



Superfund:

What It Is, How It Works



On April 21, 1980, a fire of unknown origin broke out at an inactive waste treatment facility in Elizabeth, New Jersey. The site was littered with some 20,000 leaking and corroded drums containing pesticides, explosives, radioactive wastes, acids, and other hazardous substances. A cloud of toxic gases skirted heavily-populated areas one-quarter mile from the site. Significant quantities of contaminated water from firefighting ran off into the Elizabeth River.

On February 26, 1979, a freight train derailed near Youngstown, Florida, puncturing a tank car containing 90,000 pounds of chlorine gas, and releasing a chlorine cloud. Eight motorists on a nearby highway were killed, 183 other people were injured, and 3,500 residents within a 7.5 mile radius were evacuated. Other derailed tank cars contained a variety of toxic and flammable substances.

For two and one half decades, hundreds of tons of toxic wastes were dumped into an unfinished canal built by William T. Love in Niagara Falls, New York. The canal was covered when full; houses and a school were later built near and above the canal. In the later 1970s, alarmed by unusual health symptoms, residents of the Love Canal area called the attention of government officials to hazardous substances rising to the surface, seeping into basements, and migrating from the site.

These examples and others demonstrate that the careless disposal of hazardous wastes in the past, and the continuing threat of releases of hazardous substances to the environment are potential problems throughout the nation.

The Superfund program was created by Congress as a key part of the nation's overall response to these hazardous substance problems.

Why Superfund Is Needed

Superfund is established by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, enacted in December 1980. The United States Environmental Protection Agency (EPA) is responsible for managing the Superfund program.

Until this law was passed, the Federal Government lacked the general authority to clean up hazardous waste sites or to respond to spills of hazardous substances onto land or into the air or non-navigable waters. Congress had addressed hazardous waste problems before, but Federal responsibilities were mostly regulatory.

● *The Resource Conservation and Recovery Act (RCRA), passed in 1976, establishes a regulatory system to track hazardous substances from the time of generation to disposal. It also requires safe and secure procedures to be used in treating, storing, and disposing of hazardous substances. RCRA is designed to prevent the creation of new Love Canals, but it does not permit the government to respond directly to the problems caused by improper hazardous waste disposal sites already in existence.*

● *The Clean Water Act and its predecessors enable the Federal Government to take action when oil or designated hazardous substances are discharged into navigable waterways. But they do not permit the government to act when hazardous substances are released elsewhere in the environment, threatening to contaminate groundwater or to emit dangerous fumes.*

These and other environmental laws, such as the Clean Air Act, authorize the Federal Government to take legal action to compel individuals or companies—generators, transporters, or disposers of hazardous substances—to clean up problems for which they are responsible. When a dumpsite is old and abandoned, however, it may be impossible to find anyone responsible for the problem—or anyone able to afford the cost of a cleanup. Moreover, many releases of hazardous substances demand prompt attention to avert serious damage. There may not be enough time for legal proceedings before action must be taken.

Some States had established their own programs for spill response or the cleanup of uncontrolled waste disposal sites. However, like the Federal Government, State governments often lacked the funds and the legal authority needed to deal fully with the problem.

Congress therefore enacted new legislation to establish a five-year program to spearhead both Federal and State efforts to respond to releases of hazardous substances into the environment.

The Superfund Law

The Superfund law of December 1980—CERCLA—authorizes the Federal Government to respond directly to releases (or threatened releases) of hazardous substances and pollutants or contaminants that may endanger public health or welfare. Costs are to be covered by a \$1.6 billion fund, 86 percent of which is financed by taxes on the manufacture or import of certain chemicals and petroleum, the remainder coming from general revenues. This fund is reimbursable: the government generally can take legal action to recover its cleanup costs from those subsequently identified as responsible for the release. Anyone liable for a release who fails to take ordered actions is (under specified conditions) liable for punitive damages equal to three times the government's response costs.

How The Superfund Program Works

The guidelines and procedures that the Federal Government will follow in implementing the Superfund law are spelled out in a flexible regulatory document called "The National Contingency Plan."

The Superfund program is built on the recognition that responses and cleanups must be tailored to the specific needs of each site or each release of hazardous substances. EPA's strong enforcement effort seeks to ensure that private responsible parties finance cleanup actions when possible. Direct government action, when called for, can take the following forms:

- ***Immediate removals***, when a prompt response is needed to prevent harm to public health or welfare or the environment. For example, immediate removals may be ordered to avert fires or explosions, to prevent exposure to acutely toxic substances, or to protect a drinking water supply from contamination. Actions may include the installation of security fencing, the construction of physical

barriers to control a discharge, or the removal of hazardous substances off the site. Ordinarily, immediate removals are limited by law to six months and a total cost of \$1 million.

● ***Planned removals***, when an expedited, but not necessarily immediate, response is needed. These actions are intended to minimize increases in danger or exposure that would otherwise occur if response were delayed. Planned removals are subject to the same time and cost limits as immediate removals.

● ***Remedial actions***, which are longer-term and usually more expensive, aimed at permanent remedies. They may be taken only at sites identified as national priorities. EPA published an interim list of 115 national priority sites in October 1981; the list will eventually be expanded to include some 400 sites. Specific actions may include the removal of drums containing wastes from the site, the installation of a clay "cap" over the site, the construction of ditches and dikes to control surface water or drains, liners, and grout "curtains" to control groundwater, the provision of an alternate water supply, or the temporary or permanent relocation of residents.

The primary responsibility for carrying out the Superfund program has been assigned by Executive Order to EPA. The Coast Guard, however, will respond to spills that occur in coastal areas. Other Federal agencies will provide assistance as necessary during a response. States are encouraged to take responsibility for an increasing number of Superfund-financed remedial actions. Under the law, State governments may plan and manage responses under agreement with the Federal Government. In remedial actions for which the Federal Government has lead responsibility, the Army Corps of Engineers will manage the design and construction stages for EPA. Private contractors will perform the work at a site under Federal or State government supervision.

An important part of the Superfund program is to encourage voluntary cleanup by private industries and individuals when they are responsible for releases. In fact, since the full extent of the problem has

become understood, millions of dollars have been spent by industry for cleanup, as well as for the retrofitting of existing facilities. Additionally, industrial research and development has resulted in significant advances in hazardous waste control technologies.

Working with the local community is a key aspect of every Superfund response. At each site, officials responsible for technical work will ensure that local citizens' and officials' concerns are taken into account in the development of solutions and that information about the site is widely distributed.

The Limits of Superfund

The \$1.6 billion Superfund is large. However, the cost of responding to a hazardous substance release can be large too, and there are many sites and spills in need of attention.

Consequently, while CERCLA authorizes the government to respond to releases of hazardous substances, it does not require the government to respond to every release. At present, private parties handle about 90 percent of all releases that would otherwise require a removal action.

In addition, CERCLA specifies that Superfund money can be spent only under carefully prescribed conditions.

- *A Superfund-financed response may not be taken if EPA determines that the owner, operator, or other responsible party is undertaking an appropriate cleanup.*

- *Immediate removals are taken only to bring a release of hazardous substances under control; they are not intended to eliminate completely every long-term problem. As noted, both immediate and planned removals usually must be limited in cost and duration.*

- *Before a remedial action or planned removal can be taken, States must agree to pay 10 percent of project costs (at least 50 percent if the site was owned by the State or a local government). State governments must also agree to maintain the site after response work is completed and provide for off-site disposal if necessary.*

● *Response under Superfund is not authorized in specified situations that may be covered by other laws (e.g., for certain releases of source, byproduct, or special nuclear material from a nuclear incident).*

Because remedial actions may confront technically complex problems that are expensive to resolve, they are subject to further conditions. Technical measures can be selected only after evaluation of all feasible alternatives on the basis of economic, engineering, and environmental factors. The National Contingency Plan explains how to determine the extent of cleanup that is appropriate and most cost-effective for a particular site. In addition:

● *The law requires that wherever possible, the remedy selected should avoid the costly step of excavating hazardous wastes and transporting them off the site for disposal elsewhere.*

● *The benefits to be derived from continued work at a remedial action site must be weighed against the benefits of working at other sites in the nation. A project could be delayed or terminated to allow funds to be shifted where they are most needed.*

The intent of these conditions is to derive the maximum benefit from Superfund for the nation as a whole.

The Superfund program, in sum, is a coordinated effort of the Federal Government, State and local governments, private industry, and citizens. The problems are widespread and often will require time to resolve. But the Superfund program is a significant part of our national response to one of the major environmental challenges of the decade.

This leaflet provides an overview of Superfund. For further information, please contact an EPA Regional Office or call the national information number listed on back. The toll-free number of the National Response Center is also provided for citizens to report releases of oil and hazardous substances into the environment.

EPA Superfund Offices

Region 1

John F. Kennedy Bldg.
Boston, Massachusetts
02203
(617) 223-5775

Region 2

26 Federal Plaza
New York, New York
10007
(212) 264-0503

Region 3

6th and Walnut Sts.
Philadelphia, Pennsylvania 19106
(215) 597-7370

Region 4

345 Courtland St. N.E.
Atlanta, Georgia
30365
(404) 881-3016

Region 5

230 South Dearborn St.
Chicago, Illinois
60604
(312) 353-2197

Region 6

1201 Elm St.
Dallas, Texas
75270
(214) 767-2645

Region 7

324 East 11th St.
Kansas City, Missouri
64108
(816) 374-3307

Region 8

1860 Lincoln St.
Denver, Colorado
80295
(303) 837-2221

Region 9

215 Fremont St.
San Francisco, California 94015
(415) 556-4606

Region 10

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