TESTIMONY OF AMANDA GOODIN
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EARTHJUSTICE
BEFORE THE UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON ENVIRONMENT AND CLIMATE CHANGE
"THE CLEAN FUTURE ACT: SUPERFUND PROPOSALS TO ADVANCE CLEANUPS, EQUITY, AND CLIMATE RESILIENCE"
MAY 13, 2021

Good Morning Chairman Tonko and Ranking Member McKinley:

Thank you for inviting me to testify today. My name is Amanda Goodin, and I am a Staff Attorney at Earthjustice, the nation's oldest and largest non-profit environmental law organization.

Thank you for the opportunity to provide testimony for the Subcommittee's May 13, 2021 hearing "The CLEAN Future Act: Superfund Proposals to Advance Cleanups, Equity, and Climate Resilience." Please accept this testimony for the hearing's official record. My testimony addresses the importance of financial assurance requirements to protect against the risks posed by facilities that handle or dispose of hazardous substances. The risks posed by many of these facilities are substantial, and these risks will only increase as climate change makes extreme weather events more frequent. Comprehensive financial assurance requirements are urgently needed to incentivize the highest standards of care in handling these hazardous substances, and to ensure that the public does not bear the cost of cleanup when spills do occur.

I. THE CRITICAL ROLE OF FINANCIAL ASSURANCES IN PREVENTING UNFUNDED HAZARDOUS CLEANUPS.

Congress in 1980 enacted CERCLA "in response to the serious environmental and health risks posed by industrial pollution." *Burlington N. & Santa Fe Ry. Co. v. United States*, 556 U.S. 599, 602 (2009). CERCLA requires that parties responsible for hazardous substance pollution bear the cost of cleanup. *See* 42 U.S.C. § 9607. Often, however, the responsible parties include businesses that have been liquidated through bankruptcy, restructured to limit liability for environmental cleanup, or are otherwise unable to shoulder cleanup costs.[1] Most of the costs for these "orphan" sites are borne by the public, through the Superfund. *See* 42 U.S.C. § 9611. The Superfund was initially funded by designated taxes, but since these taxes expired in 1995, funding has steadily decreased.

Public funding for cleanups is decreasing, but the number of sites requiring cleanup is not. EPA has estimated that one in four Americans lives within three miles of a hazardous waste

[1] U.S. Government Accountability Office, GA0-05-658, Environmental Liabilities: EPA Should Do More to Ensure That Liable Parties Meet Their Cleanup Obligations at 58-59 ("2005 GAO Report") (2005).

site and that more than 47,000 sites potentially require cleanup actions.[2] EPA places the most contaminated of these sites on a list for priority remediation, known as the National Priorities List. *See* 42 U.S.C. § 9605. Between 2005 and 2009, EPA added an average of sixteen sites per year to the National Priorities List, and in 2010 EPA projected adding twenty to twenty-five sites per year between 2010 and 2015.[3] The cost of cleaning up even a single site can be quite high—according to a 2005 report, it will cost $140 million, on average, to clean up each of the 142 largest Superfund sites, for a total of almost $20 billion.[4] Cleanup at sixty of these so-called mega-sites is already being funded either wholly or partly by the public.[5] The National Priorities List encompasses more than 1,300 sites, so the cost of cleaning up all the orphan sites may be many times this amount.

Cleaning up the sites that are already on the National Priorities List will be a lengthy and costly undertaking. Increased funding for Superfund Site Cleanups, and for EPA's Superfund Jobs Training Initiative, are both critical to finish the work of remediating these toxic sites. At the same time, we must ensure that we are not adding more unfunded cleanups to the list. Climate change and the extreme weather it brings threatens to increase the number and severity of hazardous spills. Robust financial assurance requirements across sectors that pose significant risks would dramatically reduce the likelihood of unfunded cleanups going forward.

Congress first directed EPA to enact rules requiring that facilities involved with hazardous substances demonstrate financial responsibility sufficient to remedy any environmental damage caused by their operations in 1980. 42 U.S.C. § 9608(b). Despite Congress' clear direction, to date, EPA has not promulgated any financial assurance requirements under CERCLA. Today, the need for financial assurances is more pressing than ever, as increasingly frequent extreme weather events threaten to increase the frequency and severity of catastrophic hazardous releases at ill-prepared facilities.

Inadequate or nonexistent financial assurance requirements are directly tied to funding shortfalls for cleanup. As 2005 GAO Report explained:

> The need for EPA to fully use its existing authorities to execute the 'polluter pays' principle underlying the Superfund and RCRA laws is even more compelling today than it was during the 1980s and 1990s when corporate taxes … provided about $1 billion a year for Superfund cleanups. Now, without revenue from Superfund taxes, the cleanup burden has increasingly shifted to the general public—and at a time when large federal deficits are likely to constrain EPA's ability to obtain such funding for these cleanups. In addition, over time, businesses have become more sophisticated in using the limited

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[2] U.S. Government Accountability Office, GA0-08-841R, Superfund: Funding and Reported Costs of Enforcement and Administration Activities, at 1 ("2008 GAO Report") (2008).

[3] U.S. Gov't Accountability Office, GA0-10-380, Superfund: EPA's Estimated Costs to Remediate Existing Sites Exceed Current Funding Levels, and More Sites Are Expected to Be Added to the National Priorities List, at 28 ("2010 GAO Report") (2010).

[4] 2005 GAO Report at 2.

[5] *Id.*

> liability principle to protect their assets by separating them from their liabilities. The result is that businesses of all sizes can easily limit the amounts they may be required to pay for environmental cleanups under Superfund and RCRA. . . .
> These challenges can seriously hamper EPA's ability to achieve its primary mission of protecting human health and the environment because they present formidable obstacles to obtaining the funding needed for cleanups. … Thus, we believe it is imperative for EPA to increase its focus on financial management and to fully use its existing authorities to better ensure that those businesses that cause pollution also pay to have their contaminated sites cleaned up.[6]

Funding shortfalls reduce the effectiveness of Superfund cleanups, leaving the public exposed to higher levels of hazardous substances. EPA's Office of Inspector General found that in fiscal year 2003, a $174.9 million funding shortfall "prevented EPA from beginning construction at all sites or providing additional funds needed to address sites in a manner believed necessary by regional officials."[7] The report identified 29 specific sites where cleanup work was delayed or scaled back in ways harmful to human health and the environment because of funding shortfalls. For example, "[t]he impact of reduced funds for the Bunker Hill site [in Northern Idaho and Eastern Washington] is associated with risk to human health, particularly for young children and pregnant women, from lead contamination in a residential area."[8]

The delayed cleanup and prolonged health risks at the Bunker Hill site are not unique: indeed, it is now more common than not for cleanup to be delayed due to lack of funding, even at the sites that pose the highest risks to human health. The GAO found that "[a]t over 60 percent of the 75 nonfederal [National Priorities List] sites with unacceptable human exposure, all or more than half of the work remains to complete the remedial construction."[9] Moreover, "[s]ince fiscal year 2000, most [EPA] regions have experienced delays because of insufficient funding . . . ." These delays "increase the length of time it takes to clean up a site; the total cost of cleanup; and, in some cases, the length of time populations are exposed to contaminants."[10]

EPA and other government oversight agencies have consistently arrived at the same conclusion, in study after study: the high cost of cleanup and the dwindling resources of the Superfund program render it impossible to address all sites in a timely and adequate manner.[11]

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[6] 2005 GAO Report at 58-59.

[7] U.S. Envtl. Prot. Agency, Office of Inspector General, Congressional Request on Funding Needs for Non-Federal Superfund Sites, Report No. 2004-P-00001, at 1 ("2004 OIG Report") (January 7, 2004).

[8] *Id.* at 8. *See also* 2010 GAO Report at 18.

[9] 2010 GAO Report at 11.

[10] *Id.* at 26-27.

[11] *See* 2010 GAO Report at 33 ("The limited funding, coupled with increasing costs of cleanup, has forced EPA to choose between cleaning up a greater number of sites in a less time and cost efficient manner or cleaning up fewer sites more efficiently."); 2005 GAO Report at 9 ("The decrease in Superfund funding in recent years and this backlog of sites ready for additional funding may make the already lengthy NPL cleanup process even lengthier."); 2004 OIG Report at 4 ("When funding is not sufficient, construction at National Priority List (NPL) sites cannot begin; cleanups are performed in less than an optimal manner; and/or activities are stretched over longer periods of time. As a result, total project costs may increase

With hundreds of National Priorities List sites awaiting cleanup and tens of thousands of contaminated sites not even on the list for public remediation, the risk to health and the environment is substantial.

Financial assurance requirements break this toxic cycle by requiring facilities involved with hazardous substances to demonstrate their ability to cover the cost of cleanup through third party insurance, bonding, or other mechanisms. Robust financial assurance requirements prevent these delayed and underfunded cleanups because money is available if accidents do occur. They also promote basic fairness because these cleanups are funded by the polluter, and not the public.

CERCLA's financial responsibility requirements not only ensure that responsible parties are able to pay for cleanup of hazardous substances, these requirements also play a significant role in preventing hazardous releases. In particular, by linking the amount of assurances required to the adoption of best practices to prevent releases, financial assurance requirements provide a powerful financial incentive for facilities to take utmost care. Section 631(e)(6) will help ensure that this incentive for best practices is realized by making the amount of financial assurance required contingent on the measures a facility takes to reduce the risks associated with climate change.

Finally, for financial assurances to be robust, they must be backed by real assets. Many forms of financial assurances satisfy this requirement, such as third-party insurance or bonding. Corporate self-guarantees, in contrast, are not secured by hard assets, cash or cash equivalents. Instead, companies may satisfy a financial assurance requirement if they pass a financial test but must secure alternative assurances if they become unable to pass. As the recent failures of some of the largest coal companies in the United States illustrate, however, once companies can no longer pass their financial test, it is typically far too late to secure third-party insurance or bonding.

II. MANY INDUSTRIES ILLUSTRATE THE NEED FOR FINANCIAL ASSURANCES

While EPA has yet to issue CERCLA financial assurance requirements for any industry, EPA has studied the need for CERCLA financial assurances for several high-risk industry sectors. In initial findings in 2009 and 2010,[12] and a proposed rule in 2016,[13] EPA concluded that assurances were warranted for the hardrock mining industry; the chemical manufacturing industry; the petroleum and coal products manufacturing industry; and the electric generation, transmission, and distribution industry.

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and actions needed to fully address the human health and environmental risk posed by the contaminants are delayed.").

[12] *See* 74 Fed. Reg. 37213 (July 28, 2009) (hardrock mining); 75 Fed. Reg. 816 (Jan. 6, 2010) (coal ash, petroleum and coal products, chemical manufacturing). *See also* 82 Fed. Reg. 3512 (Jan. 11, 2017) (subsequent notice re coal ash, petroleum and coal products, chemical manufacturing).

[13] 82 Fed. Reg. 3388 (Jan. 11, 2017).

EPA ultimately abandoned its efforts to issue CERCLA financial assurance rules in further findings published in 2017[14] and 2020,[15] based on a new interpretation of 42 U.S.C. § 9608(b) that contradicted EPA's longstanding prior interpretation. Under that novel interpretation, EPA found it need not consider risks to human health and the environment in assessing the need for financial assurance regulations. It is critical that future legislation clarify that EPA must consider risks to human health and the environment in assessing the need for and amount of financial assurance requirements.

EPA's prior findings on the need for financial assurances are nonetheless compelling. They demonstrate the substantial risks to human health and the environment posed by multiple industries, as well as the substantial costs imposed on the public in the absence of financial assurance requirements.

1. Hardrock mining

In 2009, EPA issued a priority notice finding that hardrock mining facilities would be the first for which EPA would develop CERCLA financial assurance requirements. *See* 74 Fed. Reg. 37213 (July 28, 2009). EPA based this conclusion on a combination of factors. These included the volume of hazardous substances released by hardrock mining facilities, which EPA described as "enormous": 1.15 billion pounds annually. *Id.* at 37,215. This waste frequently includes hazardous substances of "particular concern" such as heavy metals, ammonia, and nitrites, and releases from hardrock mines can cause significant environmental harm including contamination of ground and surface water. *Id.* at 37,216. The hardrock mining industry is responsible for polluting approximately 440,000 acres of land and contaminating as much as 10,000 miles of rivers and streams. *Id.* at 37,215.

EPA noted that "[t]he severity of consequences posed by hardrock mining facilities is evident in the enormous costs associated with past and projected future actions necessary to protect public health and the environment, after releases from hardrock mining facilities occur." *Id.* at 37,217. Specifically:

> EPA has estimated that the cost of remediating all hardrock mining facilities is between $20 and $54 billion. EPA's analysis showed that if the total Federal, State, and potentially responsible party outlays for remediation were to continue at existing levels . . ., no more than eight to 20 percent of all cleanup work could be completed within 30 years. In another analysis based on a survey of 154 large sites, EPA's OIG [Office of Inspector General] projected that the potential total hardrock mining remediation costs totaled $7 to $24 billion. OIG calculated that this amount is over 12 times EPA's total annual Superfund budget of about $1.2 billion.

Id. After describing numerous hardrock mining facilities declaring bankruptcy and saddling the public with enormous cleanup costs, EPA concluded that "the hardrock mining industry has

[14] 83 Fed. Reg. 7556 (Feb. 21, 2018).

[15] 85 Fed. Reg. 77384 (Dec. 2, 2020).

experienced a pattern of failed operations, which often require significant environmental responses that cannot be financed by industry." *Id.* at 37,218.

In a subsequent proposed financial assurances rule for the hardrock mining industry and supporting materials, EPA documented a massive history of contamination from the mining industry. 82 Fed. Reg. 3388, 3470-80 (Jan. 11, 2017). In the proposed rule, EPA concluded that its "review of available data indicates abundant evidence that hardrock mining facilities continue to pose risks associated with the management of hazardous substances at their sites." *Id.* at 3470.

EPA also found that the parent-subsidiary corporate structures that are common in the mining industry can allow subsidiaries with environmental liabilities to declare bankruptcy after transferring their most valuable assets to a parent corporation that cannot be reached for cleanup. 74 Fed. Reg. at 37217-18. This bankruptcy risk is particularly troubling given the high cost of cleaning up mine sites and the dwindling resources of the Superfund, *see* 74 Fed. Reg. at 37,217-18. It is also troubling because many mines will require water treatment in perpetuity, which poses a serious risk of unfunded liabilities in the future, even where mining companies are currently paying for cleanup. *See* 82 Fed. Reg. at 3479, 3432.

Our federal mining law dates to 1872. It requires too little from mining companies by way of reclamation and nothing at all by way of financial assurance. State laws contain a patchwork of incomplete requirements that have not prevented continuing releases that harm human health and the environment, and too often lead to unfunded or underfunded cleanups. CERCLA financial assurances, as well as significant updates to federal mining laws, are badly needed to prevent more toxic contamination and ensure cleanups are paid for by polluters.

2. Chemical Manufacturing

Like hardrock mines, chemical manufacturing facilities pose significant risks. There were 13,000 facilities operating in the U.S. as of 2007, and the industry releases approximately 220 million pounds of hazardous substances and nearly 20 million tons of hazardous waste annually. 75 Fed. Reg. 816, 824 (Jan. 6, 2010).

Beyond the sheer volume of substances released, there are over 180 National Priorities List sites associated with chemical manufacturing, including multiple examples of sites that pose "high risk to the environment and human health," such as sites across the street from residential areas and sites in close proximity to the drinking water supply for hundreds of thousands of people. *Id.* Remediation of these sites has been historically costly and complex – for the chemical manufacturing sites on the National Priorities List, EPA has spent approximately $2.7 billion through 2009. *Id.* at 825. Simply put, "EPA's past experience with some [National Priorities List] sites leads it to conclude that chemical manufacturing facilities are likely to and continue to present a substantial financial burden that could be met by financial responsibility requirements." *Id*.

Additionally, "common corporate structures and interrelated corporate failures within the Chemical Manufacturing industry also increase the likelihood of uncontrolled releases of hazardous substances being left unmanaged, increasing risks." *Id.* Parent-subsidiary

relationships that allow parent corporations to shield assets from liability for cleanups, frequent changes in site ownership, and bankruptcies in the industry all make it difficult to assign liability for cleanup costs in the chemical manufacturing industry. *Id*.

3. Electric Generation, Transmission, and Distribution

In deciding that financial assurance rules for this industry were warranted, EPA focused on the risks posed by coal combustion residuals, which are the toxic ash and other residue remaining after coal is burned at electric generation units. 75 Fed. Reg. at 828-29. Like the other industries identified for financial assurance rules, the electric power industry operates on a "large scale"—as of 2010, there were 1,270 fossil fuel electric power generating facilities operating in the U.S.—and so the potential for release and exposure to hazardous substances is high. *Id.* at 829. The industry reports "high levels" of on-site releases of hazardous substances – 161 million pounds annually – and these substances are "highly toxic." *Id.* EPA noted that coal combustion residuals "are a very large industrial waste stream" that "dwarf[s] the volume of hazardous waste generated in the U.S." *Id.* In 2007 alone, for example, 131 million tons of coal combustion residuals were generated in the U.S., *id.*, in contrast to the 32 million tons of hazardous waste generated by all other industry sectors combined, *id.* at 820-21 & Table 2.

EPA next noted that there are numerous documented instances of substantial and costly groundwater and surface water contamination from coal combustion residuals, including contamination of public drinking water supplies. *Id.* at 822, 829-30. Remediation costs for this industry can be enormous: for example, EPA stated that the costs to clean up the "catastrophic release" of coal combustion residuals from a single site – the Tennessee Valley Authority's Kingston Plant -- "has been estimated to range from $933 million to $1.2 billion," *id.* at 830, an amount that is as large as EPA's entire annual Superfund budget, *supra* at 12. Taking all this information into consideration, EPA determined that financial assurance rules for the electric power industry are warranted. *Id.*

4. Petroleum and Coal Products Manufacturing

The petroleum and coal products manufacturing industry primarily consists of petroleum refining facilities. These "tend to be very large, high-volume facilities," and releases from these large sites have resulted in exposure to hazardous substances "on a regional scale." 75 Fed. Reg. at 826. Moreover, refineries tend to be operated for decades, so "there is a long timeframe for potential releases and exposure of hazardous substances to occur." *Id.* "In addition, because of their need for large amounts of cooling water for operations, refineries tend to be located near navigable waterways or on the seashore, which likely increases the potential to impact groundwater, surface water, and aquatic vegetation." *Id.*

The petroleum and coal products manufacturing industry generated 4.2 million tons of hazardous waste in 2007 – second only to the chemical manufacturing industry – and releases 46 million pounds of hazardous substances annually. *Id.* These releases have in some cases led to surface and ground water contamination, and 22 of the sites on the National Priorities List as of 2009 are attributed to petroleum refinery operations. *Id.* at 827. The contamination at some of

these sites is extensive and has led to substantial risk to human health and the environment – for example, EPA noted that uncontrolled dumping at the Tennessee Products site contaminated the groundwater and surface water downstream of the facility, which residents from nearby housing projects used for swimming, playing, and fishing. *Id.* In addition to sites listed on the National Priorities List, EPA described many additional examples of releases of hazardous substances from refineries, including to groundwater – in fact, in some instances the level of groundwater contamination from refineries is so high that refineries "are actually pumping out the hydrocarbons from the groundwater table, and recovering them back in the refinery, which demonstrates the significant extent to which these materials have been released into the environment." *Id.*

EPA noted the large costs associated with "what are often extensive and long-term remediation efforts" at refinery sites—for example, as of 2009, EPA had spent $250 million on remediation of refinery sites on the National Priorities List. *Id.* EPA concluded that its "past experience with these sites leads it to conclude that petroleum and coal products manufacturing facilities may be likely to continue to present a substantial financial burden that could be met by financial responsibility requirements." *Id.* at 827-28.

III. CLIMATE CHANGE WILL INCREASE RISKS

It is indisputable that climate change is already contributing to increased extreme weather events, and that these will likely continue to increase in frequency and severity going forward. Such extreme weather events threaten to drastically increase hazardous spills and the need for Superfund cleanups. For example, much of the chemicals industry—especially basic chemicals, including petrochemicals—is concentrated in the gulf states of Texas and Louisiana.[16] These states are vulnerable to tropical storms and sea level rise, and a well-known present and future impact of climate change is increased severity and frequency of these storms, plus sea-level rise higher even than the global average rise in those states.[17] Hurricanes and storm surges can cause releases of hazardous substances at both active chemical manufacturing sites and superfund sites still under construction or even where construction has finished. For example, Hurricane Harvey caused an explosion at one active chemical manufacturing facility and partially displaced a cap at a completed superfund site in Houston.[18] The Environmental Integrity Project estimated that Harvey also caused the release of 8.3 million pounds of air pollutants.[19] As a result of Hurricane Florence in in 2018, coal ash ponds in both North and South Carolina were flooded, resulting in the release of hazardous substances to adjacent rivers. Scores of immense earthen impoundments containing millions of tons of toxic coal ash in the floodplains of the southeastern United States, as well as along the Great Lakes and the Mississippi River, are susceptible to flooding and even

[16] CERCLA 108(b) Economic Sector Profile: Chemical Manufacturing 5.

[17] Fourth National Climate Assessment 330 (2018).

[18] Vann Newkirk, *The Atlantic*, "The Looming Superfund Nightmare" (Sept. 12, 2017).

[19] Environmental Integrity Project, Preparing for the Next Storm: Learning from the Man-made Environmental Disasters that Followed Hurricane Harvey 7 (Aug. 16, 2018)

catastrophic failure in extreme weather events. As the storms become more frequent and more violent, related releases can be expected to increase. Notably, EPA has identified the risk to superfund sites in Louisiana and Texas in its latest Climate Change Adaptation strategy, from 2014.[20] These increased risks to sites that handle massive volumes of hazardous substances underscores the need for financial assurance requirements that incorporate risks posed by climate change.

IV. CONCLUSION

Congress should require EPA to enact comprehensive financial assurance requirements for facilities that produce, transport, treat, store, or dispose of hazardous substances based on the risks they pose to human health and the environment, including the increased risks posed by climate change.

Additionally, as detailed in this letter, more than 50 organizations recognized the importance of pollution cleanup and the need to ensure adequate funding in worker training programs that support this necessary work. These funds will be necessary to remediate existing sites. Financial assurances are necessary to ensure we do not continue to add to the long list of toxic sites that harm human health and the environment and require extensive remediation at the public's expense.

Sincerely,

Amanda Goodin
Staff Attorney
Earthjustice

[20] Region 6 Clean Energy and Climate Change Work Group, Climate Change Adaptation Implementaion Plan at 19, in U.S. Environmental Protection Agency, "Climate Change Adaptation Plan," Pub. EPA 100-K-14-001 (2014).