628(b). The EPA also has significant enforcement discretion.

Hazardous substance designation will also help state and local governments hold polluters accountable. State and local governments are already responding to PFOA and PFOS releases to the environment. Hazardous substance designation will allow state and local governments to seek reimbursement of costs incurred as part of a Superfund response.

There is also unlikely to be a significant amount of municipal liability due to landfill disposal of PFOA and PFOS treatment byproducts.

If utilities are generating PFOA and PFOS waste and sending it to landfills, this alone is unlikely to trigger significant CERCLA liability. Even non-hazardous waste landfills today are subject to strict state requirements and are designed to limit releases into the environment. [Landfills](#) cannot be built in environmentally sensitive areas, and they have monitoring systems that check for releases into groundwater and the air.

If there is a release of PFOA or PFOS, it is still unlikely that utilities or any other single polluter will face significant CERCLA liability. Landfills accept multiple kinds of waste from multiple sources. As such, landfill cleanups under CERCLA are complex and often involve multiple contaminants, and liability is often distributed among hundreds, if not thousands, of potentially responsible parties. For these reasons, it is unlikely that utilities or other innocent parties with limited resources would be targeted for significant liability under one of these cleanups.

Although it is not required under current law, utilities and other generators of PFAS waste should take extra precautions by disposing of PFAS waste in landfills that accept waste regulated under Subtitle C of the Solid Waste Disposal Act. This is a proactive approach to limiting potential liability from PFAS waste to ensure the waste is safely handled and not re-released into the environment.

Myth

EPA should use the rule making process to exempt certain entities from Superfund liability

Reality

EPA does not have clear authority to exempt certain entities from Superfund liability beyond those exclusions provided by Congress. EPA attempted a similar action in the early 1990s to address ambiguity in the CERCLA statute regarding lender liability through the CERCLA Lender Liability Rule. This rule was effectively rejected by the D.C. Circuit Court of Appeals *Kelly v. EPA*, 15 F.3d 1100 (D.C. Cir. 1994), which found the EPA had exceeded its authorities.

However, the EPA already has significant enforcement discretion and CERCLA contains multiple exemptions and liability limits to help ensure that those most responsible for the pollution pay the lion's share of the cleanup costs. As such, equitable cost-sharing measures are already built into the EPA's approach to CERCLA and such exemptions are not needed.

Myth

Farms where PFOA and PFOS have been detected will become Superfund sites

Reality

Farmers who apply biosolids as a fertilizer and the wastewater facilities that provide the sludge are unlikely to be held liable under CERCLA. While there are some farms that have been placed on the National Priorities List, nearly all of them have been added because industrial chemicals or hazardous wastes were improperly stored or disposed on the farmland and released into the environment. No farms have been added to the NPL solely for the use of biosolids.

[Section 101\(22\) of CERCLA](#) exempts “the normal application of fertilizer” from the definition of “release.” Applying biosolids to farm fields would constitute the normal application of fertilizer and therefore would not be considered a “release” of a hazardous substance.

Application of biosolids as fertilizer is a longstanding practice that has not yet resulted in significant liability for farmers or utilities. Because they are often a product of wastewater treatment, biosolids can contain a variety of pollutants, even when treated. [A 2018 report](#) by the EPA Office of Inspector General identified

more than 350 contaminants identified in biosolids applied to lands. Among the 352 contaminants, 61 contaminants were identified as “acutely hazardous, hazardous, or priority pollutants” in other programs, including CERCLA. The presence of these CERCLA hazardous substances in biosolids has not historically resulted in any significant liability for wastewater treatment facilities or farmers.

Given the presence of other CERCLA hazardous substances in biosolids, and the application of the fertilizer exemption, the mere addition of PFAS chemicals to the hazardous substance list is unlikely to create any new liability risk.

James Slaughter, an attorney with Beveridge & Diamond and an expert on biosolids issues, [told *Inside EPA*](#) in 2019 that he also believes that concerns over CERCLA liability from biosolids are overblown. He pointed to the fertilizer exemption and also said that “Biosolids have long had trace amounts” of chemicals that are CERCLA hazardous substances, and that designating PFAS as hazardous substances “won’t likely trigger new liability.”

Because a hazardous substance under CERCLA Section 102(a) does not confer a hazardous waste designation under the Resource Conservation and Recovery Act (RCRA), the hazardous substance designation will not require utilities to dispose of biosolids following RCRA hazardous waste requirements.

The EPA, however, may choose to provide guidance on how these wastes should be disposed of in a safe manner to help ensure that wastes are disposed of safely. The EPA could also consider using a variance or some other means to delay the effective date of applying the hazardous waste designation to biosolids until after EPA promulgates a CWA Section 503 rule identifying safe levels of PFOA and PFOS in biosolids for various beneficial uses. This delay would provide a grace period for wastewater utilities to monitor their biosolids and evaluate their reuse/disposal options.

Myth

Any site where PFOA and PFOS have been detected will become a Superfund site

Reality

There is no automatic listing on the National Priorities List, or NPL, following detection of a hazardous substance. Instead, there is a long process for determining whether to list a site and how to address any contamination. In addition, as a matter of longstanding [policy](#), EPA seeks to determine whether a state or tribe

supports listing a site on the NPL prior to proposing such listing. Since that policy was issued in 1996, EPA has never finalized an NPL listing for a site over a state's objection.