

September 1997

# SUPERFUND

## Trends in Spending for Site Cleanups



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**Resources, Community, and  
Economic Development Division**

B-277456

September 4, 1997

Congressional Requesters

The Environmental Protection Agency (EPA) spends about \$1.4 billion a year on the Superfund program to address the potential threats to human health and the environment resulting from hazardous waste sites. The Superfund program is focused on cleaning up the nation's worst hazardous waste sites, known as the National Priorities List (NPL) sites, although Superfund money may also be used to address other releases of hazardous substances into the environment. The Congress is considering proposals to reauthorize the program.

EPA does not clean up hazardous waste sites by itself. Instead, it uses Superfund money to prepare for and implement the cleanups through others. EPA may compel private parties to clean up the contamination for which they are responsible (an action referred to as enforcement). Alternatively, EPA may pay contractors, states, or other federal agencies to prepare for and implement the site cleanups. (In this report, these alternatives are referred to as contractor cleanup work.) Actual cleanups are of two basic types: remedial actions, which are generally long-term, comprehensive cleanups, and removal actions, which are generally shorter-term measures to address immediate health threats. EPA also uses Superfund money to pay for the program's administration and management, research and development, and laboratory analysis.

As agreed with your offices, we analyzed Superfund spending from fiscal year 1987 through fiscal year 1996 to determine (1) of total Superfund spending, how much was for contractor cleanup work, in contrast with other activities; (2) of the money spent on contractor cleanup work, how much was spent on the actual cleanups, in contrast with cleanup preparation; and (3) whether a trend in spending for the actual cleanups could be determined for the years examined, and, if so, what accounted for that trend.

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**Results in Brief**

Both the amount and share of money spent on contractor cleanup work increased from fiscal year 1987 through fiscal year 1996. In fiscal year 1987, \$261 million (in constant 1996 dollars) was spent on contractor cleanup work, or 37 percent of the total Superfund spending of \$702 million. In fiscal year 1996, \$696 million was spent on contractor cleanup work, or 49 percent of the total Superfund spending of \$1.4 billion.

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In both years, the remaining funds were spent on administration, enforcement, and other Superfund activities.

Of the money spent on contractor cleanup work, the amount and share spent on the actual cleanups also increased from fiscal year 1987 through fiscal year 1996. In fiscal year 1987, of the \$261 million the Environmental Protection Agency spent on contractor cleanup work, \$142 million was for the actual cleanups, or 54 percent of the total. In fiscal year 1996, of the \$696 million the agency spent on contractor cleanup work, \$614 million went to the actual cleanups, or 88 percent of the total. In both years, the remaining funds for contractor cleanup work were spent for cleanup preparation—that is, to study site contamination and design the cleanup action.

Annual spending for the actual cleanups increased by about \$472 million from fiscal year 1987 through fiscal year 1996. About half of this increase resulted from spending at a few large-dollar sites (defined as those with \$10 million or more in spending during any 1 year). There were no large-dollar sites in 1987 or 1988; but by 1989, two large-dollar sites accounted for \$28 million in annual spending; and by 1996, nine such sites accounted for \$238 million in annual spending. Two other factors each contributed about 25 percent to the increase in the spending for the actual cleanups. First, the remedial action spending at sites other than the large-dollar sites increased from \$61 million in 1987 to \$180 million in 1996, primarily because the number of these sites grew from 38 in 1987 to 165 in 1996. Second, the amount of money spent on removal actions increased from \$80 million in 1987 to \$196 million in 1996, primarily to address the immediate threats at sites that were not on the National Priorities List.

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## Background

In 1980, the Comprehensive Environmental Response, Compensation, and Liability Act created the Superfund program to clean up highly contaminated hazardous waste sites. To pay for the activities under the Superfund program, the act established a trust fund, financed primarily by taxes on crude oil and certain chemicals. Under the act, EPA has the authority to compel the parties responsible for the contamination to perform the cleanup. EPA may also pay for the cleanup and attempt to recover the cleanup costs in those cases in which a responsible party can be identified. In 1986, amendments to the act added new provisions regarding cleanup methods, community participation, and enforcement actions, among other things.

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EPA arranges to have cleanup preparation and the actual cleanups conducted through one of several entities. EPA may directly hire a contractor to conduct the work, or it may arrange to have the work conducted by another federal agency, usually the Army Corps of Engineers, or a state. Under agreements with other federal agencies or states, EPA transfers the cleanup funds to them, and they in turn generally hire a contractor to conduct the actual site work.

A number of phases occur in cleaning up an NPL site. First, once a site is determined to be contaminated enough to be placed on the NPL, the type and extent of contamination is studied and the alternative remedial actions are analyzed. This phase is known as the study phase. Second, after a cleanup action is selected, technical drawings and specifications for the remedial action are developed. This phase is known as the design phase. (We define spending for these first two steps as “cleanup preparation spending.”) Finally, the remedial action is constructed or implemented; this action is usually a long-term project that can continue over several years. In addition, EPA can use Superfund funds to pay for removal actions—shorter-term actions that generally address immediate threats from hazardous substances.<sup>1</sup> Removal actions may occur at NPL sites, or more commonly, at non-NPL sites. (We define spending for remedial and removal actions as “actual cleanup spending.” According to the director of the Superfund program office, EPA uses the term “cleanup” generally to refer to both cleanup preparation spending and actual cleanup spending.)

Other Superfund spending covers (1) costs directly related to cleanups, including EPA’s salaries and travel for cleanup oversight and the costs associated with screening sites for inclusion on the NPL; (2) enforcement, including costs related to the oversight of responsible parties’ cleanups and to EPA’s legal staff for negotiating and settling with responsible parties; (3) research and development, and laboratory analysis, including the costs of EPA’s scientists, innovative technology programs, and the evaluation of hazardous waste samples; and (4) administration and support, including indirect costs for the Superfund program, such as rent, utilities, and accounting systems.

All dollar amounts in this report have been converted to constant 1996 dollars. Appendix I provides both the constant and the current dollar

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<sup>1</sup>In 1996, we reported that using the removal process instead of the remedial process at portions of Superfund sites can save time and money and expedite the protection of human health and the environment. See [A Superfund Tool for More Efficient Cleanups](#) (GAO/RCED-96-134R, Apr. 15, 1996).

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amounts of Superfund expenditures from fiscal year 1987 through fiscal year 1996.

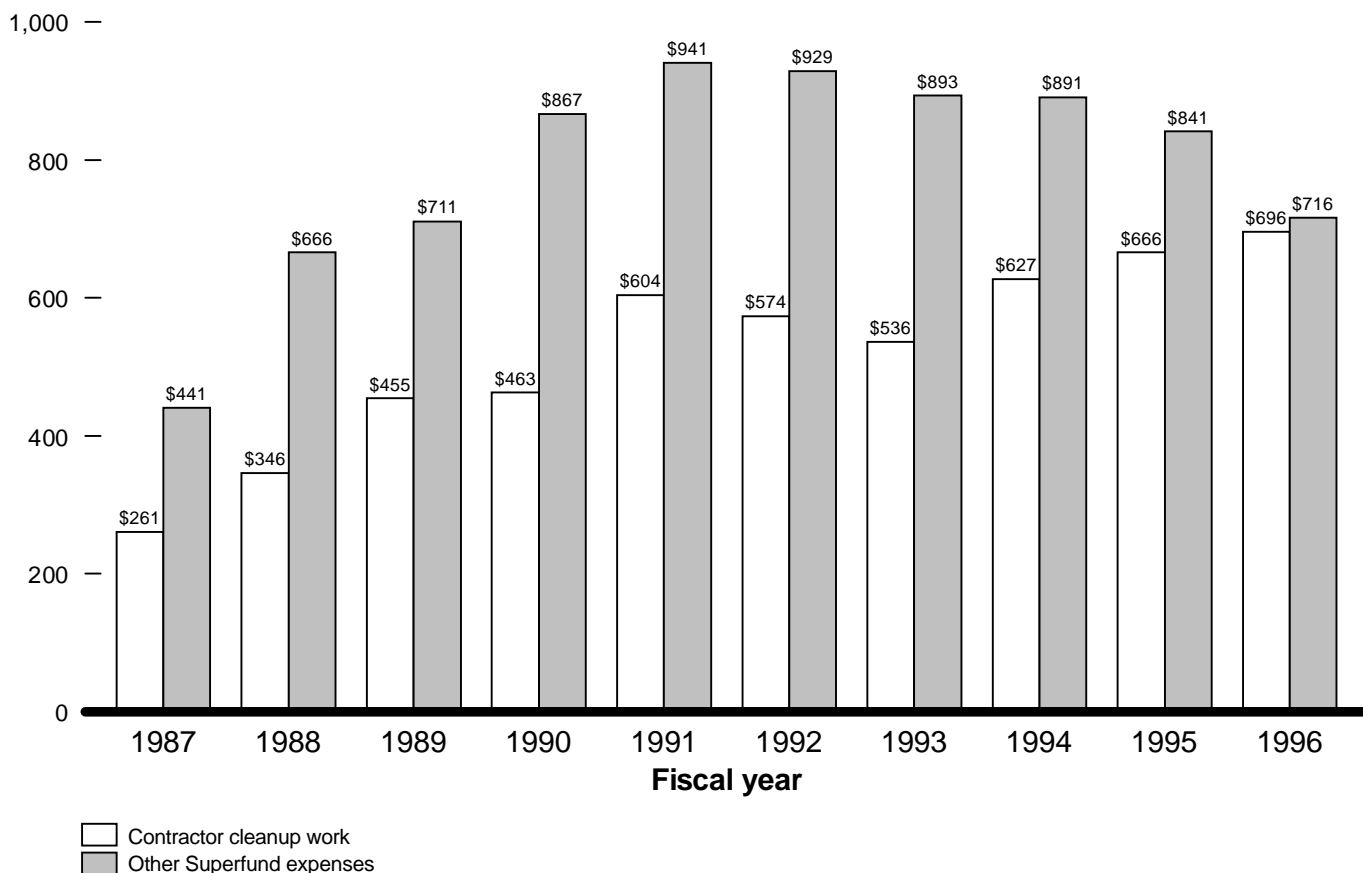
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## Spending on Contractor Cleanup Work Increased

From fiscal year 1987 through fiscal year 1996, Superfund spending for contractor cleanup work increased from \$261 million to \$696 million (in constant 1996 dollars). As figure 1 shows, the funds spent for contractor cleanup work generally increased each year. The amount spent on other Superfund activities increased each year from 1987 through 1991, but decreased each year from 1991 through 1996.

**Figure 1: Contractor Cleanup Work and Other Superfund Expenses in 1996 Constant Dollars, Fiscal Year 1987 Through Fiscal Year 1996**

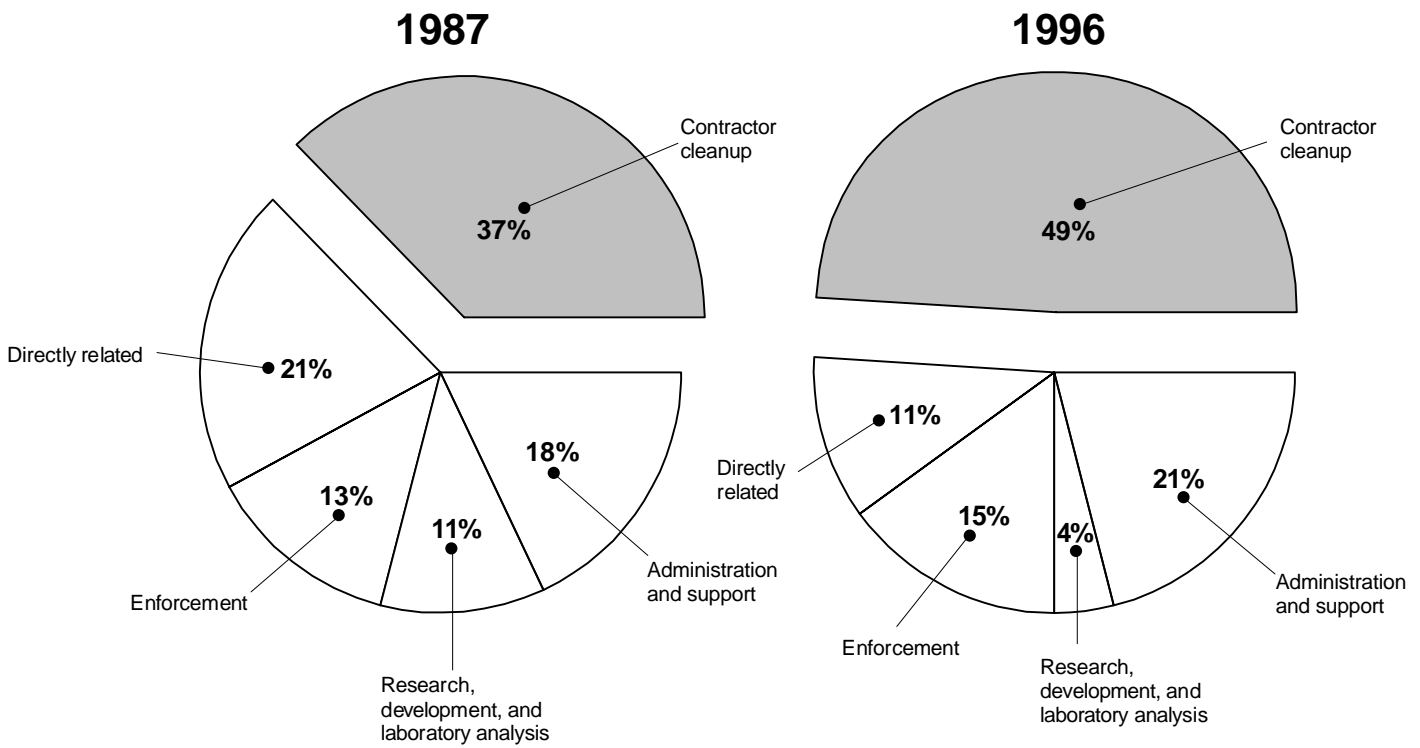
Dollars in millions



Over the same period, the spending on contractor cleanup work also increased as a percentage of total Superfund spending. Contractor cleanup work accounted for 37 percent of total spending in fiscal year 1987 and 49 percent in fiscal year 1996. The spending for the other Superfund activities declined during the period, from 63 percent in 1987 to 51 percent in 1996. Within this category, the percentages spent on directly related costs and research and development and laboratory analysis decreased,

while the percentages spent on enforcement and administration and support increased, as shown in figure 2.

Figure 2: Changes in the Composition of Superfund Spending, Fiscal Years 1987 and 1996

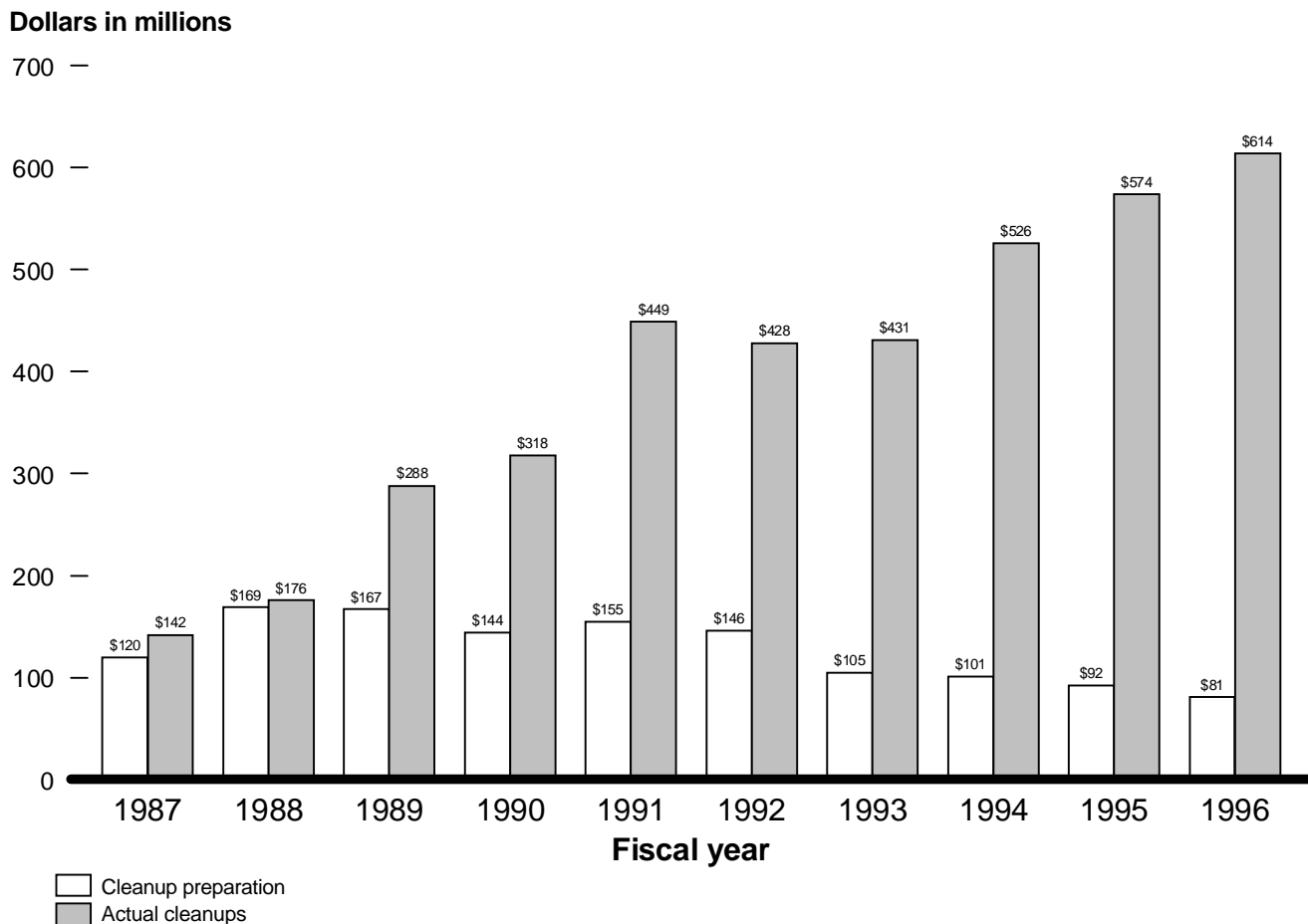


### Spending for Actual Cleanups Also Increased

EPA's spending on the actual cleanups increased from fiscal year 1987 through fiscal year 1996, while spending on cleanup preparation declined. As figure 3 shows, spending on the actual cleanups rose from \$142 million in 1987 to \$614 million in 1996. In contrast, spending on cleanup preparation increased from \$120 million in 1987 to \$169 million in 1988 but generally decreased each year thereafter, dropping to \$81 million in 1996.



**Figure 3: Cleanup Preparation Spending and Actual Cleanup Spending in 1996 Constant Dollars, Fiscal Year 1987 Through Fiscal Year 1996**



Note: The spending for the cleanup preparation and the actual cleanups may not add to total spending for contractor cleanups because of rounding.

From fiscal year 1987 through fiscal year 1996, the spending for the actual cleanups also increased as a percentage of total spending for contractor cleanup work. The spending for the actual cleanups accounted for 54 percent of the spending for contractor cleanup work in 1987 and

88 percent in 1996. Conversely, the spending for cleanup preparation declined during the period, from 46 to 12 percent.

### A Few Large-Dollar Sites Primarily Accounted for Increased Spending on Actual Cleanups

About half of the increase in the spending on the actual cleanups from fiscal year 1987 through fiscal year 1996 resulted from the growth in the spending at a few large-dollar sites. The increased spending at other remedial action sites and for removals accounted for the remainder.

### Large-Dollar Sites Were the Most Significant Factor in the Increase in Actual Cleanup Spending

Of the approximately \$472 million increase in spending for the actual cleanups from fiscal year 1987 through fiscal year 1996, about \$356 million was for remedial actions and about \$116 million was for removal actions. We found a substantial variation in the annual spending per site. For example, in 1996, of the 327 sites where EPA spent money for remedial actions, it spent less than \$10,000 at each of 153 sites,<sup>2</sup> \$10,000 to \$10 million at each of 165 sites, and \$10 million or more at each of 9 sites, as shown in table 1. (App. II provides a list of the nine large-dollar sites and the amount of remedial action spending at those sites in 1996.)

**Table 1: Distribution of Remedial Action Spending, by Amount of Spending Per Site, Fiscal Year 1996**

Annual spending per site	Number of sites	Spending (dollars in millions)	Percentage of sites	Percentage of spending
Less than \$10,000	153	\$0.3	46.8	0.1
\$10,000 to \$10 million	165	179.9	50.4	43.0
\$10 million or more	9	237.9	2.8	56.9
<b>Total</b>	<b>327</b>	<b>\$418.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Numbers may not add to totals because of rounding.

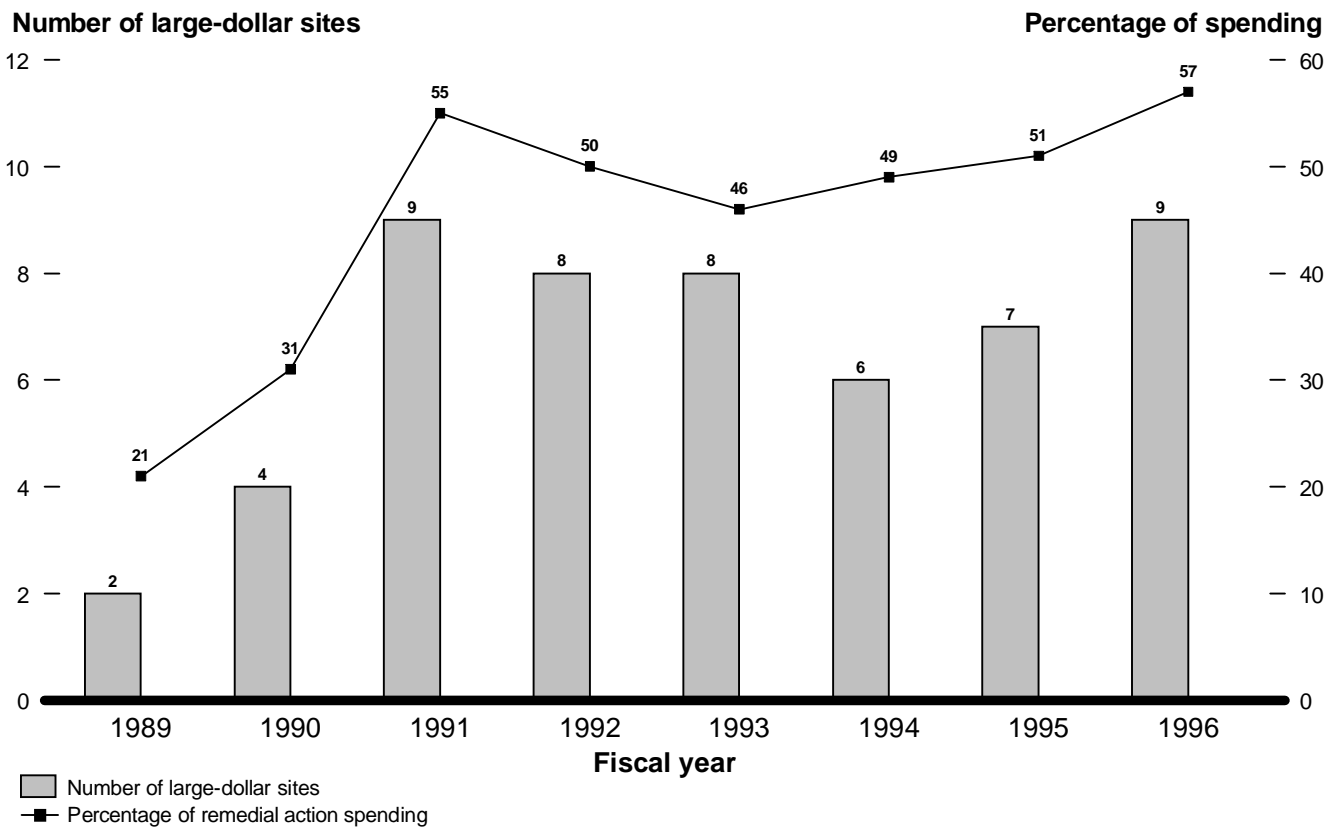
The number of large-dollar sites generally increased from fiscal year 1987 through fiscal year 1996, as shown in figure 4. There were no such sites in 1987 or 1988, two in 1989, and nine in 1996. In dollar terms, \$28 million was spent on large-dollar sites in 1989 and \$238 million in 1996. Thus,

<sup>2</sup>According to EPA's officials, charges this small were most likely to represent adjustments to previous years' expenditures at a site, not ongoing activity. Therefore, we excluded these sites from the following analysis of site-by-site spending patterns.

large-dollar sites accounted for half of the \$472 million increase in spending for the actual cleanups that occurred from 1987 through 1996.

Moreover, the percentage of the spending on remedial actions at such sites generally increased from fiscal year 1987 through fiscal year 1996. There was no spending for remedial action at such sites in 1987 or 1988, 21 percent in 1989, and 57 percent in 1996, as also shown in figure 4.

**Figure 4: Remedial Action Spending at Large-Dollar Sites, Fiscal Year 1987 Through Fiscal Year 1996**



Note: Large-dollar sites are those with annual spending of \$10 million or more in 1996 constant dollars for at least 1 year. There were no such sites in 1987 or 1988.

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**Spending at Other Remedial Action Sites Also Contributed to the Increase in Actual Cleanup Spending**

At sites other than those in the large-dollar category, spending increased from \$61 million in fiscal year 1987 to \$180 million in fiscal year 1996. This \$119 million increase accounted for 25 percent of the growth in the spending for the actual cleanups. This increase resulted primarily from a growth in the number of such sites at which EPA spent money, although the number of sites leveled off after 1993. The average annual amount spent at sites other than the large-dollar sites changed little during this period.

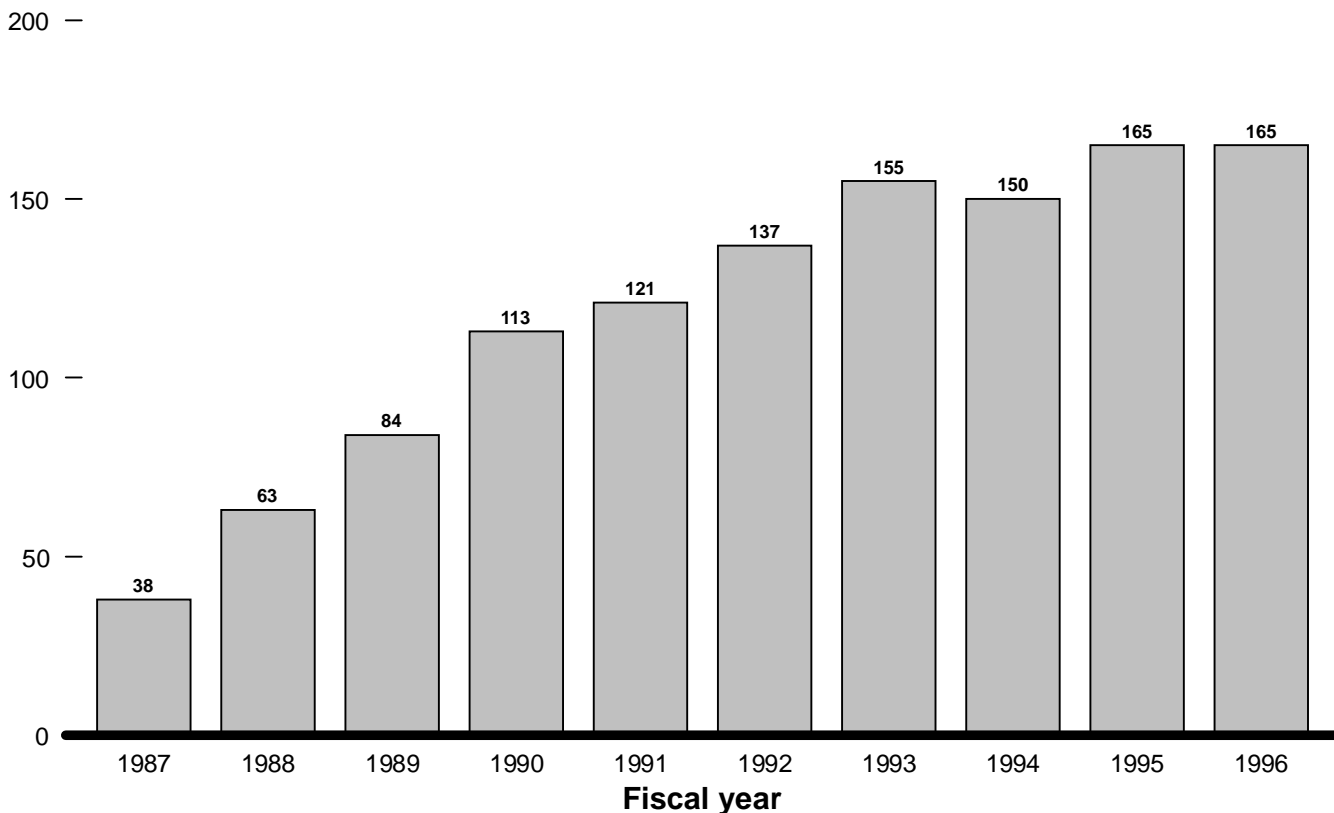
Excluding the large-dollar sites and the sites with annual spending of less than \$10,000,<sup>3</sup> the number of sites receiving funds for remedial action increased from 38 in fiscal year 1987 to 165 in fiscal year 1996. However, the increase was not steady. The number of these sites increased from 38 to 155 from fiscal year 1987 through fiscal year 1993, and from 155 to 165 from fiscal year 1993 through fiscal year 1996, as shown in figure 5.

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<sup>3</sup>Spending at sites with annual disbursements of less than \$10,000 amounted to 0.04 percent of total spending during the 10-year period.

**Figure 5: Number of Sites With Spending for Remedial Action, Fiscal Year 1987 Through Fiscal Year 1996**

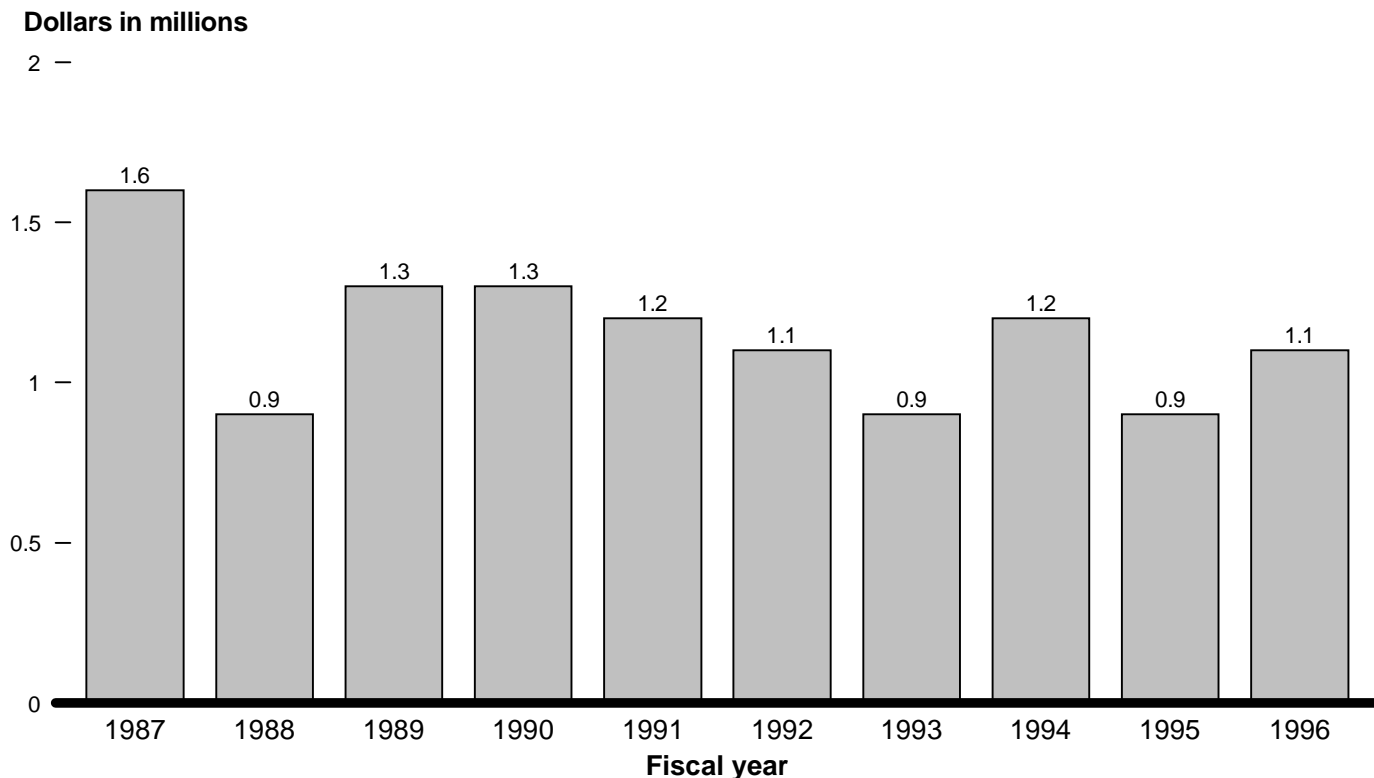
**Remedial action sites**



Note: We excluded (1) sites with annual spending of \$10 million or more and (2) sites with annual spending of less than \$10,000, both in 1996 constant dollars.

Moreover, when the large-dollar sites and those with little spending are excluded, the average annual amount spent per site changed only slightly during this period. Specifically, the average spending ranged between \$0.9 million and \$1.3 million, except in 1987, when the average annual spending per site was \$1.6 million. (See fig. 6.)

**Figure 6: Average Annual Spending for Remedial Action Per Site, in 1996 Constant Dollars, Fiscal Year 1987 Through Fiscal Year 1996**



Note: We excluded (1) sites with annual spending of \$10 million or more and (2) sites with annual spending of less than \$10,000, both in 1996 constant dollars.

### Spending on Removal Actions Also Increased

The spending on removal actions also contributed to the increase in actual cleanup spending from fiscal year 1987 through fiscal year 1996. This spending increased from \$80 million in fiscal year 1987 to \$196 million in fiscal year 1996. This \$116 million increase accounted for 25 percent of the overall \$472 million increase in actual cleanup spending.

While the spending on remedial action is limited to the NPL sites by EPA's regulations, the spending on removal action usually occurs at non-NPL sites. In fact, from fiscal year 1987 through fiscal year 1996, about 80 percent of the removals EPA funded were at non-NPL sites. EPA

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undertakes removals at non-NPL sites if it determines that an immediate threat exists to human health or the environment.

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## Agency Comments

We provided copies of a draft of this report to EPA for review and comment. EPA said that the report's analysis is sound. EPA also commented that, in representations to the Congress and the public, it uses the term "cleanup" to include studying and designing cleanups (which we refer to as "cleanup preparation"), as well as field work to implement site remedies (which we refer to as "actual cleanups"). We added this clarification where appropriate. (App. IV contains EPA's comments.)

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We conducted our review from January through August 1997 in accordance with generally accepted government auditing standards. See appendix III for the details of our scope and methodology.

As arranged with your offices, we plan no further distribution of this report until 15 days after the date of this letter unless you publicly announce its contents earlier. At that time, we will send copies of the report to other appropriate congressional committees and to the Administrator of EPA. We will also make copies available to others upon request.

Should you need further information, please call me at (202) 512-6111. Major contributors to this report are listed in appendix V.



Lawrence J. Dyckman  
Associate Director, Environmental  
Protection Issues

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Congressional Requesters

The Honorable Thomas J. Bliley, Jr.  
Chairman, Committee on Commerce  
House of Representatives

The Honorable Michael G. Oxley  
Chairman, Subcommittee on Finance  
and Hazardous Materials  
Committee on Commerce  
House of Representatives

The Honorable Bud Shuster  
Chairman, Committee on Transportation  
and Infrastructure  
House of Representatives

The Honorable Sherwood C. Boehlert  
Chairman, Subcommittee on Water Resources  
and Environment  
Committee on Transportation  
and Infrastructure  
House of Representatives



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Abbreviations

EPA	Environmental Protection Agency
FMS	Financial Management System
IFMS	Integrated Financial Management System
NPL	National Priorities List

# Superfund Spending Categories

This appendix provides detailed information on Superfund disbursements for fiscal years 1987 through 1996 in constant 1996 dollars (table I.1) and in current dollars (table I.2).

**Table I.1: Superfund Net Disbursements, Fiscal Year 1987 Through Fiscal Year 1996, in 1996 Constant Dollars**

Dollars in millions

Inflation factor and type of disbursement	Fiscal year										Total
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Inflation factor	0.7546	0.7810	0.8140	0.8473	0.8839	0.9099	0.9338	0.9555	0.9793	1.0000	
<b>Contractor cleanup work</b>											
Remedial investigation/feasibility study	\$105.5	\$142.7	\$128.7	\$108.8	\$105.8	\$81.3	\$55.7	\$55.9	\$48.9	\$41.3	\$874.7
Remedial design	14.4	26.7	38.3	35.5	49.6	64.6	48.8	45.1	43.1	39.8	\$405.8
Remedial actions	61.4	60.7	185.8	207.4	321.0	300.7	250.5	337.3	312.7	418.5	\$2,456.0
Removal actions	80.2	115.8	102.0	111.1	127.6	127.2	180.9	188.4	261.6	195.9	\$1,490.6
<b>Subtotal</b>	<b>\$261.4</b>	<b>\$345.9</b>	<b>\$454.8</b>	<b>\$462.8</b>	<b>\$604.0</b>	<b>\$573.7</b>	<b>\$535.9</b>	<b>\$626.7</b>	<b>\$666.4</b>	<b>\$695.5</b>	<b>\$5,227.2</b>
<b>Directly related cleanup costs</b>											
Removal support and management	\$35.2	\$58.5	\$59.4	\$61.7	\$64.4	\$84.4	\$64.7	\$91.0	\$54.9	\$45.4	\$619.7
Remedial support and management	85.8	98.5	111.0	103.2	90.0	81.1	96.7	71.4	78.6	53.5	\$869.8
Site assessment	22.6	37.4	34.2	39.3	32.3	51.4	52.1	52.7	53.6	43.1	\$418.5
Other	1.2	(13.2)	0.3	0.1	0.7	0.7	(0.4)	7.7	12.7	16.9	\$26.7
<b>Subtotal</b>	<b>\$144.7</b>	<b>\$181.3</b>	<b>\$204.9</b>	<b>\$204.3</b>	<b>\$187.4</b>	<b>\$217.6</b>	<b>\$213.1</b>	<b>\$222.7</b>	<b>\$199.8</b>	<b>\$158.9</b>	<b>\$1,934.6</b>
<b>General administrative and support management</b>											
<b>Subtotal</b>	<b>\$126.8</b>	<b>\$214.0</b>	<b>\$230.0</b>	<b>\$330.2</b>	<b>\$385.1</b>	<b>\$342.1</b>	<b>\$279.1</b>	<b>\$296.0</b>	<b>\$317.0</b>	<b>\$299.4</b>	<b>\$2,819.6</b>
<b>Enforcement</b>											
Preenforcement activities	\$5.6	\$14.6	\$15.3	\$17.0	\$15.7	\$18.8	\$16.0	\$12.2	\$8.5	\$7.1	\$130.8
Oversight of responsible parties	26.3	35.8	38.7	54.5	64.8	79.5	77.3	75.4	64.5	45.4	\$562.3
Judicial enforcement	3.5	4.8	3.5	34.9	16.1	25.8	24.1	19.2	26.5	26.5	\$185.0

(continued)

**Appendix I  
Superfund Spending Categories**

Dollars in millions

Inflation factor and type of disbursement	Fiscal year										Total
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
Enforcement support and management	55.4	71.3	70.3	87.9	142.7	117.3	125.0	106.2	113.1	122.4	\$1,011.6
Other	0.8	18.4	3.2	5.0	5.9	6.7	6.0	6.9	4.4	2.9	\$60.1
<b>Subtotal</b>	<b>\$91.6</b>	<b>\$145.0</b>	<b>\$131.0</b>	<b>\$199.3</b>	<b>\$245.1</b>	<b>\$248.0</b>	<b>\$248.3</b>	<b>\$219.9</b>	<b>\$216.9</b>	<b>\$204.4</b>	<b>\$1,949.7</b>
<b>R&amp;D/laboratory analysis</b>											
Research and development activities	\$25.5	\$52.8	\$69.5	\$77.6	\$82.2	\$89.2	\$103.6	\$113.0	\$70.9	\$19.5	\$703.7
Laboratory activities	52.2	73.1	75.7	55.9	41.1	32.3	49.0	39.0	36.0	34.1	\$488.3
<b>Subtotal</b>	<b>\$77.7</b>	<b>\$125.8</b>	<b>\$145.2</b>	<b>\$133.5</b>	<b>\$123.3</b>	<b>\$121.5</b>	<b>\$152.6</b>	<b>\$152.0</b>	<b>\$106.9</b>	<b>\$53.6</b>	<b>\$1,192.0</b>
<b>Total net disbursements</b>	<b>\$702.1</b>	<b>\$1,012.0</b>	<b>\$1,165.9</b>	<b>\$1,330.1</b>	<b>\$1,545.0</b>	<b>\$1,502.9</b>	<b>\$1,428.9</b>	<b>\$1,517.2</b>	<b>\$1,507.0</b>	<b>\$1,411.9</b>	<b>\$13,123.1</b>

**Appendix I  
Superfund Spending Categories**

**Table I.2: Superfund Net Disbursements, Fiscal Year 1987 Through Fiscal Year 1996, in Current Dollars**

Dollars in millions

Type of disbursement	Fiscal year										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Total
<b>Contractor cleanup work</b>											
Remedial investigation/feasibility study	\$79.6	\$111.4	\$104.7	\$92.2	\$93.5	\$74.0	\$52.1	\$53.4	\$47.9	\$41.3	\$750.2
Remedial design	10.9	20.8	31.2	30.1	43.8	58.7	45.5	43.1	42.2	39.8	\$366.2
Remedial actions	46.3	47.4	151.2	175.8	283.8	273.6	233.9	322.3	306.2	418.5	\$2,259.0
Removal actions	60.5	90.4	83.0	94.1	112.8	115.7	168.9	180.0	256.2	195.9	\$1,357.6
<b>Subtotal</b>	<b>\$197.3</b>	<b>\$270.1</b>	<b>\$370.2</b>	<b>\$392.1</b>	<b>\$533.9</b>	<b>\$522.1</b>	<b>\$500.4</b>	<b>\$598.8</b>	<b>\$652.6</b>	<b>\$695.5</b>	<b>\$4,733.0</b>
<b>Directly related cleanup costs</b>											
Removal support and management	\$26.5	\$45.7	\$48.4	\$52.2	\$56.9	\$76.8	\$60.4	\$86.9	\$53.8	\$45.4	\$553.2
Remedial support and management	64.7	77.0	90.4	87.4	79.6	73.8	90.3	68.2	77.0	53.5	761.8
Site assessment	17.0	29.2	27.8	33.3	28.6	46.7	48.6	50.3	52.5	43.1	\$377.1
Other	0.9	(10.3)	0.2	0.1	0.6	0.6	(0.3)	7.4	12.4	16.9	\$28.5
<b>Subtotal</b>	<b>\$109.2</b>	<b>\$141.6</b>	<b>\$166.8</b>	<b>\$173.1</b>	<b>\$165.7</b>	<b>\$198.0</b>	<b>\$199.0</b>	<b>\$212.8</b>	<b>\$195.6</b>	<b>\$158.9</b>	<b>\$1,720.5</b>
<b>General administrative and support management</b>											
<b>Subtotal</b>	<b>\$95.7</b>	<b>\$167.1</b>	<b>\$187.2</b>	<b>\$279.8</b>	<b>\$340.4</b>	<b>\$311.3</b>	<b>\$260.6</b>	<b>\$282.8</b>	<b>\$310.4</b>	<b>\$299.4</b>	<b>\$2,534.7</b>
<b>Enforcement</b>											
Preenforcement activities	\$4.2	\$11.4	\$12.4	\$14.4	\$13.8	\$17.1	\$15.0	\$11.7	\$8.3	\$7.1	\$115.5
Oversight of responsible parties	19.9	28.0	31.5	46.2	57.3	72.3	72.2	72.0	63.2	45.4	\$508.0
Judicial enforcement	2.7	3.8	2.9	29.5	14.3	23.5	22.5	18.4	25.9	26.5	\$169.9
Enforcement support and management	41.8	55.7	57.2	74.5	126.1	106.7	116.7	101.4	110.7	122.4	\$913.4
Other	0.6	14.4	2.6	4.2	5.2	6.1	5.6	6.6	4.3	2.9	52.4
<b>Subtotal</b>	<b>\$69.1</b>	<b>\$113.3</b>	<b>\$106.7</b>	<b>\$168.9</b>	<b>\$216.7</b>	<b>\$225.7</b>	<b>\$231.9</b>	<b>\$210.1</b>	<b>\$212.4</b>	<b>\$204.4</b>	<b>\$1,759.1</b>

(continued)

**Appendix I  
Superfund Spending Categories**

Dollars in millions

Type of disbursement	Fiscal year										Total
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	
<b>R&amp;D/Laboratory analysis</b>											
Research and development activities	\$19.2	\$41.2	\$56.6	\$65.8	\$72.7	\$81.1	\$96.7	\$108.0	\$69.4	\$19.5	\$630.2
Laboratory activities	39.4	57.1	61.6	47.4	36.3	29.4	45.7	37.2	35.2	34.1	423.5
<b>Subtotal</b>	<b>\$58.6</b>	<b>\$98.3</b>	<b>\$118.2</b>	<b>\$113.1</b>	<b>\$109.0</b>	<b>\$110.6</b>	<b>\$142.5</b>	<b>\$145.2</b>	<b>\$104.6</b>	<b>\$53.6</b>	<b>\$1,053.7</b>
<b>Total net disbursements</b>	<b>\$529.8</b>	<b>\$790.4</b>	<b>\$949.1</b>	<b>\$1,127.0</b>	<b>\$1,365.6</b>	<b>\$1,367.5</b>	<b>\$1,334.4</b>	<b>\$1,449.7</b>	<b>\$1,475.7</b>	<b>\$1,411.9</b>	<b>\$11,801.1</b>

# Superfund Sites With \$10 Million or More in Remedial Action Spending, Fiscal Year 1996

Dollars in millions		
Site	State	1996 spending
Bridgeport Rental and Oil Services	New Jersey	\$62.2
Baird & McGuire	Massachusetts	40.4
Raymark Industries	Connecticut	30.8
Sharon Steel	Utah	21.5
Summitville Mine	Colorado	20.5
Drake Chemical Corp.	Pennsylvania	19.5
Southern Shipbuilders	Louisiana	17.2
Portland Cement	Utah	13.5
Bunker Hill Mining & Metallurgical	Idaho	12.2
<b>Total</b>		<b>\$237.9</b>

Note: Spending amounts do not add to total because of rounding.



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# Scope and Methodology

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To determine how Superfund spending was apportioned from fiscal year 1987 through fiscal year 1996, we obtained information from the Environmental Protection Agency's (EPA) Integrated Financial Management System (IFMS) and its predecessor, the Financial Management System (FMS). (IFMS replaced FMS as the agency's official financial information system in 1989.) Working with officials from EPA's Office of the Comptroller, we established categories for Superfund spending and allocated the Superfund expenditures into those categories. To identify the factors accounting for increased spending on the actual cleanups, we analyzed site-by-site Superfund expenditures for each fiscal year from 1987 through 1996. We discussed our analysis with EPA officials from both the Comptroller's office and the Superfund program office. They generally agreed that our analysis was appropriate.

We did not assess the reliability of the data contained in IFMS as part of this review. However, in a 1995 review of IFMS, we found instances of inaccurate and incomplete data in the system.<sup>4</sup> While we did not consider these instances to be representative of the overall integrity of the IFMS data, we recommended that EPA conduct statistical testing of the data, and EPA has done that. To provide additional assurance about the reliability of the IFMS data, we verified that, for each fiscal year included in our analysis, the site-by-site cleanup expenditures added up to the annual cleanup expenditure totals reported in the system. The sum of the cleanup expenditures closely matched the annual total for each year, except 1989. Officials from the Office of the Comptroller explained that the discrepancy for 1989 is related to the conversion from FMS to IFMS that occurred that year. They stated that reconciling the differences between the two totals would be very difficult. We did not attempt such a reconciliation because data for a single year have a relatively minor effect on the 10-year trends observed in our analysis.

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<sup>4</sup>Superfund: System Enhancements Could Improve the Efficiency of Cost Recovery (GAO/AIMD-95-177, Aug. 25, 1995).

# Comments From the Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 12 1997

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Lawrence J. Dyckman  
Associate Director  
Environmental Protection Issues  
United States General Accounting Office  
Washington, D. C. 10548

Dear Mr. Dyckman:

Thank you for the opportunity to review the draft GAO Report -- Superfund: Trends in Spending for Site Cleanups. During their research and analysis for this undertaking we found the GAO staff to be professional, courteous, and very considerate of the concurrent demands on the time of my staff. We tried to accommodate all requests from the GAO team and their associated time frames, and we appreciate their flexibility in working within our own time constraints.

While we find the report's analysis to be sound, there is one significant point that we would like to raise. The term "cleanup" has become a term of art in the context of the national budget debate regarding Superfund. This report could lead to considerable confusion if it is not explicitly pointed out in the text that the Agency defines the term "cleanup" to include activities that directly support the process of being able to conduct field work for site remedies. Therefore, in the Agency's representations to congress and the public, activities in the areas of study and design constitute cleanup. This difference in terminology should be explained in the final report to avoid any potential confusion.

If you have any questions or require further information, please do not hesitate to call Robin Richardson at 703-603-8912 or John Smith at 703-603-8802 of my staff.

Sincerely,

A handwritten signature in cursive script that reads "Stephen D. Luftig".

Stephen D. Luftig, Director  
Office of Emergency and Remedial Response

cc: Andrew Kreider

# Major Contributors to This Report

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