August 1992

ICJ Research Brief

Superfund: The Private-Sector Experience

In the late 1970s, the discovery of latent toxic landfills like Love Canal stimulated intense public concern over the health and safety risks posed by abandoned waste sites. Such sites presented an acute challenge for policymakers. In many cases, these sites had been closed for years, and the parties originally responsible for the waste were unknown or unavailable to remedy the situation. Furthermore, the magnitude of the remedies required was uncertain and the cost potentially prohibitive.

Superfund's liability approach

In response, Congress established the Superfund program in 1980. Based on the premise that those who caused the problem should pay for the solution, Superfund relies on a liability approach designed to leverage private-sector resources to fund cleanups and identify firms involved in creating the waste. Under this approach, the Environmental Protection Agency (EPA) may either sue suspected polluters—the potentially responsible parties (PRPs)—to compel them to clean up sites, or it may undertake cleanup itself and then sue PRPs to recover costs. Superfund's liability doctrine facilitates this process in two ways. First, it requires only that the government prove involvement at a waste site, not negligence; second, it allows the government to assign total liability for cleanup to any defendants it chooses to name. This doctrine is intended to create incentives for defendants to spread the burden of liability by tapping other involved parties.

From the beginning, Superfund's liability approach has aroused controversy. Critics contend that it creates steep transaction costs (spending to determine who should pay for the cleanups) for private firms and generates more litigation than remediation. Defenders counter that it motivates PRPs to initiate cleanups privately and justifiably shifts the costs of cleanups to the actual polluters. However, these conflicting claims have been difficult to assess in the absence of empirical information about the program's effects on participants.

A quantitative look at private firms' response to Superfund

A recently completed ICJ study offers the first empirical assessment of private parties' involvement with Superfund. The report is the second ICJ study of the Superfund program. The first, which looked at Superfund's progress from EPA's perspective, found that cleanups were proceeding slowly and that EPA had enjoyed only limited success recovering its costs.[1] In *Superfund and Transaction Costs: The Experiences of Insurers and Very Large Industrial Firms*, Jan Paul Acton and Lloyd Dixon examine the experiences of two major nongovernment participants in Superfund: insurance companies and large firms named as PRPs.

The study addresses four questions:

- What is the extent of insurer and PRP involvement in Superfund?
- How much has this involvement cost?
- What proportion of spending goes to transaction costs?
- Are transaction costs affected by site characteristics?

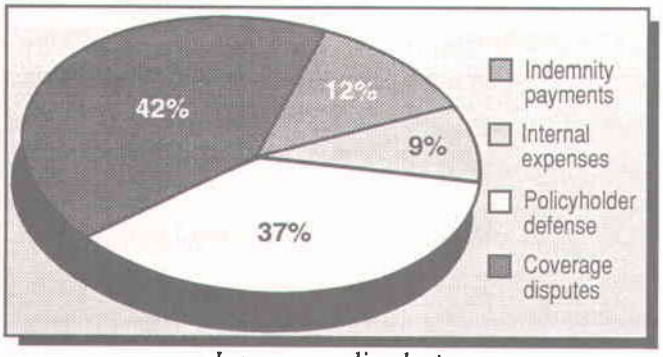
The researchers gathered data from a sample of five very large industrial PRPs and four insurers who were involved at a substantial number of hazardous-waste sites during the 1980s.

[1] Jan Paul Acton, *Understanding Superfund: A Progress Report*, RAND, R-3838-ICJ, 1989.

Insurers increasingly involved and incurring high transaction costs

The study found that insurer involvement in Superfund activities has become extensive and costly. Between 1986 and 1989, claims pending against insurers rose from approximately 650 per firm to 2,200. Over the same period, the average number of policyholders filing claims grew from 200 to 1,000. By 1989, insurers were involved at an average of 1,250 sites per firm. This growing involvement was reflected in sharply increased outlays, up from $9 million per firm in 1986 to $18 million in 1989.

The analysts sorted these outlays into two categories: indemnity payments and transaction costs. They found that a sizable majority of insurer outlays went to transactions: 88 percent annually. About half of the transaction costs went to reimburse policyholders involved in disputes with the government, other PRPs, or private parties over liability, while the other half resulted from disputes with policyholders over whether a claim is covered by their policy. These figures apply to all claims, closed and open; for closed claims alone, transaction costs were slightly lower—69 percent of spending. This difference suggests that most insurer transaction costs occur early in the process, while most indemnity payments occur near the end.



Insurer spending by type

PRP involvement also growing, though transaction costs are lower

By 1989, the very large industrial PRPs were involved at an average of 144 sites each. PRP spending nearly tripled from $2.6 million per company in 1984 to over $6 million in 1989. A small number of very expensive sites—approximately 15 percent of the total—accounted for almost 85 percent of these outlays.

The PRP experience indicates that, to date, transaction costs are not uniformly high. PRP transaction costs averaged only 21 percent of annual outlays. The lower transaction-cost figure for PRPs reflects the fact that they have concentrated spending at sites where the liability is clearest and less litigation occurs. In addition, to date, the sampled firms have spent little in pursuing insurance claims at individual sites. Indications suggest that such spending may increase in the future, which would increase PRP transaction costs.

The PRP figures apply to all sites. However, PRP transaction-cost levels vary according to site characteristics. In general, transaction-costs are lowest at sites where only a single party is involved. A single-party-site's transaction-costs total only 7 percent, compared with 39 percent at sites with multiple parties. In addition, PRP transaction costs—like insurers'—decrease as a fraction of total spending as sites progress in the cleanup process. Sites in the early stages of cleanup incur transaction costs of 46 percent, compared with 23 percent at sites in the later stages.

Completing the picture

Two fundamental questions about Superfund remain unanswered. First, what are the Superfund costs to date for the remaining players—small- and medium-sized PRPs and state and local governments? Second, what will all the costs look like when cleanup is complete at the nation's hazardous-waste sites? Through 1989, cleanup was complete at only 5 percent of Superfund sites. As the program matures, the level and type of outlays for the various parties could shift significantly. For example, if the uncertainty surrounding insurance coverage issues is resolved, insurer transaction-cost shares may decline. On the other hand, post-cleanup litigation by PRPs seeking to spread responsibility may create a new wave of transaction costs. A more complete assessment of Superfund's liability approach will have to await further progress in the program itself.

The research summarized in this brief was carried out within RAND's Institute for Civil Justice. Research results are described in detail in R-4132-ICJ, *Superfund and Transaction Costs: The Experiences of Insurers and Very Large Industrial Firms*, by Jan Paul Acton and Lloyd S. Dixon, 73 pp., $7.50. Prior ICJ work on Superfund is described in R-3838-ICJ, *Understanding Superfund: A Progress Report*, by Jan Paul Acton (1989), 65 pp., $7.50.

RB-9017