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### The Comprehensive Environmental Response, Compensation, and Liability Act: Policy Analysis

Lehna Kitzel

*Rochester Institute of Technology*, lrk3997@rit.edu

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# **The Comprehensive Environmental Response, Compensation, and Liability Act: Policy Analysis**

## **Introduction**

During World War II, the United States underwent a manufacturing transformation. Industry proliferated, and research and development into new chemical and manufacturing processes accelerated. After the armistice, this wartime effort transformed to address the consumer. Thousands of newly created synthetic chemicals were deployed to create household products and industrial materials. Unaware or unwilling to admit the risks, hazardous industry and waste proliferated. The economy swelled, and it would take two decades for citizens and the United States to realize this expansion came at a tragic cost. Beginning in the late 1970s, citizens and environmentalists raised alarm at the proliferation of unregulated hazardous waste from industry and manufacturing. Their advocacy led to the passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

CERCLA was passed in 1980 and signed into law by President Jimmy Carter. The Act provides a clear example of protective regulatory policy, combined with a redistributive effect. This bill authorized the federal government, through the Environmental Protection Agency, to mandate and finance clean up of sites contaminated by hazardous waste. A National Priority List (NPL) was established to identify toxic sites and designate the priority of remedial action. The NPL would be administered by the newly-created Agency for Toxic Substances and Disease Registry, which conducted health and risk assessments at hazardous sites (Congressional Research Service, 2013). Significantly, this bill also stipulated that Potentially Responsible Parties (PRPs) be identified and held financially liable for the clean up. This structure of liability, as well as a taxation mechanism, created a “superfund” for addressing hazardous waste.

## **Policy Goals**

CERCLA seeks to address the environmental externality of hazardous waste produced by state and private actors. This externality demands government action, as it poses a serious health risk, with biological impacts ranging from birth defects to cancer. Additionally, environmental remediation can be exorbitantly expensive, completely infeasible for local communities. Prior to the passage of CERCLA, there was no clear legal avenue for holding polluters responsible for the toxic waste they created.

The primary policy goal of CERCLA was to achieve security. Health is a basic unit of human need, and the government has an obligation on every level to secure a clean environment for citizens and reduce adverse health outcomes. This is the primary driving force behind CERCLA, but it also recognizes goals of equity, ensuring that parties who caused contamination are held responsible, and the cost of clean up doesn't land on victims of exposure. There are additional equity implications in that disadvantaged communities and communities of color are disproportionately exposed to hazardous industry, while having the least political and financial means to pursue remedial action (Anderton et al., 1997).

## **Leading to Legislation: Activism and Advocacy**

Citizen advocacy is largely responsible for getting hazardous waste on the national policy agenda. Several high-profile cases of environmental contamination generated national media and political attention. The most significant of these events happened at Love Canal (Fletcher, 2003). From post-war manufacturing and industrial proliferation through the 1980s, there were no best practices for waste disposal, and residential communities were being developed directly adjacent to hazardous waste dumps.

Love Canal was a working-class neighborhood developed on top of a hazardous waste dump near Niagara Falls, NY, including hundreds of family homes, a park, and an elementary school. Residents began to notice unusually high levels of birth defects and leukemia, and chemical burns on their children after playing outside. The neighborhood association sieged a passionate campaign to have the federal government address the harm and exposure they'd experienced, and launched the risk of hazardous industry into the national media spotlight for the first time.

The federal government was initially unwilling to take action, as establishing liability for toxic waste would implicate them in the thousands of other toxic sites emerging around the United States. It took the tireless organizing efforts of the Love Canal community, including holding several EPA officials hostage, to secure recognition from state and federal officials. The state health commissioner declared a state of emergency in 1978, and there was an eventual buyout of 400 homes closest to the dump (Fletcher, 2003). Two years later, CERCLA was passed. This activism is significant, as CERCLA and the Superfund are costly, and demand accountability from industries with extensive lobbying power that have historically had their way in the political process. It should be noted that Love Canal was by no means an isolated incident. Communities such as that in Alliston, Alabama, where chemical company Monsanto had poisoned thousands of black residents with PCBs, had been protesting as early as the 1960s, but lacked the social and political capital of white, middle-class Love Canal (Fletcher, 2003).

### **Policy Mechanisms**

CERCLA employs two primary mechanisms to achieve its goals. The first one is a regulatory structure. It provides a mandate, enforceable by courts, that potentially responsible parties (this can include private industry and government bodies) pay for cleanup actions to the

point of bankruptcy. The act also enables citizens to sue the EPA if they find cleanup actions to be insufficient or not conducted with appropriate urgency. The second component of the original act, and the most effective in establishing the Superfund and addressing the larger externality of waste, was a tax on chemical, petroleum, and other hazardous industries. The funds generated by this “superfund tax” pay for the cleanup of “orphan shares”- sites where PFPs cannot be identified or cannot pay. To address orphan shares, the state and federal government share costs, with state governments supplying up to 10% of the funding (CRS, 2013). This tax was allowed to expire in 1995, and the Superfund has since shrunk to a fourth of its initial size (Burda et al. 2014).

CERCLA creates a broad liability scheme to hold polluters financially accountable for cleanup efforts. This includes anyone who owned a facility that released hazardous substances or disposed of them in a negligent way. Multiple parties can be held responsible under joint liability, and parties can be held retroactively responsible for sites that they no longer own but polluted (CRS, 2013).

### **Action Under CERCLA**

CERCLA distinguishes between different types of action in addressing hazardous sites, including containment, removal, or the more involved treatment and remediation of contamination (CRS, 2013). Removal actions have less stringent community engagement requirements and are designed for more expedited approval so that vulnerable citizens can be quickly relocated in an environmental emergency. Strategies such as managed retreat and buyouts fall under the purview of less urgent removal action. Containment strategies can range significantly from capping toxic waste with an impenetrable cement layer to merely circling a toxic site with a chain link fence (Swanston, 1994). Remedial actions are often the most costly

and time-consuming, including dredging multiple feet of topsoil or pumping and purifying contaminated waterways. The average National Priority Listing site cleanup takes over a decade and costs, on average, \$40 million (CRS, 2013).

### **Amendments to CERCLA**

There have been several amendments to CERCLA. A 1986 amendment to the Act exempted certain parties from liability. This is unsurprising, as every industrial entity impacted by CERCLA has lobbied extensively against the bill. The 1986 amendment removed financial lenders and “innocent” property owners (owners who purchased the site unaware of its contaminated status) from being held responsible for cleanups (CRS, 2013).

In 1994, President Clinton signed Executive Order 12898, mandating that the EPA and other federal agencies create environmental justice policies and initiatives (O’Neil, 2007). While not directly part of the CERCLA act, it was anticipated that EO 12898 would impact the implementation of the bill, prioritizing marginalized communities of color for NPL listing and cleanup. The executive order bolstered CERCLA’s goal of equity, but failed to meaningfully channel resources to disadvantaged communities.

Finally, due to extensive political lobbying by industry, the Superfund tax on polluters was allowed to expire in 1995. This struck a significant blow to the Superfund and the hazard remediation process. Without the polluter tax, superfund has been financed by annual congressional appropriations from the general tax fund, which usually constitute less than a quarter of the funds available in the 1990s. The Superfund reached a zero balance in the early 2000s, and now hovers around a billion dollars (Declet-Barreto et al., 2022). This is not nearly enough to finance cleanups of the over 1,000 sites on the NPL, much less sites that have yet to

receive NPL status. As a result, fewer sites have been added to the NPL and fewer cleanups have been initiated or completed (Decllet-Barreto et al., 2022).

While CERCLA has generated significant social benefits by remediating hazardous pollution, the tax expiration has shifted the social costs of this action from the responsible industries to the general tax payer. In addition, there is a social cost of removal and remediation themselves, which often involve extensive construction that lasts years and disrupts the surrounding community. The scope of construction can be so daunting, some communities will opt to live with toxic waste rather than undergo cleanup.

### **CERCLA Site Process**

CERCLA outlines a clear process for identifying and addressing toxic sites, although this process is often politicized, contentious, and can take decades. First, a potential site of concern must be reported, often by a concerned citizen group or local government official. When the site has been reported, the Agency for Toxic Substances and Disease Registry division of the EPA conducts a risk assessment, measuring the variety of chemicals, concentrations, proximity to residential communities and likelihood of chemical migration (CRS, 2013). If a site is deemed dire enough, it is granted National Priority Listing status. These decisions are not always empirical; community activism can hasten NPL status, while PRPs can litigate to resist the listing of the site. With superfund resources scarce, a limited number of sites are listed. Once added to the NPL, a site is eligible for federal funds and the initiation of cleanup efforts.

CERCLA mandates several rounds of community engagement before the EPA can contract cleanup agents. The remedial process itself takes years, and often requires continuous community pressure to be completed. If the site is deemed no longer hazardous, it is removed from the NPL, no longer a Superfund site.

An example of the CERCLA process can be witnessed at Onondaga Lake. Onondaga Lake, adjacent to Syracuse, NY, is one of the most polluted lakes in the world (Chanatry, 2012). It is also a sacred site for the Haudenosaunee people, where the longest-lasting democracy in the world was founded. There are an estimated 40 toxic chemicals combining to make the lake unfishable and unswimmable (NYS Dept. of Environmental Conservation, 2022). Onondaga Lake and its surrounding watershed was designated as a Superfund site on the NPL in 1994, divided into 9 sub-sites. The EPA and New York State Department of Environmental Conservation signed a contract with Honeywell, Inc in 2004, who had inherited liability from a chemical company they subsumed, to dredge 10 feet of toxic mud from the lake bottom. The project has cost over a billion dollars of private and public money, with only one of the 9 sub-sites having been addressed. In 2014 the project was declared finished, but only 85% of the lake floor has been remediated (Chanatry, 2012). Most of the toxic sludge lining the bottoms and banks have been “capped” rather than removed. The cleanup has been disparaged by the community as a “very expensive band-aid”. This is emblematic of many Superfund cleanups, in that the remedial effort was better than the alternative of inaction, but failed to return the environment to anything like its original state of health.

### **Policy Impact and Outcomes**

The success of CERCLA in addressing its goal of security is both evident and insufficient. On an individual site basis, CERCLA has enabled cleanups of perilous hazardous toxic waste where it otherwise would have been financially unfeasible. Yet under 25% of the sites on the NPL have been remediated (Declat-Barreto et al., 2022). The decline in funding has stalled progress, and the annual appropriations Superfund has come to rely on is highly subject to political will. In addition, shifting notions of acceptable risk affect the perceived success of



cleanup efforts. The number of synthetic chemicals in commercial use continues to balloon without comprehensive safety studies and no studies of synergistic effects. As scientists hone their understanding of synergistic toxicity and health effects beyond cancer, such as endocrine disruption, the EPA must respond with more stringent regulations, and the number of hazardous sites and insufficient cleanups grows. In addition, the burden of cost has been shifted onto the general taxpayer rather than industry, essentially failing to correct the market failure of hazardous pollution by decoupling the polluter from the remediation. Still, CERCLA is essential, as it enables cleanup and thus human health security that would be unattainable without federal support.

While CERCLA has exhibited some success in pursuing security, it has more clearly failed to establish equity. CERCLA's implementation has been plagued by a lack of equitable distribution in NPL status and remedial action. Due to redlining, segregation, and socioeconomic disadvantages, marginalized communities are disproportionately exposed to heavy industry and hazardous materials. In 2017 the EPA estimated that people of color account for nearly half of the total population living within three miles of a superfund site, and 70% of superfund sites are located within one mile of government assisted housing (Declet-Barreto et al., 2022). Burda and Harding found in their 2014 study that neighborhoods with more minority populations and socioeconomically disadvantaged residents are less likely to secure NPL listings, and to have less quickly completed remediations. Particularly as its funding has declined, residents must exert political pressure to receive recognition under CERCLA. Communities without the time to organize and the money to litigate for action are left behind.

## **Policy Future**

Despite the drawbacks in its implementation and erosion of the Superfund and liability structure, CERCLA remains a vital piece of legislation. Such a bill is necessary to address the extremely expensive externality of hazardous waste. The federal government took steps to reinvigorate the Superfund and gain ground in pursuing security when the Infrastructure Investment and Jobs Act, signed by President Biden in 2021, reinstated the excise tax on chemical manufacturers and importers (Keck, 2022). Going into effect in June of 2022, the tax applies to the production and transportation of 42 different chemicals, with a rate per ton ranging from \$0.55 to \$9.74 per ton. The reinstated tax is projected to generate over 14.4 billion in revenue annually (Internal Revenue Service, 2022). This repairs a major hole in the sinking ship of CERCLA and will enable a much greater scale of NPL listing and remedial action. There has been less concrete progress towards the goal of equity. Acting on the 1994 environmental justice Executive Order and prioritizing sites in marginalized communities could finally lead CERCLA to meeting its equity goal. While imperfect, CERCLA is a major achievement for the public and vulnerable communities in the face of industry with strong financial and lobbying power.

## References

Anderton, D. L., Oakes, J. M., & Egan, K. L. (1997). Environmental equity in superfund: Demographics of the discovery and prioritization of abandoned toxic sites. *Evaluation Review*, 21(1), 3-26. <https://doi.org/10.1177/0193841X9702100101>

Burda, M., & Harding, M. (2014). Environmental justice: Evidence from superfund cleanup durations. *Journal of Economic Behavior & Organization*, 107, 380-401. <https://doi.org/10.1016/j.jebo.2014.04.028>

Chanatry, D. (2012, July 31). *America's 'most polluted' lake finally comes clean*. NPR. Retrieved November 28, 2022, from <https://www.npr.org/2012/07/31/157413747/americas-most-polluted-lake-finally-comes-clean>

Congressional Research Service, & Fletcher, S. R., Environmental laws: Summaries of major statutes administered by the Environmental Protection Agency (EPA) (2013).

Fletcher, T. H. (2003). *From Love Canal to Environmental Justice: The Politics of Hazardous Waste on the Canada - U.S. Border*. University of Toronto Press. <http://www.jstor.org/stable/10.3138/j.ctt2ttgk4>

*IRS issues Superfund Chemical Excise Taxes Faqs*. Internal Revenue Service. (n.d.). Retrieved December 10, 2022, from <https://www.irs.gov/newsroom/irs-issues-superfund-chemical-excise-taxes-faqs#:~:text=The%20Infrastructure%20Investment%20and%20Jobs,4672%20beginning%20July%201%2C%202022.>

Juan Declet-Barreto, Senior Social Scientist for Climate Vulnerability, Declet-Barreto, J., Senior Social Scientist for Climate Vulnerability, Fellow, M. L. S. V. R., Latner, M., Fellow, S. V. R., Fellow, K. E. K., Ellickson, K., Fellow, K., & Network, U. C. S. S. (2022, November 22). *Superfund site cleanups ignore communities of color*. The Equation. Retrieved December 10, 2022, from <https://blog.ucsusa.org/juan-declet-barreto/superfund-site-cleanups-ignore-communities-of-color/>

Keck, L. M. (2022, October 12). *Superfund excise tax is catching many companies by surprise*. Forbes. Retrieved December 10, 2022, from <https://www.forbes.com/sites/lynnmucenskikeck/2022/07/25/superfund-excise-tax-is-catching-many-companies-by-surprise/?sh=5f003387598a>

*Onondaga Lake*. Onondaga Lake - NYS Dept. of Environmental Conservation. (n.d.). Retrieved November 28, 2022, from <https://www.dec.ny.gov/lands/72771.html>

O'Neil, S. G. (2007). Superfund: Evaluating the impact of executive order 12898. *Environmental Health Perspectives*, 115(7), 1087-1093. <https://doi.org/10.1289/ehp.9903>

Swanston, S. F. (1994). An environmental justice perspective on superfund reauthorization. *St. John's*

*Journal of Legal Commentary*, 9(2), 565.