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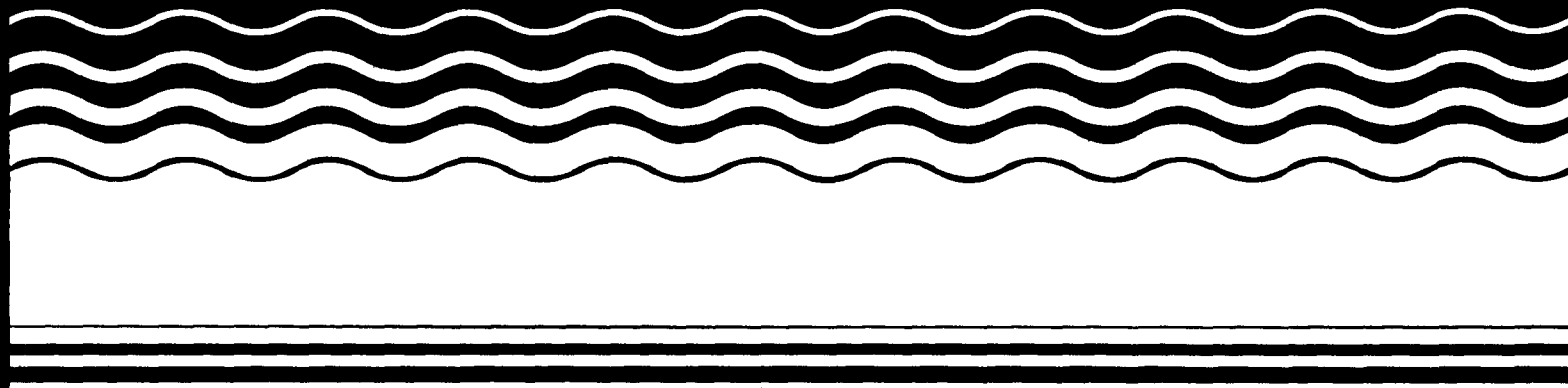


Association of State and Territorial

ASTSWMO

Solid Waste Management Officials

A Report on State/Territory Non-NPL Hazardous Waste Site Cleanup Efforts for the Period 1980 - 1992



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Preface

This report was sponsored by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the U. S. Environmental Protection Agency (EPA). The combined dedication of their management and staff was instrumental to the project's success.

In addition, the dedication, time and resources provided by the States and Territories in preparing and submitting the requested data is to be commended; particularly since their participation was voluntary.

The focus of the report is on the non-National Priority List (NPL) hazardous waste sites being cleaned up by the States/Territories. However, in order to tell the whole Superfund program story, data on Federal hazardous waste cleanup efforts have been included. The time frame of the data is 1980 through 1992, except in a few instances, as noted. The report, therefore, is historic in nature and tells the story of what has happened rather than what is expected to happen.

The extensive efforts of ASTSWMO, EPA and the States and Territories have been successful in preparing this report, which is the first of its kind in the life of the Superfund Program. Special thanks are also extended to the contractor, Kensington Systems, Inc. (KSI), who provided the major support for this effort.

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EXECUTIVE SUMMARY

Introduction

This report presents the results of an analysis of the State/Territory non-National Priorities List (non-NPL) cleanup activities in the United States. It discusses Superfund removal and remedial actions, the predominant remedies selected, and the costs of cleanup.

The time frame of the data presented within this report covers the period from 1980 through 1992. The report focuses on State/Territory non-NPL hazardous waste cleanup efforts. However, to afford a full view of all Superfund cleanup efforts, data on Federal hazardous waste cleanups are included.

A key point is that the data is historical. The report represents what has happened over the first twelve years of the Superfund program. It does not purport to represent what is currently happening in Superfund or what is anticipated to happen in Superfund.

This Executive Summary presents highlights of how the study was conducted, the data collected and the analysis performed. It commences with the identification of the need for the data and concludes with a discussion of the results obtained. This Executive Summary is divided into sections on State/Territory data, Federal data, combined data, and the conclusions drawn from the data.

The Universe of Sites

In understanding the universe of abandoned or uncontrolled hazardous waste sites, it is important to understand how the United States Environmental Protection Agency (EPA) determines sites for Federal Superfund response. The computer database known as the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) contains a listing of all abandoned or uncontrolled hazardous waste sites that have been reported to EPA as potential Superfund sites. As of December 31, 1992, a total of 36,781 sites were included in CERCLIS. This study focuses on State/Territory sites where, at least, a Preliminary Assessment (PA) or removal action had been completed. By subtracting Federal sites that still needed a PA and adding some actions that were not in CERCLIS, the universe for this study was 35,166 sites.

EPA has a statutory requirement to use Superfund resources to remediate the most serious of these sites. The process EPA uses to identify the appropriate sites for action begins with an assessment for any imminent threats to human health or the environment;

if such threats are identified, an emergency removal action is taken. Next, a PA is performed to determine the likelihood of serious potential threats. If a site is not "screened out" during the PA, a Site Inspection (SI) is performed. An SI includes field sampling and analysis to quantify the site's contamination. If a site is not screened out during the SI stage, it is scored for potential listing on the National Priorities List (NPL), and those that meet listing criteria are added to the NPL. In December 1992, there were 1,280 NPL sites.

For those sites that are "screened out" at any one of the above steps, EPA determines that No Further Remedial Action is Planned (NFRAP). These NFRAP sites are referred to States or other EPA programs for any further response action. NFRAP sites that are referred to the States and Territories are a major source of sites addressed by the States and Territories and, hence, are the focus of this study.

State/Territory Data

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the U.S. Environmental Protection Agency (EPA) acknowledged that a void existed with regard to data on the cleanup efforts of the States and Territories at non-NPL hazardous waste sites. To fill this void, States and Territories were asked to provide data on site status, predominant remedies, State and potentially responsible party (PRP) cleanup costs, start and completion dates, and site identification information like name, location and State ID number.

This information has been entered into a database which now permits individual State/Territory reports and national summaries. This report is the most thorough compilation of State and Territorial cleanup data and, for the first time, these data are presented in a single format.

Thirty-nine States and two Territories responded to this request for data. Of these, one Territory, the Virgin Islands, stated that they did not have any sites of concern under their jurisdiction. The State of New York provided detailed site information which is included in the national summary data, however, they did not want their individual state charts published in Appendix A. The State of Connecticut was unable to provide the requisite detailed backup for its data. Alaska, California and Texas were only able to submit detailed data on some of their sites.

The terms and resulting data used in this report must be qualified. Each State and Territorial "Superfund-like" program is different. The States are not required to use Federal definitions for terms like "remedial", "removal" or "construction completion." This report's use of these terms to describe and measure cleanups in a State/Territory program will not be fully consistent either among States/Territories or with the Federal data. For the purposes of this study, ASTSWMO, in consultation with many of their members, agreed to use the Federal Superfund program terminology as the most commonly understood set of

terms. Even if there were perfect understanding of these Federal terms, the States/Territories still had to fit their programs to these definitions and may have interpreted the wording of the data matrix differently. Individual States/Territories also varied in the amount of time they were able to commit to this study. All of these factors contribute to the accuracy and variability of the presented data. It is important to keep these qualifications on terms in mind when comparing States and Territories to each other and to the Federal cleanup data.

On a national level, as of December 31, 1992, some of the compiled study results from the States and Territories are:

- 21,905 total sites were reported
- 3,527 sites have at least one completed State removal
- 2,689 sites have completed construction through a State remedial process (entire site work was completed except ongoing "operation and maintenance" activities)
- 11,000 sites were described as still active in some part of their State remedial process (the process from preliminary assessment through remedial action)
- 4,834 sites were in a State version of the remedial investigation/feasibility study phase
- 4,261 sites had a duration of less than one year from the start of the remedial investigation to the completion of the remedial action or, if a removal, the duration is from the beginning to the end of the removal action
- 3,395 sites reported a total cost of \$1,205,531,234, which includes both State and PRP costs.

The cost figures reported are limited since many States/Territories did not report State and/or PRP costs; only some State or PRP site costs were reported by 30 of the participating States/Territories. Due to some States' accounting procedures, certain costs were not assigned to specific sites or were not easily retrievable for this study. The "An Analysis of State Superfund Programs: 50-State Study" (1991 Update), a study sponsored by EPA and conducted by the Environmental Law Institute (ELI), concluded that the States spent nearly \$500 million for their cleanup efforts in 1991 alone.

A complete compilation of the State/Territory data, i.e., the State/Territory National Data Summary, can be found at the end of this Executive Summary. Appendix A contains a complete presentation for each of the 40 States/Territories that provided data to ASTSWMO.

Federal Data

The Federal information is taken from the CERCLIS database and other official EPA data sources. CERCLIS contains detailed data on all fifty States, the U.S. Territories of American Samoa, Guam, Midway Island, Puerto Rico, Virgin Islands, Wake Island and the Trust Territories, as well as, the Navajo Nation and the District of Columbia. A compilation of the Federal data, i.e., the Federal National Data Summary, is presented in a table at the end of this Executive Summary. Since the CERCLIS database is constantly being updated, the CERCLIS information presented herein may not be the most accurate at the time it is reviewed. Additionally, since CERCLIS is not the official financial reporting system for EPA cost data, the Federal cost data presented may not necessarily be accurate. In addition, Federal cost data are represented in this study by financial obligations and not final expenditures.

As mentioned earlier, in addition to the data derived from CERCLIS, the Federal data presented in this study are augmented by other data sources, e.g., the Superfund Management Report. For the period through December 31, 1992, some of the Federal results include:

- 35,166 sites existed
- 2,365 sites had completed removal actions
- 155 sites had remedial construction completions
- 9,134 sites were active in the process from preliminary assessment to remedial action
- 900 sites had a duration of less than 1 year from the start of the Remedial investigation to the completion of the remedial action or, if a removal, the duration is from the beginning to the end of the removal action
- 2,866 sites reported total Federal obligations of \$4,782,175,666.

A complete compilation of the Federal data can be found at the end of this Executive Summary.

Combined State/Territory and Federal Data

The combined State/Territory and Federal data is limited to the 38 States and 1 Territory that responded to the ASTSWMO data matrix with detailed information and represents the status of individual sites, as of December 31, 1992. Reviewing three key cleanup accomplishments of the State/Territory data and the Federal data reveals:

- 5,892 sites had completed removal actions -- 3,527 State/Territory and 2,365 Federal
- 2,844 sites had remedial construction completions -- 2,689 State/Territory and 155 Federal
- 20,134 sites were still in the remedial process -- 11,000 State/Territory and 9,134 Federal -- from a completed PA through a Remedial Action (RA).

Conclusions

Differences in terminology and systems for tracking accomplishments by the States/Territories and between States/Territories and the EPA make the development of conclusions a challenge. However, the findings and conclusions presented herein are useful as a general measure of activities. The reader needs to remember that these data are historical in nature and the conclusions may not apply at the time this report is reviewed based upon additional or more current data.

State/Territory Governments, by December 31, 1992, had:

- Completed several thousand sites
 - 2,689 or 14% of the identified sites which required remedial action had completed construction
 - 5,828 or 30% of the identified sites required no further remedial action, based on preliminary assessment, site inspection or remedial investigation
- Completed a large number of removal actions -- 3,527 or 36% of the total number of removal sites had been completed
- Utilized potentially responsible parties as the majority funding source
 - Enforcement actions: 3,692 or 31% of primary funding

- Voluntary/property transfer actions: 6,448 or 55% of primary funding
- Increased the pace of site activities in the latter half of the Superfund program
 - 6,561 or 78% of the sites reporting start dates were started in the years 1986 through 1992 as compared to only 22% of the sites having been started prior to 1986
 - 6,170 or 91% of the sites reporting completion dates were completed in the years 1986 through 1992 as compared to only 9% of the sites having been completed prior to 1986
- Selected containment, either on-site or off-site, as the predominant remedy at 76% of the sites
 - 2,438 or 61% of the predominant remedies used off-site containment
 - 599 or 15% of the predominant remedies used on-site containment
- Of the on-going sites as of December 31, 1992, States/Territories had moved a large number of sites from the preliminary assessment and site inspections phases to the remedial design and remedial action phases
 - PA/SI accounted for 3,887 sites or 40% of the last remedial phase
 - RI/FS accounted for 4,834 sites or 50% of the last remedial phase
 - RD and RA accounted for 941 sites or 10% of the last remedial phase
- Used site security as a predominant remedy at a low number of sites; only at 197 sites or 5% of the remedies selected and it was used as the only remedy in 74 of the 197 sites
- Used innovative technologies as a predominant remedy at 11 sites or 0.3% of the reported remedies selected.

Federal Government, by December 31, 1992, had:

- Completed construction at 155 NPL sites
- Increased the annual number of removal and remedial cleanup completions since the Superfund Amendments and Reauthorization Act (SARA) of 1986 was passed (1987 - 1992 time period vs pre-1987 time period)

- Completed removal actions at 2,365 sites
- A relatively even distribution of predominant remedies for all actions, both removal and remedial; 2,248 or 84% of the reported predominant remedies were divided among:
 - On-site containment at 24%
 - Site security at 22%
 - Off-site containment at 21%
 - Off-site treatment at 17%
- Utilized innovative technology in the cleanup efforts; seven construction completion sites had utilized innovative technology. However, according to an internal EPA study, undertook 263 innovative technology projects, prior to December 31, 1992.

Although the data obtained for this report is limited, it does represent the first attempt at compiling the "total" accomplishments influenced by the Superfund program. These accomplishments represent tremendous effort by all involved, the States, Territories, and the Federal government. ASTSWMO members have expressed an interest in updating the data in this study in the future.

* * * * *

State/Territory

The States and Territories reported a total of 21,905 sites, with 1,017 having neither a **Removal** nor a **Remedial** status. These 1,017 sites represent sites such as those on Indian reservations, which are known but are not under the direct jurisdiction of a State or Territory. Of the remaining 20,888 sites, 8,421 were **Removal** and **Remedial** sites, 1,371 were sites with only **Removal** actions, and 11,096 sites were sites with only **Remedial** actions.

The total number of **Removal** sites was 9,792, with 3,527 completed as of December 31, 1992. The total number of **Remedial** sites was 19,517 with 2,689 construction completion—i.e., the total of **All Remedial Action Complete Except Operations and Maintenance** (260) and **All Remedial Actions Complete** (2,429).

The most prevalent **Last Remedial Phase** was Remedial Investigation or Feasibility Study (**RI/FS**), with 4,834 of the 9,662 **Active Remedial** sites reporting a **Last Remedial Phase**.

The three key **Predominant Remedies** were **Off-Site Containment** with 2,438, **On-Site Containment** with 599, and **On-Site Treatment** with 455.

Total Cost of \$1,205,531,234 was reported for 3,395 sites, with the cost represented by **State** cost of \$650,000,770 for 2,167 of the sites and **PRP** cost of \$555,530,464 for 1,385 of the sites.

A **Primary Funding** source was reported for 11,778 sites, with **Voluntary/Property Transfer** representing 6,448 of them. **Enforcement** was the **Primary Funding** source on a national level with 3,692 sites.

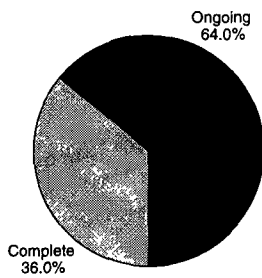
Duration of Response Actions reported for 6,052 sites had an average of 13 months and 15 days.

National Data Summary (Total Sites = 21,905)

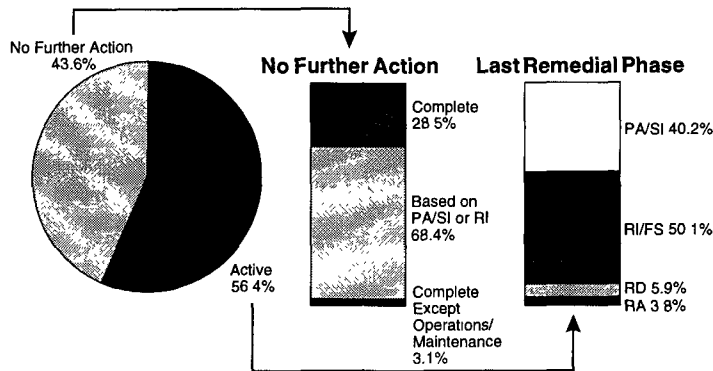
Removal	9,792	100.00%
Ongoing	6,265	63.98%
Complete	3,527	36.02%
Remedial	19,517	100.00%
Active	11,000	56.36%
No Further Action	8,517	43.64%
No Remedial Action Based on PA/SI or RI	5,828	68.43%
All Remedial Action Complete Except Operations/Maint.	260	3.05%
All Remedial Action Complete	2,429	28.52%
Last Remedial Phase	9,662	100.00%
PA/SI	3,887	40.23%
RI/FS	4,834	50.03%
RD	571	5.91%
RA	370	3.83%
Predominant Remedies	4,005	100.00%
On-Site Treatment	455	11.36%
On-Site Containment	599	14.96%
Off-Site Containment	2,438	60.87%
Off-Site Treatment	238	5.94%
Population Protection	67	1.67%
Site Security	197	4.92%
Innovative Technology	11	0.28%
Total Cost	\$1,205,531,234.00	
State	\$650,000,770.00	
Sites: 2,167		State Average: \$299,954.21
PRP	\$555,530,464.00	
Sites: 1,385		State Average: \$401,105.03
Primary Funding	11,778	100.00%
State	1,273	10.81%
Federal Government	365	3.10%
Enforcement	3,692	31.35%
Voluntary/Property Transfer	6,448	54.74%
Duration of Response Actions	6,052	100.00%
Less Than 12 Months	4,261	70.40%
12-23 Months	858	14.18%
24-35 Months	356	5.88%
36-47 Months	246	4.06%
48-59 Months	125	2.07%
60-71 Months	73	1.21%
More Than 71 Months	133	2.20%

State/Territory

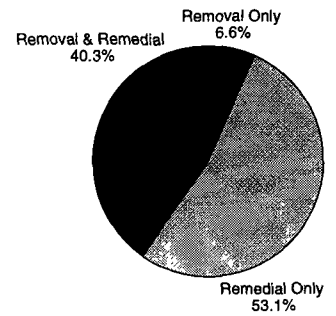
Removal 9,792 Sites



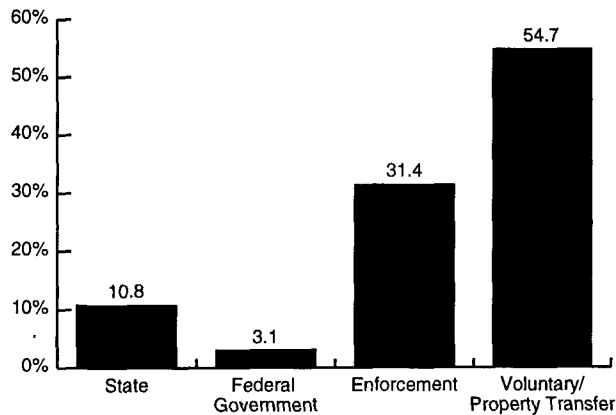
Remedial 19,517 Sites



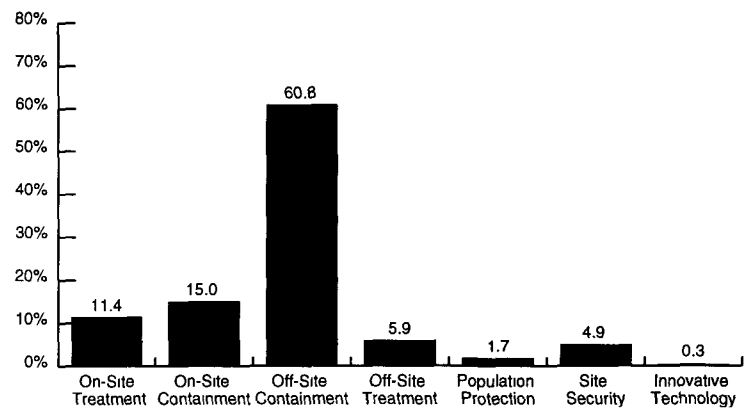
Removal and Remedial 20,888



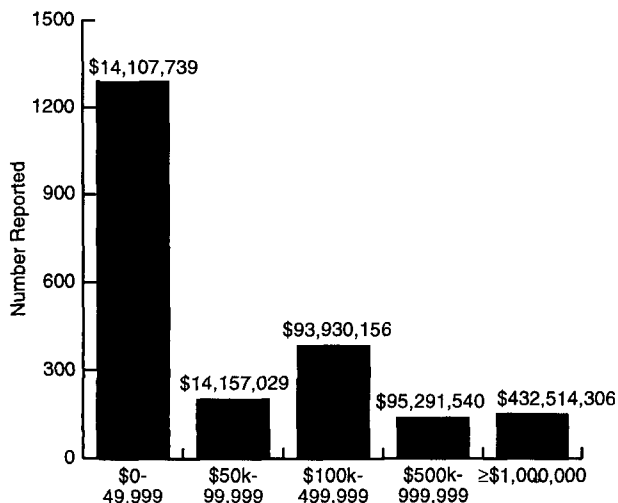
Primary Funding 11,778 Sites



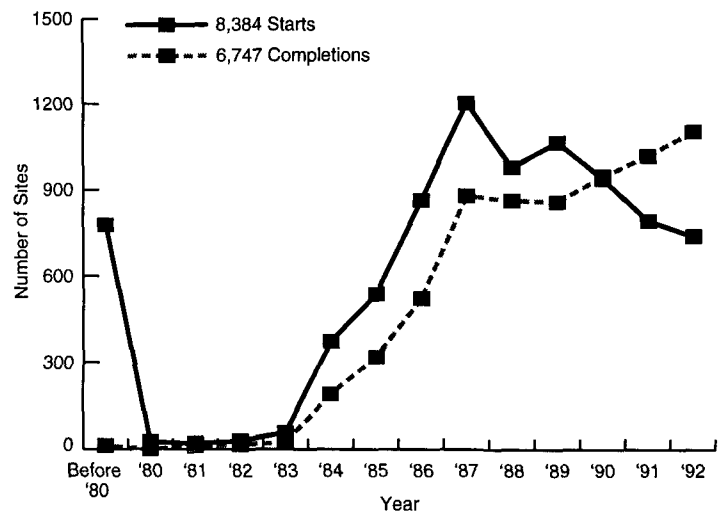
Predominant Remedies 4,005 Reported



State Costs 2,167 Sites



Start and Completion Dates



Federal

Data derived for CERCLIS reported 35,166 sites; 2,331 had both **Removal** and **Remedial** actions, 465 had only **Removal** actions, and 32,370 had only **Remedial** actions.

The total number of sites with **Remedial** actions was 34,701, with 9,134 **Active**, 22,876 **No Further Federal Superfund Remedial Action Based on PA/SI or RI**, 155 construction completion, and 2,536 **Deferred to Other Programs**. The 22,876 sites under **PA/SI or RI** represent sites that were under consideration for transfer to the States/Territories for follow-up and subsequent action.

The **Predominant Remedies** were **On-Site Containment** with 652 occurrences, followed by **Site Security** with 583 occurrences and **Off-Site Containment** with 558 occurrences.

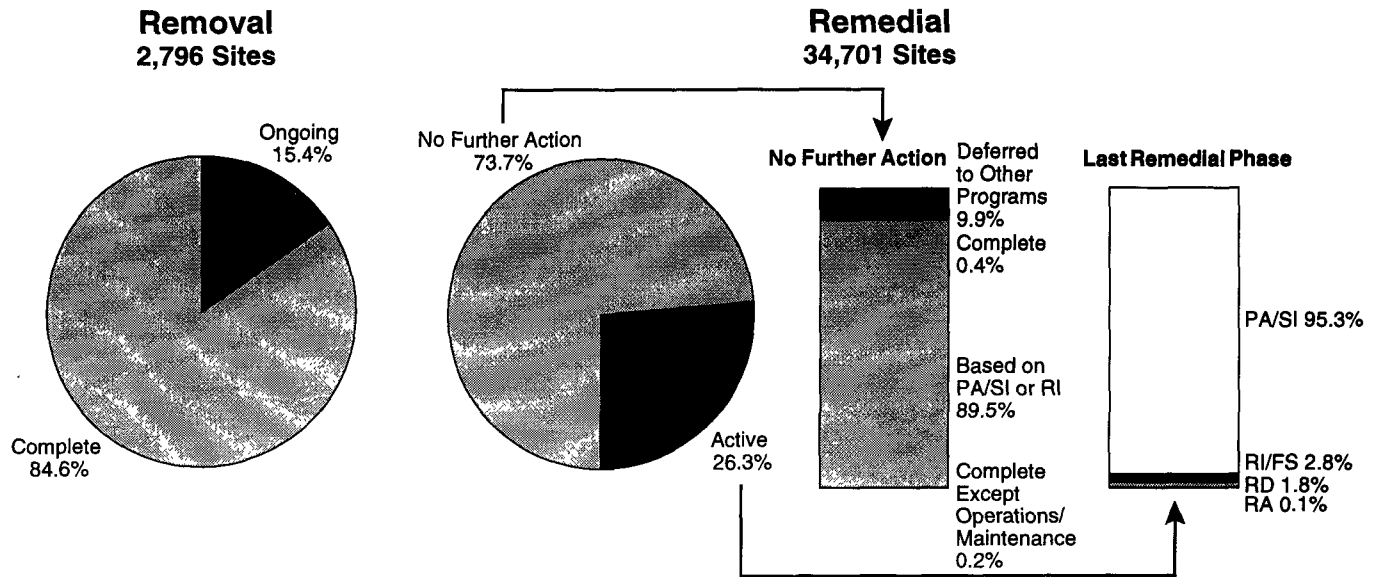
The **Total Cost** was \$4,782,175,666 for 2,866 sites with an average of \$1,668,588 per site. The average cost for the 143 construction completion sites with reported cost was \$2,361,629. The average cost for the 73 construction completion sites with Federal **Fund Lead** was \$3,953,849. However, it was estimated that future sites with construction completion **Remedial** actions will average \$25,000,000 due to the larger and more complex nature of these sites.

The average **Duration of Response Actions** of the 1,405 sites reporting start and completion dates was 16 months and 21 days. The average **Duration of Response Actions** of the 113 construction completion **Remedial** actions reporting start and completion dates was 65 months and 25 days. It is estimated that ongoing construction **Remedial** actions will take 94 months to complete and future construction **Remedial** actions will take 121 months to complete, due to the size and complexity of these sites.

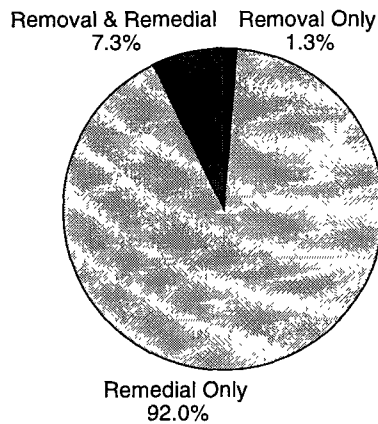
National Data Summary (Total Sites = 35,166)

Removal	2,796	100.00%
Ongoing	431	15.41%
Complete	2,365	84.59%
Remedial	34,701	100.00%
Active	9,134	26.32%
No Further Federal Superfund Remedial Action Planned	25,567	73.68%
Deferred to Other Programs	2,536	9.92%
Based on PA/SI or RI	22,876	89.47%
All Remedial Action Complete Except Operations/Maint.	48	0.19%
All Remedial Action Complete	107	0.42%
Last Remedial Phase	9,194	100.00%
PA/SI	8,764	95.33%
RI/FS	254	2.76%
RD	171	1.86%
RA	5	0.05%
Predominant Remedies	2,663	100.00%
On-Site Treatment	228	8.56%
On-Site Containment	652	24.48%
Off-Site Containment	558	20.95%
Off-Site Treatment	455	17.09%
Population Protection	172	6.46%
Site Security	583	21.89%
Innovative Technology	15	0.57%
Federal Cost	\$4,782,175,666.00	
Sites: 2,866	Average: \$1,668,588.86	\$4,782,175,666.00
Duration of Response Actions	1,405	100.00%
Less Than 12 Months	900	64.06
12-23 Months	226	16.09
24-35 Months	87	6.19
36-47 Months	54	3.84
48-59 Months	33	2.35
60-71 Months	28	1.99
More Than 71 Months	77	5.48
Fund Lead	1,188	100.00%
Coast Guard	4	0.34
EPA Fund-Financed	435	36.61
EPA In-House	0	0.00
Federal Enforcement	3	0.25
Federal Facilities	114	9.60
Mixed Fund Federal/RP	4	0.34
PRP Lead under State	22	1.85
PRP Response under State	69	5.81
Responsible Party	497	41.84
State, Enforcement	1	0.08
State, Fund-Financed	37	3.11
State, No Fund Money	2	0.17
Tribal Lead, Fund-Financed	0	0.00

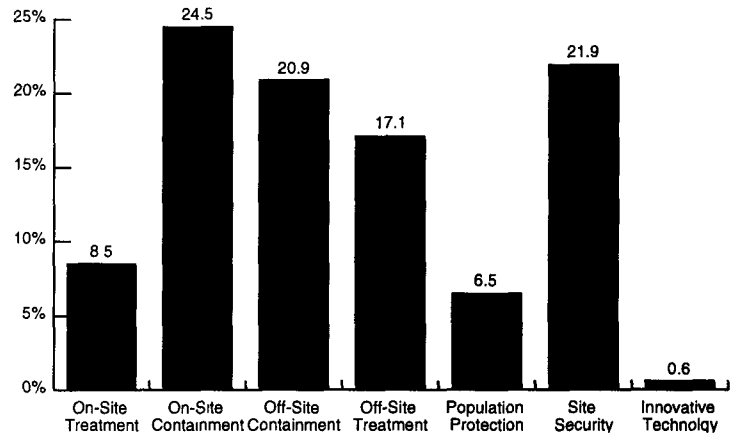
Federal



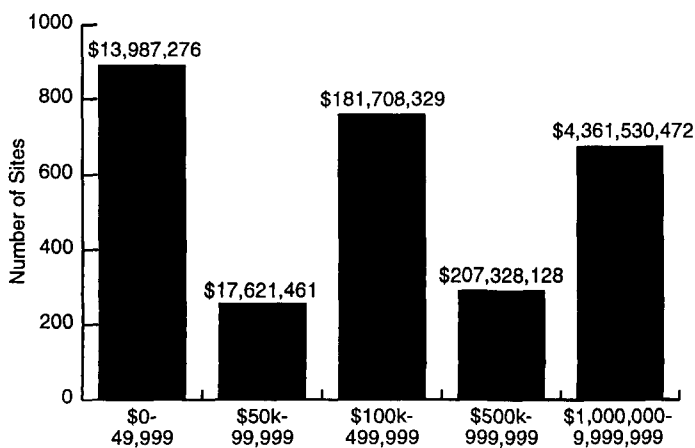
Removal and Remedial 35,166 Sites



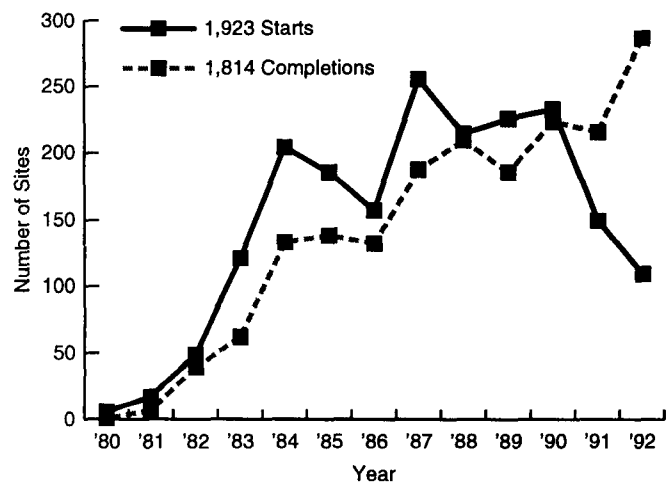
Predominant Remedies 2,663 Reported



Federal Costs 2,866 Sites



Start and Completion Dates



State/Territory and Federal

Data Comparison—Database

	State/Territory	Federal	Total
Total Sites	21,905	35,166	N/A ¹
Removal	9,792	2,796	12,588
Ongoing	6,265	431	6,696
Complete	3,527	2,365	5,892
Remedial	19,517	34,701	N/A¹
Active	11,000	9,134	20,134
No Further Action	8,517	25,567	N/A ¹
Deferred to Other Programs	N/A ²	2,536	N/A ³
No Remedial Action Based on PA/SI or RI	5,828	22,876	N/A ¹
All Remedial Action Complete Except Operations/Maint.	260	48	308
All Remedial Action Complete	2,429	107	2,536
Last Remedial Phase	9,662	9,194	18,856
PA/SI	3,887	8,764	12,651
RI/FS	4,834	254	5,088
RD	571	171	742
RA	370	5	375
Predominant Remedies	4,005	2,663	6,668
On-Site Treatment	455	228	683
On-Site Containment	599	652	1,251
Off-Site Containment	2,438	558	2,996
Off-Site Treatment	238	455	693
Population Protection	67	172	239
Site Security	197	583	780
Innovative Technology	11	15	26
Public Cost	\$650,000,770.00	\$4,782,175,666.00	\$5,432,176,436.00
Sites:	2,167	2,866	5,053
Average:	\$299,954.21	\$1,668,588.86	\$1,075,039.86
Duration of Response Actions	6,052	1,405	7,457
Less Than 12 Months	4,261	900	5,161
12–23 Months	858	226	1,084
24–35 Months	356	87	443
36–47 Months	246	54	300
48–59 Months	125	33	158
60–71 Months	73	28	101
More Than 71 Months	133	77	210

¹Not additive due to the fact that some of the Federal sites may have been transferred to the states/territories and may therefore be counted in both jurisdictions since CERCLIS does not delete a site once a site record has been entered.

²States/territories do not transfer sites to other programs; therefore, the field is not applicable to states/territories.

³Not additive due to footnote 2.

CHAPTER 1

INTRODUCTION AND REPORT METHODOLOGY

In 1980, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) was passed and was enhanced, in 1986, by the Superfund Amendments and Reauthorization Act (SARA). The program came to be known as Superfund. Superfund enables EPA to assess certain waste sites, classifying and cleaning up those sites that require the attention and resources of CERCLA and the Federal government. Once a site has been discovered or identified, it is assessed as to the severity of the health hazard it poses for human health and the environment. A determination is then made on whether the site needs the attention and resources of CERCLA and the Federal government. The cleanup responsibility for the remaining sites, after assessment, is transferred to the States and Territories.

The Universe of Sites

In understanding the universe of abandoned or uncontrolled hazardous waste sites, it is important to understand how EPA determines sites for Federal Superfund response. The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) inventory contains a listing of all the abandoned or uncontrolled hazardous waste sites that have been reported to EPA as potential Superfund sites. As of December 31, 1992, a total of 36,781 sites were included in CERCLIS. This Study focuses on State/Territory sites where at least a Preliminary Assessment (PA) or removal action had been completed. By subtracting Federal sites that still needed a PA and adding some actions that were not in CERCLIS, the universe for this study was 35,166 sites.

EPA has a statutory requirement to use Superfund resources to remediate the most serious of these sites. The process EPA uses to identify the appropriate sites for action is described below.

- Sites are assessed for any imminent threats to human health or the environment; if such threats are identified, an emergency removal action is taken.
- Next, a Preliminary Assessment (PA) is performed to determine the likelihood of serious potential threats; for some 40 percent of the sites, EPA determines that "No Further Remedial Action is Planned" (NFRAP) following the PA.

These NFRAP sites are referred to States or other EPA programs for any further response action.

- If sites are not "screened out" following the PA, a Site Inspection (SI) is performed, which includes field sampling and analysis to quantify the site's contamination; at roughly 50 percent of the sites, EPA determines that NFRAP, by the Federal program, following the SI.
- If sites are not "screened out" during the SI stage, they are scored for potential listing on the National Priorities List (NPL), and those that meet listing criteria are added to the NPL. In December 1992 there were 1,280 NPL sites.
- Referred NFRAP sites are a major source of sites addressed by the States and Territories, and are the focus of this study.

Background

This report represents the status of the State/Territory hazardous waste cleanup efforts as of December 31, 1992. The decision to prepare this report was made at the 1992 Annual Meeting of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). At the meeting, ASTSWMO and the U.S. Environmental Protection Agency (EPA) agreed on the need to collect data on State efforts for non-NPL hazardous waste cleanups. This agreement was predicated on the abundance of data on Superfund cleanups at NPL sites and other Federal actions, but a lack of data on State/Territory efforts. In order to obtain a complete picture of the national cleanup efforts, State/Territory level data were needed. Thus, the decision to collect the data was made by ASTSWMO and EPA.

The format for the collection of the State/Territory level data was determined at ASTSWMO's mid-year meeting in April of 1993, where it was decided that ASTSWMO would send a matrix form to all the States and Territories requesting, on a voluntary basis, the desired data. The data matrix form was distributed on July 8, 1993. In August 1993, data were received by ASTSWMO. In September a contract was awarded for the compilation of a database on State/Territory non-NPL cleanups, based on ASTSWMO's matrix form. The contract was also for the presentation and analysis of the collected data and for the retrieval of specific data in response to queries. Additionally, the contract was to compile Federal data received from CERCLIS and other official EPA data sources. A copy of the study's data matrix form, which ASTSWMO sent to State Superfund managers for completion, can be found in Appendix B of this report.

Data Targeted

The State/Territory matrix asked for data for the calendar years 1980 through 1992. The requested data included:

- Site name and location
- Site status, i.e., removal, remedial, active, completed
- Last remedial phase, if remedial active
- Predominant remedy
- Primary funding source
- Both State and potentially responsible party (PRP) costs
- Duration dates, i.e., start and completion dates
- State identification number.

The same data were requested from CERCLIS with the exception that State ID was replaced by EPA ID and primary funding was replaced by fund lead. Also, a few extra data fields for future consideration were requested of CERCLIS.

Targeted Sites

The sites targeted for this study consisted of all locations where hazardous waste cleanup efforts were performed by States/Territories directly, under State/Territory enforcement authority, and under State/Territory voluntary and property transfer programs. NPL sites, Resource Conservation and Recovery Act (RCRA) corrective actions and underground and above ground storage tanks and petroleum spills were excluded.

All 50 States, seven Territories, and the District of Columbia were asked to participate. The following 39 States and two Territories were able to provide the requested data:

Alabama	Kansas	Nebraska	Rhode Island
Alaska	Louisiana	Nevada	South Carolina
Arizona	Maine	New Jersey	South Dakota
California	Maryland	New Mexico	Tennessee
Colorado	Massachusetts	New York	Texas
Connecticut	Michigan	North Carolina	Utah
Delaware	Minnesota	Ohio	Virginia
Florida	Mississippi	Oklahoma	Washington
Illinois	Missouri	Oregon	Wisconsin
Indiana	Montana	Pennsylvania	

The two participating territories are American Samoa and The Virgin Islands. The CERCLIS data included the 50 States, all seven Territories, the Navajo Nation, and the District of Columbia. The CERCLIS data also contain NPL sites.

Study Benefits

The two primary benefits of this study are increased knowledge and better communications:

- Increased knowledge will:
 - provide a more comprehensive picture of Superfund influenced State/Territory cleanups, both complete and underway; and
 - provide useful information on the growing amount of State/Territory-level cleanup activity that is occurring outside the umbrella of the Federal system.
- Better communications will:
 - allow ASTSWMO, EPA and the States and Territories to demonstrate the successes of the Superfund program; and
 - support the continued dialogue with Congress on clarifying the roles of the States and Territories in the re-authorization of Superfund.

Data Definitions

Due to the differences in the methods and systems used by the States and Territories to account for their cleanup accomplishments, the ASTSWMO data matrix used specific definitions for the information requested in order to have a common core for the data being received. The following are some of the definitions used in the ASTSWMO data matrix and details on how they affected the data presentations.

- Site Status -- A site that had:
 - a **removal only** -- a site that had one or more removal-type actions and no remedial activity;
 - a **remedial only** -- a site that had one or more remedial-type actions and no removal activity; or

- **a combined removal and remedial** -- a site that had both removal type and remedial-type actions.

A combined removal and remedial site can be both complete, both active, removal complete and remedial active or removal ongoing and remedial complete. However, to be a site in this study, a preliminary assessment must have been completed or a removal action started. The total number of sites for any State/Territory should equal the total of the number of removal only sites, remedial only sites and combined removal and remedial sites. However, two additional categories used in this report -- **sites with removal activities** and **sites with remedial activities** will not add up to the total of sites in a State; the total of these two categories will exceed the total sites by the number of sites that had both removal and remedial activities.

- Last Remedial Phase -- This is the last remedial phase which had been completed by December 31, 1992. It is used only for active or ongoing remedial sites; the phases are:
 - PA/SI: preliminary assessment/site investigation completed but the remedial investigation has not been completed;
 - RI/FS: remedial investigation/feasibility study completed but the remedial design has not been completed;
 - RD: remedial design completed but the remedial action has not been completed; and
 - RA: remedial action completed but site activities other than operation and maintenance are ongoing.

The total number of phases should equal the total number of active remedial sites.

- No Further Action -- Applies only to remedial sites and addresses the three ways in which a remedial site can be considered as complete:
 - No required remedial action needed based on the results of a PA/SI or RI;
 - All remedial action completed, except ongoing operation and maintenance; and
 - All remedial action completed; no ongoing remedial action, of any sort, remains.

The total number of these three categories should total the number of no further action remedial sites.

- Predominant Remedies -- The major types of remediation used at a completed site. Each completed site could report up to six predominant remedies. Only the most significant remedies were to have been reported. Active sites were not to have reported predominant remedies.
- Total Costs -- All known State and PRP costs associated with the completed cleanup of a site. A site can have State costs or PRP costs or both. State costs were reported individually, regardless of whether the site had PRP costs. Likewise, PRP costs were reported individually, regardless of whether the site had State costs. Therefore, the total number of sites reporting costs by State and PRP will exceed the total number of sites with costs if any of the sites of concern have both State and PRP costs. Additionally, for combined sites with both a completed removal and completed remedial, any reported cost is considered the cost of both of the actions. In instances where costs were known to have been incurred, but the exact amount is not known, "unknown" is reported for the State costs and/or PRP costs as appropriate.
- Primary Funding Source -- The primary or "lead" funding source for a completed site is reported as one of the following four categories: State, Federal, enforcement, and voluntary/property transfer. Voluntary is an action defined by an individual State/Territory. It was combined with property transfer because many States/Territories consider the financing of a cleanup prior to the transfer of a property to be a voluntary act. A primary funding source may be reported even if total costs were not reported. Thus, there is not a requirement for the number of sites which reported costs to equal those which reported primary funding sources.
- Duration of Response Actions -- For remedial only sites, the duration is the time period from the start of the remedial investigation through the completion of the remedial action. For combined removal and remedial sites, the duration is the time period for the completed remedial action. If the remedial is active and the removal is complete, then the duration is the time frame for the completed removal. For completed removal only and completed remedial only sites, the time frame is for the individual site actions.

In most cases, these same definitions apply to the CERCLIS data with the following exceptions:

- Total Costs -- all costs are Federal costs

- **Primary Funding Source** -- is replaced by event lead where the following categories are used (from OSWER Directive 9200.3-01H-1):
 - **Coast Guard** -- Work performed by Coast Guard; limited to removals (applies to response events)
 - **EPA Fund Financed** -- Fund financed response actions performed by EPA (applies to response events)
 - **EPA In-House** -- Response activities performed by EPA using in-house resources
 - **Federal Enforcement** -- Enforcement activities performed by EPA or work done by enforcement program (also applies to record of decision (ROD) events at PRP financed response events); historically (Pre-FY 1989) applied to RI/FS and RD response events
 - **Federal Facilities** -- Response activities performed by the Federal facility with oversight provided by EPA and/or the State at sites designated as Federal facilities on the NPL; also applies to RODs at Federal facilities
 - **Mixed Funding Federal/Responsible Party (RP)** -- Preauthorization mixed funding work performed by PRP under a Federal consent decree (CD) with an agreement that the Fund will provide some reimbursement to the PRP (applies to response events)
 - **Potential Responsible Party (PRP) Lead under State** -- PRP response under a State order/CD and no EPA oversight support or money provided through a CA and no other formal agreement exists between EPA and the State
 - **PRP Response under State** -- PRP financed response action performed by PRP under State order/CD with PRP oversight paid for or conducted by EPA through an EPA cooperative agreement (CA) with the State or, if oversight is not funded by EPA, a State memorandum of agreement (SMOA) or other formal document between EPA and the State exists which allows EPA review of PRP deliverables (applies to response events)
 - **Responsible Party** -- PRP financed response actions performed by the PRP under a Federal order/CD (applies to response events)

- **State, Enforcement** -- Enforcement activities performed by a State; money provided through a CA or if not funded by EPA, a comparable enforcement document exists (also applies to ROD events at State financed and PRP lead under State response events)
 - **State, Fund-Financed** -- Fund financed response actions performed by a state; money provided through a CA (applies to response events)
 - **State, No Fund Money** -- State financed (no Fund dollars) response actions performed by the State (applies to response events)
 - **Tribal Lead, Fund Financed** -- Indian Tribal Governments
- Duration of response actions -- is the time from the discovery of a site through the remedial action.

Data Interpretation

The major interpretation of the data is left to the reader. The data are presented in different arrays and formats to facilitate that interpretation. The data are factual in that they have been extracted from the data provided by the States, Territories and CERCLIS and other official EPA sources with only minimal interpretations made and conclusions drawn. The reader is left to use the data and his/her knowledge and experience to generate more in-depth analyses.

The data sheets, in Appendix A, compile the data provided on the study instruments by all participating States/Territories. Percentages have been added to assist the reader in determining the relative impact of specific data categories. Written profiles are provided to highlight salient points and contain, when appropriate, information pertaining to the State or Territory not displayed directly by the data sheets, e.g., the cost of completed removals in both State and PRP dollars. These data, although captured by the study instrument, were obtained via a report that compiles and combines completed sites and costs. Another report depicts the predominant remedies for completed sites by removal and remedial actions. These reports and others were developed in response to information requested from ASTSWMO and EPA.

The graphics which accompany the State/Territory data sheets visually present the major data groups of site status, predominant remedies, cost, primary funding and site duration.

Data Accuracy

The presented data are as accurate as the data submitted by the participating States and Territories and retrieved from CERCLIS. To assure the accuracy of the submitted State/Territory data, a series of verification processes were undertaken. First, in November 1993, a site-by-site listing and the data sheet was sent to the participating States and Territories.

Then, corrections and enhancements received from the States and Territories were input into the database and a revised data sheet accompanied by graphic displays of major data categories and a written profile of the presented data were produced. This package of information was next returned to the States and Territories for review. Additional corrections and enhancements received by the States and Territories were input to the database and a final information display produced. Finally, the ASTSWMO Board of Directors reviewed the draft report and approved its release on April 20th, 1994 at the ASTSWMO Mid-Year meeting.

The CERCLIS data accuracy test used was a review of the results of the extraction with other official EPA data sources. In those instances when exact matches did not occur, further investigation with appropriate EPA staff was pursued until valid and substantiated results could be obtained.

Data Flow

The data submitted by the States and Territories were in the form of hard copy, i.e., the completed data matrix, and/or a disk file. When only hard copy was received, it was reviewed to flag obvious inconsistencies, e.g., neither a removal or remedial status was entered. All data, including inconsistencies were put into the system. Site-by-site listings were produced with the inconsistent data highlighted. The site-by-site listing and a data sheet were returned to the affected States and Territories.

Data received from States/Territories on disks were converted, where possible, to the system's required input format and processed through the edit routine. Sites with inconsistencies were flagged. Like data received via hard copy only, site-by-site listings with highlighted inconsistencies and a data sheet were sent to the affected States and Territories.

For those State/Territory submittals that were in hard copy, but not the format of the data matrix and/or on disk but in an incompatible format, time was spent via telephone with the individual States and Territories to rectify the difficulties. Once resolved, the data were input to the system as noted above.

To assure that the State/Territory data were as accurate as possible, all data presented in this report have been reviewed by the appropriate parties with all their final corrections and enhancements being considered.

For the CERCLIS data extraction, a general query was established requesting all the data elements comparable to those in the ASTSWMO data matrix. The query was converted into a more detailed extraction statement with the identification of specific CERCLIS data fields and logic. The details of the extraction statement were reviewed in a walk-through prior to the actual run. The results of the extraction run were reviewed against known results such as the 155 remedial construction completions which occurred by December 31, 1992. CERCLIS results, not in agreement with other official EPA sources, were reviewed and, if necessary, rerun until valid results were obtained.

CHAPTER 2

REPORT FINDINGS

This chapter presents the findings of the two different data collection efforts. The findings are presented by:

- State/Territory
- Federal
- Combined State/Territory and Federal.

State/Territory, as of December 31, 1992

The State/Territory national data summary of the 21,905 sites shows that 8,421 were combined removal and remedial sites, 1,371 were removal only sites and 11,096 were remedial only sites. Appendix A, State/Territory Data, presents the data collected from the 40 participants. The remaining 1,017 sites represent independent sites that were known, but were not under the authority of the States/Territories. For example, a site on an Indian reservation would be in this category.

The number of sites with State/Territory removal activities was 9,792, of which 6,265 were ongoing and 3,527 were complete. The number of sites with State/Territory remedial activity was 19,517, of which 11,000 were still active, 5,828 were determined not to need further State/Territory remedial action based on site assessment, and 2,689 were considered construction completions. For the active remedials, the prevalent last completed remedial phases were remedial investigation and feasibility study (RI/FS) and preliminary assessment and site inspection (PA/SI) with 4,834 and 3,887 occurrences, respectively.

The leading predominant remedies for State/Territory reported data were excavation and final removal to off-site landfill (1,458 sites) followed by encapsulation or over-packing with final off-site disposal (676 sites), final removal to off-site landfill (304 sites), and surface capping (271 sites). None of the other 33 predominant remedy categories had more than 150 occurrences.

Cost data were submitted for 3,395 sites or only 15% of the sites and totaled \$1,205,531,234. Since the study design precluded use of partial costs known to the States and Territories, most States and Territories were not able to supply information on total PRP costs. Therefore, total cost, particularly the PRP cost, is significantly understated.

The source of funding for the cleanup activities was provided for 11,778 sites. Of these, 10,140 or 86% were conducted by private parties. Voluntary/property transfer cleanups accounted for the funding for 55% of all sites.

Duration, from the start of a remedial investigation through the completed remedial action, was reported for 6,052 sites of which 4,261 sites (70%) were completed in less than 1 year.

Federal, as of December 31, 1992

The Federal data provides information on 35,166 sites: 2,331 were combined removal and remedial sites, 465 were removal only sites and 32,370 were remedial only sites. This means that 2,796 sites had removal events and 34,701 sites had remedial events. Ongoing removals totaled 431 and completed removals totaled 2,365. The 34,701 sites with remedial activities break down into the following categories: 9,134 were active, 22,876 had no further Federal action based on PA/SI or RI, 155 were construction completions, and 2,536 were deferred to other programs.

Federal cost figures were compiled from EPA's Integrated Financial Management System (IFMS). Seventy-three of the 155 construction completion sites were Federal fund lead sites with obligated costs totaling \$288,630,961 or an average of \$3,953,849 per site. Total obligated costs for the 143 sites with available financial data (this included sites with mixed funding and PRP oversight costs) was \$337,441,389 or an average of \$2,359,730 per site. The average Federal cost for all sites (2,860) was \$1,668,589, some of which were still active.

The average duration of the Federal site completions varied based on whether a removal or a remedial action had occurred. In examining those sites that reported start and completion dates, where only a removal action or only a remedial action had occurred, the following is observed:

	<u>Sites</u>	<u>Average Months</u>
■ Removal Only Sites	286	13.89
■ Remedial Only Sites	43	73.35

The predominant remedy was on-site containment (652 sites). Within CERCLIS, each site can have an unlimited number of predominant remedies. However, for this report, a limit of six predominant remedies per site was imposed to be consistent with the State/Territory survey. This has not had an adverse effect on the report since only 19 sites, or less than five-hundredths of one percent (<0.05%), had listed more than six predominant remedies. Table 1, which follows, presents the reported predominant remedies for the 155

construction completions and the 400 completed removal only sites. Within this context, the 155 construction completions were completed remedials with or without removal activity. However, if removal activity was present, they were likewise completed. The 400 completed removal only sites were sites with no ongoing removal actions and no remedial activity, either active or complete.

TABLE 1
PREDOMINANT REMEDIES: CONSTRUCTION COMPLETION
AND COMPLETED REMOVAL ONLY SITES

CONSTRUCTION COMPLETION SITES		COMPLETED REMOVAL ONLY SITES		PREDOMINANT REMEDIES
96	34.5%	212	25.6%	On-Site containment
65	23.4%	239	28.8%	Site Security
37	13.3%	97	11.7%	Off-Site Containment
36	13.0%	125	15.1%	Off-Site Treatment
28	10.1%	79	9.5%	On-Site Treatment
13	4.6%	70	8.4%	Population Protection
3	1.1%	7	0.9%	Innovative Technology

Combined State/Territory and Federal

Combining the State/Territory and Federal data reveals the results and status of the entire Superfund effort as of December 31, 1992. Table 2 displays key Federal and State/Territory accomplishments.

TABLE 2
KEY FEDERAL AND STATE/TERRITORY ACCOMPLISHMENTS

Accomplishment	Federal Data	State/Territory Data
Sites with completed removals	2,365 Sites	3,527 Sites
Sites with remedial construction completions	155 Sites	2,689 Sites
Sites with active remedials	9,134 Sites	11,000 Sites

Totaling the numbers from the table above, key accomplishments were as follows:

- 5,892 completed removals
- 2,844 remedial construction completions
- 20,134 ongoing sites in the remedial process.

A full compilation of the State/Territory data and the Federal data is contained in the display at the end of the Executive Summary. Included in this comparison display are the numbers as derived from the two databases.

As of December 31, 1992 cost and obligation data from the two database sources (i.e., the ASTSWMO data matrix and CERCLIS) total \$5,987,706,900 of which \$4,782,175,666 were from 2,866 Federal sites; \$650,000,770 were State/Territory costs based on 30 States reporting costs; and \$555,530,464 were PRP costs based on 16 States reporting PRP costs. The total number of sites for which costs were reported was 6,261, with 2,866 Federal sites, 2,167 State/Territory sites and 1,385 PRP sites. (The total exceeds the 6,261 because some sites have reported both PRP and State/Territory costs yet these sites were counted only once in the total.) In the following Table 3, the sites for which State/Territory costs and Federal obligations were reported are summarized with dollar averages for remedial and removal only completions.

TABLE 3
PUBLIC DOLLARS FOR CONSTRUCTION COMPLETIONS
AND REMOVAL ONLY SITES

Universe	Remedial Construction Completions Sites		Completed Removal Only Sites	
	Sites	Average \$	Sites	Average \$
Total	770	588,001	726	3,768,791
State/Territory	627	183,490	343	46,915
Federal	143	2,361,629	383	7,072,442

By adding the PRP costs reported by the States/Territories to the costs in Table 3, the State/Territory average for remedial construction completions would increase to \$259,695 based on 1,601 sites and the average for completed removal only sites would be increased to \$105,115 based on 374 sites. However, the combined State/Territory and Federal average for remedial construction completions would be reduced to \$432,044 based on 1,744 sites and the combined average for completed removal only sites would be reduced to \$3,644,638 based on 757 sites.

To avoid confusion between this report of historical data from 1980 - 1992 with more recent data collected by EPA, the following information is presented. It was not possible to obtain similar updates from the States/Territories; however, it is obvious that additional cleanups have been completed by the States/Territories.

CURRENT FEDERAL CONTEXT

In addition to the 155 remedial construction completion sites discussed in this report, the following is presented:

-- an additional 89 remedial construction completions have been identified over the 18-month period from January 1, 1993 through June 30, 1994, bringing the total to **244** as of June 30, 1994; an increase of over 57% within the last 18 months;

-- Based on a 1993 survey of site managers, the **average cost** of future non-Federal Facility remedial construction completions is expected to be approximately \$25 million. This is reported in the EPA Office of Solid Waste and Emergency Response Directive 9200.2-21, letter from Elliott P. Laws to Congressmen Swift and Dingell, dated January 28, 1994;

-- The **average cost is impacted** by the relatively small number of sites with very high cleanup costs; 16% of the operable units on the sites account for over 60% of all capital costs incurred at NPL sites; The majority of projects (69%) have capital costs of less than \$10 million and 38% have capital costs of less than three million dollars.

-- Approximately 89% of the total site cleanup cost is for capital costs; the remaining 11% includes site assessment, study and design activities. In addition, operation and maintenance costs of \$50,000 per year is projected over a 20 year period.

-- Currently the average duration of a construction complete site, as reported by other EPA sources, is 94 months starting at the initial discovery of the site and going through the remedial action phase. In the future, it is estimated that the duration will be 121 months from the discovery to completion because of the more complex nature of the sites to be cleaned up.

Data Retrieval

The system accepts ad hoc queries based upon the available data in the system. For example, the system can respond to a query for the PRP costs by completed removal only sites or by predominant remedy. Some examples of the type of queries possible include:

Query: What was the predominant remedy for completed removal only sites?

Response: The predominant remedy was encapsulation or overpacking with final off-site disposal for removals.

Query: What was the total study site count by site activity?

Response: One thousand three hundred seventy-one were removal only sites; 11,096 were remedial only sites; 8,421 were combined removal and remedial sites; and 1,017 sites were designated as neither removal nor remedial. These 1,017 sites represent sites identified by States/Territories, but were not under the jurisdiction of either a State or Territory.

CHAPTER 3

CONCLUSIONS

The conclusions presented herein are based only on the data and the direct experiences encountered over the course of this project. They do not include programmatic elements that, if applied, could affect the result. For example, additional research has been recently concluded in preparation for the Reauthorization of CERCLA. Much of this research is aimed at projecting future costs and performance of the program. Those projections will not always match the historical findings of this report. The conclusions of this report, therefore, should be read with the caveat that the data, as a stand alone element, is insufficient to provide the total picture of the current State/Territory or Federal efforts.

There are two comments the researchers would like to make about the study design and process. First, should the collection effort be continued on a periodic basis, the universe of the required data should be expanded to permit a more in-depth and accurate analysis of both the State/Territory and Federal hazardous waste cleanup efforts. For example, the fact that most of the data in this study is summarized at the site level does not allow us to thoroughly analyze cost and duration data at sites where multiple remedial and/or removal activities have occurred.

The second comment is that the two databases established are powerful tools that, although not perfect, can still provide insight into the State/Territory and Federal cleanup efforts. The information can help interested parties analyze those efforts and identify where improvements may be warranted. The need, then, is to minimize the inconsistencies within the databases and to permit an easy access such that interested parties can retrieve and analyze data of concern to them.

The following report conclusions are targeted to the specific universes of State/Territory and Federal data.

State/Territory

The conclusions regarding the State/Territory efforts are presented according to the following four topic areas:

- Success Of The Cleanup Efforts
- Need To Continue The Cleanup Efforts
- Increased Program Development
- Adequacy of Cost Data

State/Territory Cleanup Efforts Have Been Successful

States/Territories have completed 2,689 sites through the remedial construction completion phase, i.e., remedial action. These sites have had their risk to public health and the environment addressed. In addition, 3,527 removal sites have had actions completed to address immediate risks. Thus, over 6,000 sites across the country have been either fully remediated or had their immediate environmental concerns addressed.

Also, no further action determinations have been made at 5,828 sites based on a PA/SI or RI. The finding of no further action by a State or Territory provides the public with an assurance that these sites were not seriously contaminated and can be utilized for most purposes and, therefore, returned to productive use.

There Is A Need To Continue The State/Territory Efforts

States/Territories, on December 31, 1992, were working on 6,250 removal sites and 11,000 remedial sites. This active caseload was nearly twice the number of completed removals and four times the completed remedial actions for the previous thirteen years.

State/Territorial resources will continue to be needed to address this universe of contaminated sites for many years to come. Of the 9,662 active remedial sites which reported the last completed remedial phase, 40% (3,887 sites) had completed a PA or SI, 50% (4,834 sites) had completed an RI or FS, almost 6% had finished an RD and almost 4% had completed an RA but had other work to complete on the site. Therefore, a large number of sites will be moving into the RD and RA phases.

State/Territory Programs Have Continued To Develop

State/Territorial cleanup programs have greatly increased in their capacity to address contaminated sites. This was evidenced by the number of project starts and completions for the periods 1980-1986 and 1987-1992:

- 2,685 (32%) starts for 1980-1986
- 5,699 (68%) starts for 1987-1992
- 1,099 (16%) completions for 1980-1986
- 5,648 (84%) completions for 1987-1992.

These data show that States/Territories have recognized the problems associated with contaminated sites and have developed the program capacity to deal with the problems faced by their individual States. It will be required that State/Territorial programs continue to address sites well into the future.

There Is A Need To Collect More Detailed Cost Data

Less than 15% of the sites reported cost data. Only one State reported cost for all its sites and 10 of the participating States/Territories reported no costs at all. In addition, some of the States that reported costs indicated that their costs were estimates, while others gave ranges (e.g. less than "X" thousand or between "X and Y" thousand).

States/Territories should attempt to improve their collection of cost data. Currently, all States track the expenditures of public funds, however, private party costs may not always be available to State program managers. A means to obtain this information should be pursued in order to obtain the full picture of costs, i.e., public and private dollars spent on site remediation in this country. Therefore, the State/Territory costs presented herein, should be viewed and analyzed within the limited arena in which the data has been collected.

Federal

The Federal data, like the State/Territory data, generate questions as well as some answers. The available answers, i.e., the conclusions, are presented within the following topics:

- Distribution of Predominant Remedies
- Impact of SARA.

Remedies Selected For Completed Removal and Remedial Actions Were Evenly Distributed Over the Various Predominant Remedies

Eighty-four percent of the predominant remedies used were evenly distributed between on-site containment, off-site treatment, off-site containment and site security, each with approximately one-fourth of the 84%.

By the end of 1992, Federal sites were beginning to use innovative technology as a predominant remedy. Such technologies have been used on 15 completed removal or remedial actions, seven of which were sites with remedial construction completions.

The 1986 Superfund Amendments and Reauthorization Act has had an Impact On The Federal Cleanup Efforts

Cleanup actions at both removal and remedial Federal sites prior to 1987 were 739 starts and 509 completions. From 1987 through 1992, starts totaled 1,184 and completions 1,305.

Reviewing the data another way, the 7-year period from 1980-1986 had 38% of the starts and the 6-year period from 1987-1992 had 62% of the starts or almost twice as many starts in one year less time.

* * * * *

APPENDIX A

STATE/TERRITORY DATA

APPENDIX A

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* The Virgin Islands, although willing to participate, does not have data to present at this time.

INTRODUCTION

STATE/TERRITORY DATA

This chapter contains presentations for 39 States and one Territory. Another Territory, the Virgin Islands, elected to participate; however, at this time, it does not have any Territorial enforcement program or other vehicle to handle non-NPL hazardous waste cleanup efforts. As a result, the U.S. Environmental Protection Agency has taken the lead, handling all stages of any required cleanup efforts.

Connecticut, although participating, submitted summary data that did not have detailed support. Therefore, its data sheets and all subsequent presentations for Connecticut is based upon that summary data. To maintain the integrity of the database, Connecticut is not included in the national totals.

California has submitted detailed data on 850 sites; however, California has stated that it has many more sites for which it was unable to provide the requested data in the time allotted for this project. The 850 detailed sites submitted by California are in the database.

Alaska has provided detailed information on 41 sites and these sites are in the database. Alaska has also identified another 400 sites. These sites, however, do not have any direct parameter data like site status, predominant remedy or cost and, therefore, are not in the database.

Similarly, Texas has provided detail information on 200 sites and these sites are in the database. Texas has also stated that another 1900 sites have been referred by the Federal government and they are currently under eligibility review. Approximately another 100 sites, abandoned industrial disposal sites and state emergency removals, have been completed from the early 1980's through 1992. These latter sites are not in the database because the time constraints of the study did not permit the gathering of the necessary information for acceptance by the database.

For the 39 States and the one Territory that submitted data, it is presented in three forms: a written profile of the data, a raw data display and a graphic data display. Preceding the State/Territory presentations is a summary table depicting selected data elements for each State/Territory. Following the 40 presentations is the State/Territory National Data Summary. This is a summary, on the national level, of all the data in the database. It is presented in the format of profile, raw data and graphic data. Note that Connecticut is not in this Summary since its data is not in the database.

State/Territory—Selected Data

State	Total Sites	Removal Ongoing	Removal Complete	Remedial Active	Remedial NFA	Remedial Complete	Durations (Sites/Days)	State Average (Sites/S)	PRP Average (Sites/S)
Alabama	69	31	38	1	7	0	44/186	26/\$7,307	0/\$0.00
Alaska	41	4	11	11	8	6	33/248	38/\$95,160	3/\$9,899
American Samoa	3	3	0	2	1	1	1/62	0/\$0.00	0/\$0.00
Arizona	76	8	33	34	40	40	30/403	54/\$231,928	7/\$2,802,227
California	850	20	152	213	600	149	0/0	223/\$407,141	0/\$0.00
Colorado	11	4	5	5	0	0	3/93	1/\$3,200,000	0/\$0.00
Connecticut	642	0	0	551	91	91	0/0	0/\$0.00	0/\$0.00
Delaware	185	10	1	84	31	0	0/0	18/\$69,750	0/\$0.00
Florida	36	15	21	13	23	21	24/992	25/\$487,393	0/\$0.00
Illinois	906	553	207	651	189	187	209/1,891	375/\$167,227	138/\$461,948
Indiana	79	27	18	25	2	2	15/372	10/\$168,112	1/\$1,000
Kansas	183	62	5	179	3	2	0/0	2/\$83,500	14/\$2,349,000
Louisiana	101	5	5	69	21	21	23/930	24/\$41,061	0/\$0.00
Maine	70	10	25	51	12	9	34/1,674	29/\$89,741	2/\$367,500
Maryland	378	4	26	166	212	1	40/186	8/\$77,468	6/\$236,177
Massachusetts	3,089	2,669	420	2,553	536	379	391/558	33/\$77,389	0/\$0.00
Michigan	2,662	1,584	343	1,584	1,078	343	0/0	496/\$321,021	0/\$0.00
Minnesota	414	11	31	293	108	53	80/558	89/\$127,561	89/\$912,044
Mississippi	110	0	17	89	16	8	24/961	0/\$0.00	0/\$0.00
Missouri	44	0	23	11	10	10	34/635	3/\$42,666	5/\$2,218,000
Montana	214	27	26	169	7	4	0/0	3/\$253,333	1/\$250,000
Nebraska	15	0	0	15	0	0	0/0	0/\$0.00	0/\$0.00
Nevada	34	0	0	24	10	9	7/465	0/\$0.00	0/\$0.00
New Jersey	5,996	798	1,030	1,374	4,621	948	4,440/279	32/\$974,329	1,083/\$288,565
New Mexico	58	1	7	49	1	0	7/155	2/\$67,500	1/\$5,000,000
New York	556	33	231	442	112	27	111/465	210/\$1,006,030	0/\$0.00
North Carolina	873	2	0	646	225	8	0/0	0/\$0.00	0/\$0.00
Ohio	86	29	8	60	2	2	0/0	0/\$0.00	0/\$0.00
Oklahoma	40	0	32	4	4	4	7/651	29/\$2,951	0/\$0.00
Oregon	307	9	16	205	49	8	21/465	0/\$0.00	0/\$0.00
Pennsylvania	41	13	24	9	0	0	25/248	26/\$304,615	1/\$200,000
Rhode Island	29	1	82	13	1	1	10/403	0/\$0.00	0/\$0.00
South Carolina	42	3	16	19	5	4	18/155	35/\$201,034	0/\$0.00
South Dakota	674	242	372	60	19	19	212/744	0/\$0.00	0/\$0.00
Tennessee	244	0	40	198	7	4	43/279	43/\$51,175	29/\$155,827
Texas	200	39	15	151	10	10	2/217	13/\$701,076	3/\$2,783,333
Utah	31	1	6	24	1	0	10/195	4/\$32,597	2/\$7,000,000
Virginia	21	20	0	0	1	1	0/0	2/\$1,250,000	0/\$0.00
Washington	1,220	27	19	171	210	134	28/362	131/\$83,544	0/\$0.00
Wisconsin	1,849	0	222	1,352	275	275	126/465	183/\$5,131	0/\$0.00
Totals	22,547	6,265	3,527	11,551	8,608	2,780	6,052/14,454	2,167/\$299,954	1,385/\$401,105

State/Territory—Alabama

Alabama reported 69 sites; 61 of the sites had only **Removal** actions and 8 of the sites had both **Removal** and **Remedial** actions. There were no sites with only **Remedial** actions. Thirty-five of the sites with only **Removal** actions were designated **Complete** (i.e., the **Removal** actions were **Complete**). Three of the sites with both **Removal** and **Remedial** actions had all **Removal** actions **Complete** and had all **Remedial** actions designated as requiring **No Further Action**.

The **Predominant Remedy** most reported was **Off-Site Treatment** with 37 occurrences.

State cost was reported as \$190,000 for 26 sites for an average of \$7,308 per site. The range of cost was from \$2,000 to \$25,000 per site. For 25 sites with only **Removal** actions, and with these actions **Complete**, the average cost was \$7,200 per site.

A **Primary Funding** source was reported for 53 sites, with the **State** as the source for 32 of the sites.

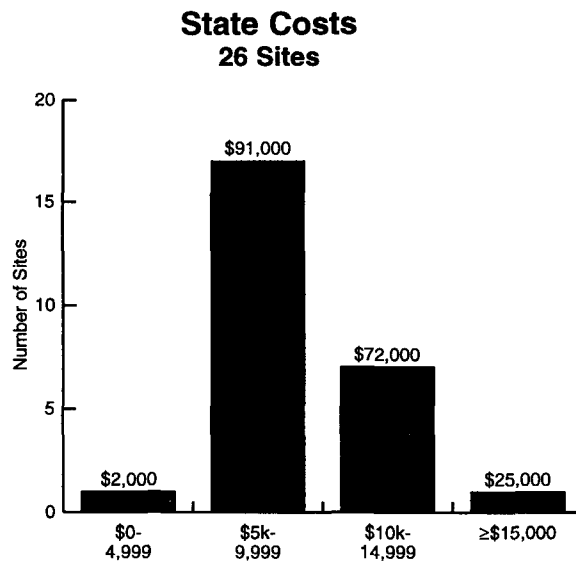
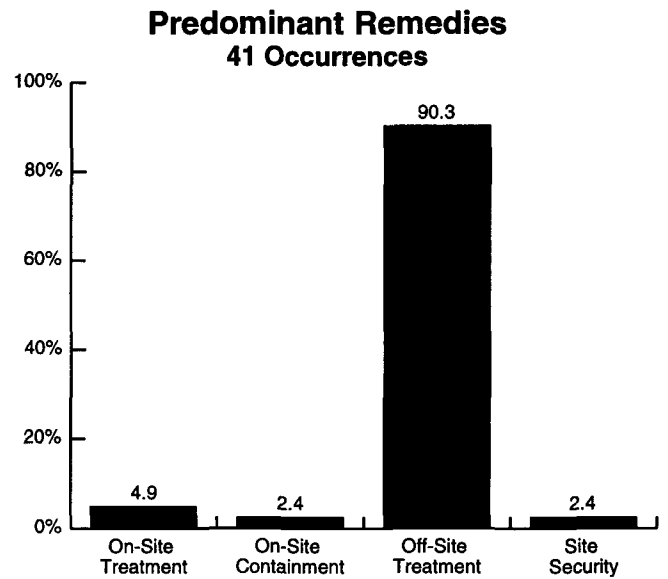
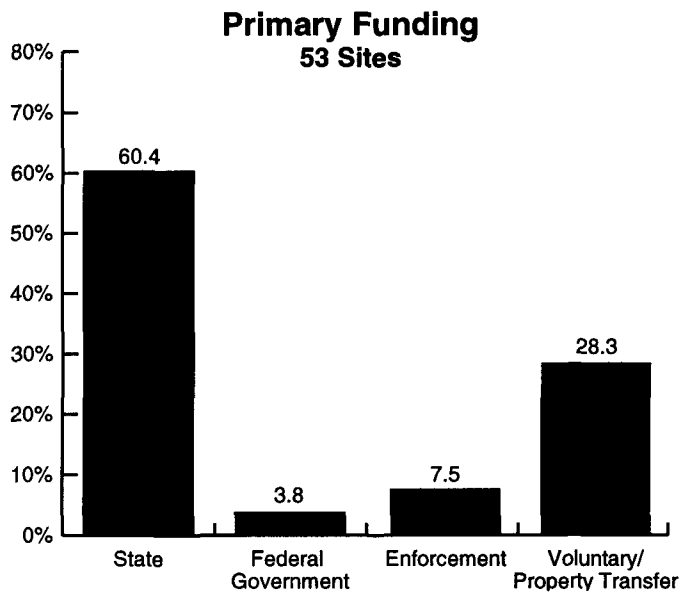
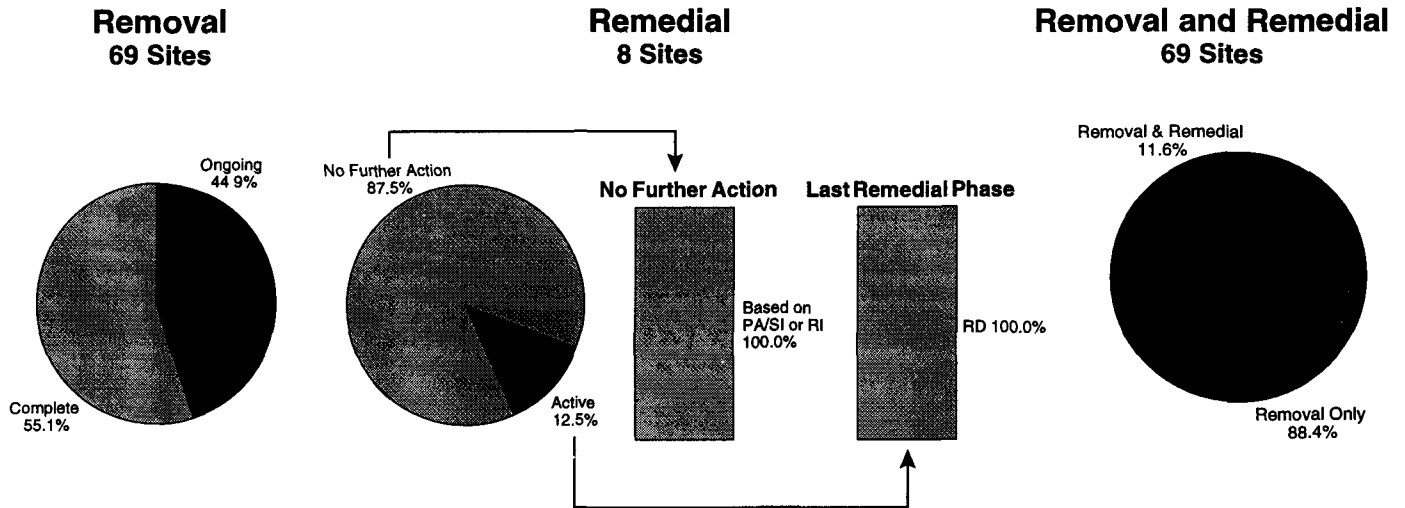
The average **Duration of Response Actions** for 44 sites with reported start and completion dates was 6 months.

Alabama has a hazardous substance cleanup fund that was enacted in 1988 with enforcement, liability, and cost recovery provisions.

Data Display (Total Sites = 69)

Removal	69	100.00%
Ongoing	31	44.93%
Complete	38	55.07%
Remedial	8	100.00%
Active	1	12.50%
No Further Action	7	87.50%
No Remedial Action Based on PA/SI or RI	7	100.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	1	100.00%
PA/SI	0	0.00%
RI/FS	0	0.00%
RD	1	100.00%
RA	0	0.00%
Predominant Remedies	41	100.00%
On-Site Treatment	2	4.88%
On-Site Containment	1	2.44%
Off-Site Containment	0	0.00%
Off-Site Treatment	37	90.24%
Population Protection	0	0.00%
Site Security	1	2.44%
Innovative Technology	0	0.00%
Total Cost		\$190,000.00
State		\$190,000.00
Sites: 26	State Average: \$7,307.69	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	53	100.00%
State	32	60.38%
Federal Government	2	3.77%
Enforcement	4	7.55%
Voluntary/Property Transfer	15	28.30%
Duration of Response Actions	44	100.00%
Less Than 12 Months	35	79.55%
12–23 Months	9	20.45%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Alabama



State/Territory—Alaska

Alaska identified more than 450 sites and reported detailed information for 41 sites. Two of these 41 sites were both **Removal** and **Remedial** actions, 13 were sites with only **Removal** actions, and 17 were sites with only **Remedial** actions. The 2 sites with both **Removal** and **Remedial** actions reported those actions as completed (i.e., **Removal** actions were **Complete** and **Remedial** actions required **No Further Action**). Nine of the sites with only **Removal** actions reported those actions as **Complete**, and 6 of the sites with only **Remedial** Actions reported those actions as requiring **No Further Action**.

The prevalent **Last Remedial Phase** was **PA/SI** with 11 of the 20 sites that reported a **Last Remedial Phase**. The prevalent **Predominant Remedies** were **On-Site Treatment** with 18 occurrences and **Off-Site Treatment** with 15 occurrences.

Total Cost was reported as \$3,645,801 for 41 sites. **State** cost was reported for 38 sites for a total of \$3,616,104, and **PRP** cost was reported for 3 sites for a total of \$29,697. **State** cost of \$37,754 was reported for the two sites with both **Removal** actions that were **Complete** and **Remedial** actions that required **No Further Action**. **State** cost of \$296,165 was also reported for 7 sites with only **Removal** actions where those actions were **Complete**, and **State** cost of \$765,183 was reported for 6 sites with only **Remedial** actions that required **No Further Action**.

The **Primary Funding** source was the **State** with 23 of the 28 sites that reported **Primary Funding**; **Enforcement** was reported for 4 sites and **Voluntary/Property Transfer** for one site.

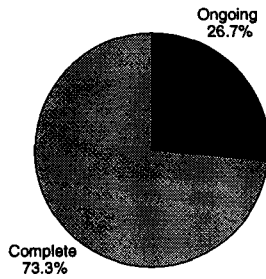
The average **Duration of Response Actions** was 8 months and 7 days based on 33 sites reporting start and completion dates for **Duration of Response Actions**. The first site was started in 1988.

Data Display (Total Sites = 41)

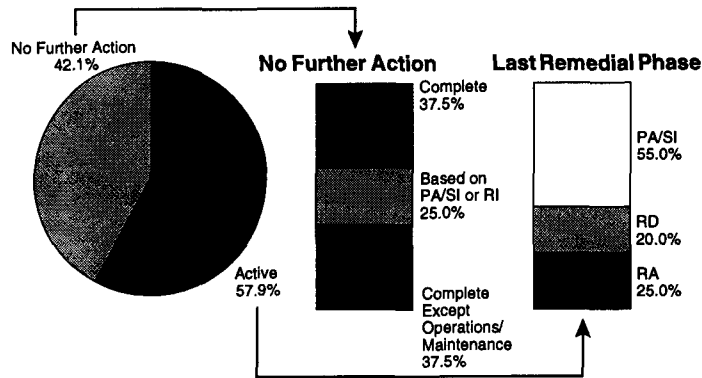
Removal			15	100.00%
Ongoing			4	26.67%
Complete			11	73.33%
Remedial			19	100.00%
Active			11	57.89%
No Further Action			8	42.11%
No Remedial Action Based on PA/SI or RI			2	25.00%
All Remedial Action Complete Except Operations/Maint.			3	37.50%
All Remedial Action Complete			3	37.50%
Last Remedial Phase			20	100.00%
PA/SI			11	55.00%
RI/FS			0	0.00%
RD			4	20.00%
RA			5	25.00%
Predominant Remedies			50	100.00%
On-Site Treatment			18	36.00%
On-Site Containment			7	14.00%
Off-Site Containment			4	8.00%
Off-Site Treatment			15	30.00%
Population Protection			3	6.00%
Site Security			3	6.00%
Innovative Technology			0	0.00%
Total Cost			\$3,645,801.00	
State			\$3,616,104.00	
Sites: 38	State Average: \$95,160.63			
PRP			\$29,697.00	
Sites: 3	PRP Average: \$9,899.00			
Primary Funding			28	100.00%
State			23	82.14%
Federal Government			0	0.00%
Enforcement			4	14.29%
Voluntary/Property Transfer			1	3.57%
Duration of Response Actions			33	100.00%
Less Than 12 Months			28	84.85%
12–23 Months			4	12.12%
24–35 Months			1	3.03%
36–47 Months			0	0.00%
48–59 Months			0	0.00%
60–71 Months			0	0.00%
More Than 71 Months			0	0.00%

State/Territory—Alaska

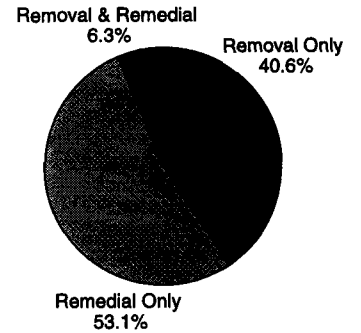
**Removal
15 Sites**



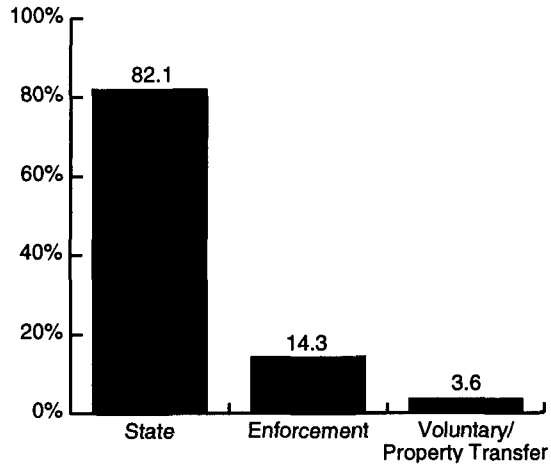
**Remedial
19 Sites**



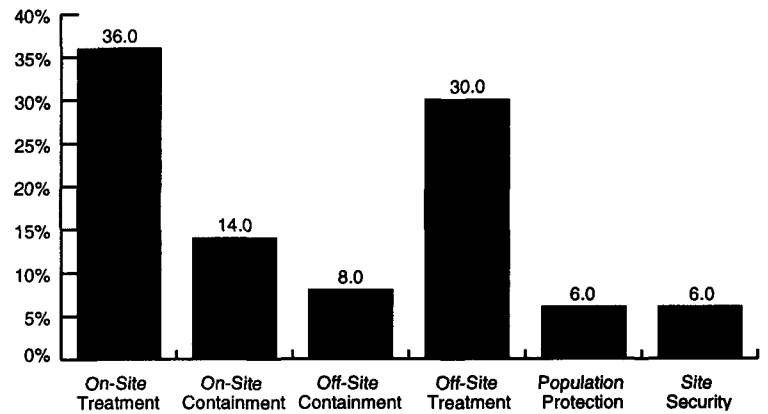
**Removal and Remedial
32 Sites**



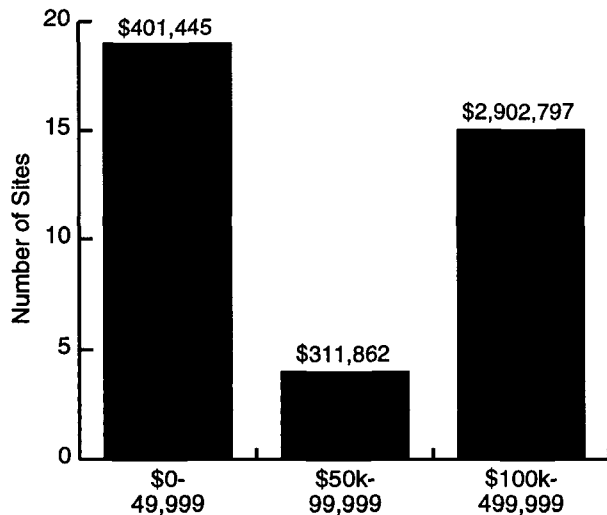
**Primary Funding
28 Sites**



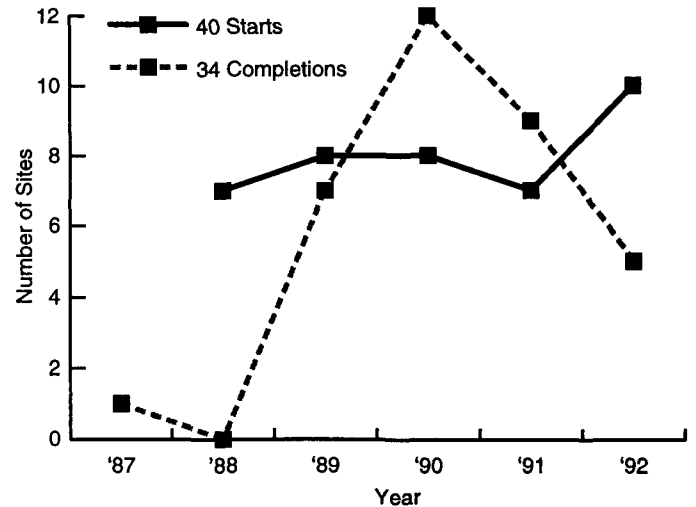
**Predominant Remedies
50 Occurrences**



**State Costs
38 Sites**



Start and Completion Dates



State/Territory—American Samoa

American Samoa reported 3 sites, all of which had both **Removal** and **Remedial** actions.

The **Last Remedial Phase** for the 2 sites with **Active Remedial** actions was, respectively, **PA/SI** and **RA**. The **Removal** actions for all 3 sites were **Ongoing**.

The **Predominant Remedies** used for the 3 sites were **On-Site Treatment**, **Off-Site Treatment**, **On-Site Containment**, and **Off-Site Containment**.

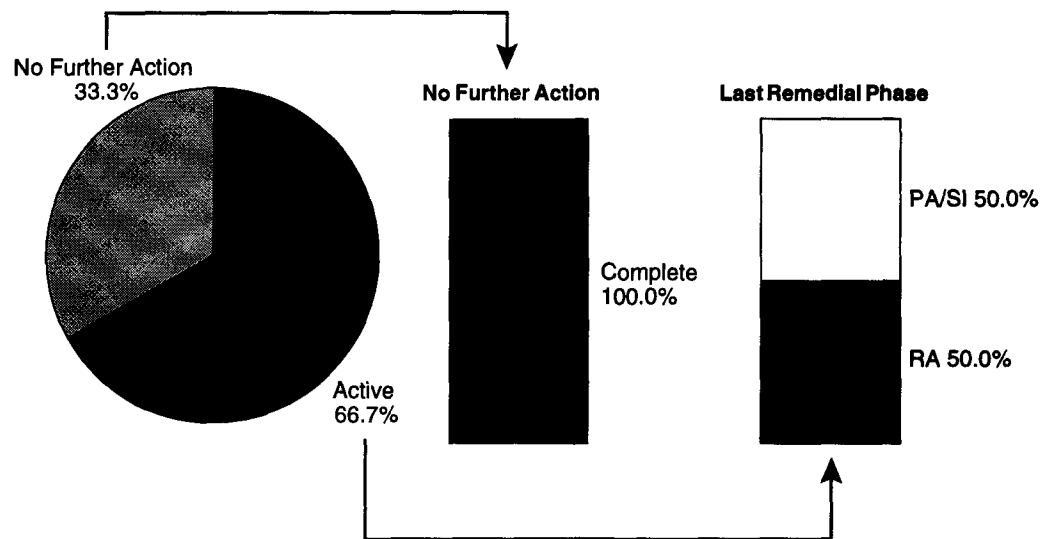
The **Primary Funding** source was the **Federal Government**. All costs are unknown.

One site was started in 1988, and 2 sites were started in 1990. The one **All Remedial Action Complete** designation occurred in 1990.

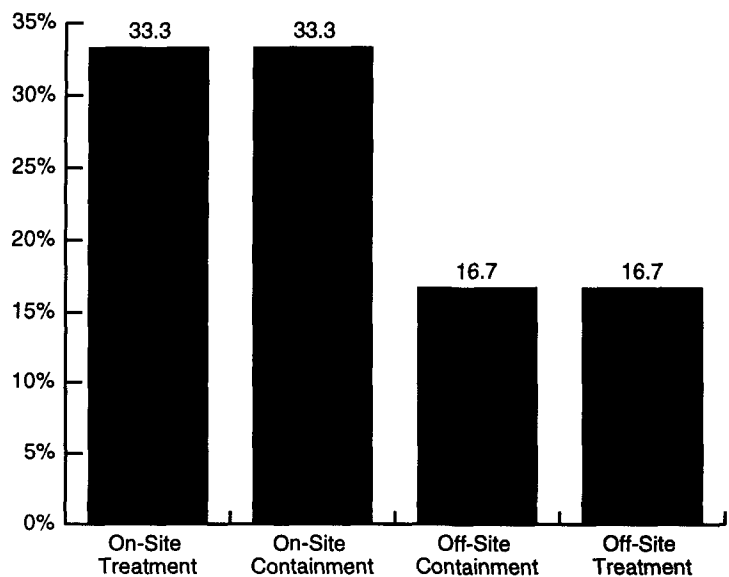
Data Display (Total Sites = 3)		
Removal	3	100.00%
Ongoing	3	100.00%
Complete	0	0.00%
Remedial	3	100.00%
Active	2	66.67%
No Further Action	1	33.33%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	1	100.00%
Last Remedial Phase	2	100.00%
PA/SI	1	50.00%
RI/FS	0	0.00%
RD	0	0.00%
RA	1	50.00%
Predominant Remedies	6	100.00%
On-Site Treatment	2	33.33%
On-Site Containment	2	33.33%
Off-Site Containment	1	16.67%
Off-Site Treatment	1	16.67%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	3	100.00%
State	0	0.00%
Federal Government	3	100.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	1	100.00%
Less Than 12 Months	1	100.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—American Samoa

Remedial 3 Sites



Predominant Remedies 6 Occurrences



State/Territory—Arizona

Arizona reported 76 sites. Forty-one of these sites had both **Removal** and **Remedial** actions, and 33 had only **Remedial** actions. There were no sites with only **Removal** actions.

Forty of the sites with **Remedial** actions were classified as construction completions.

State cost for 54 sites was \$12,524,140 for an average cost of \$231,929. The total **PRP** reported cost for 7 sites was \$19,615,593 for an average of \$2,802,228.

The most prevalent **Predominant Remedy** was **On-Site Containment** with 9 occurrences.

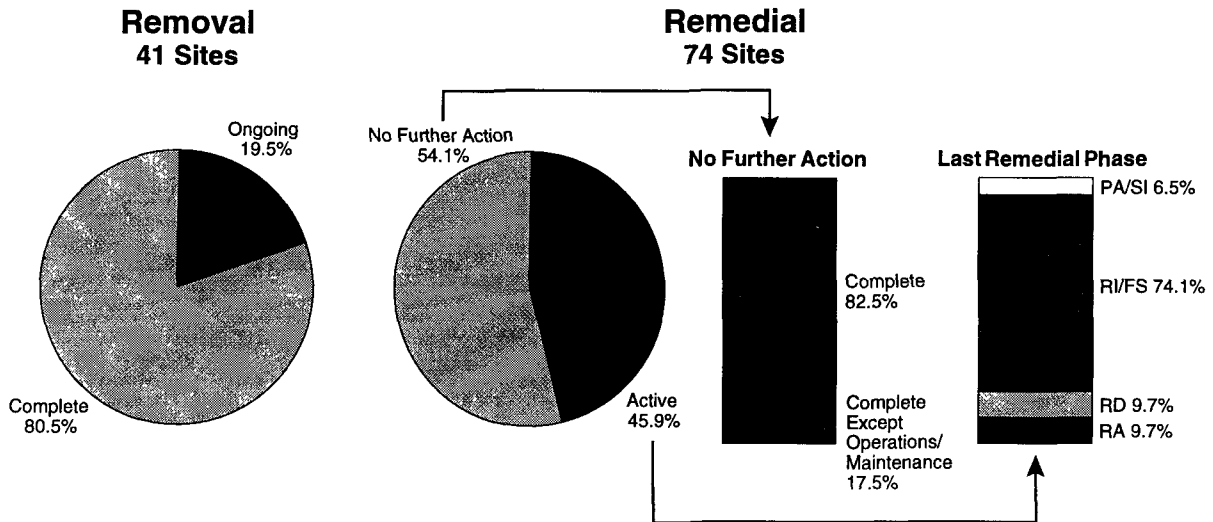
For sites with **Remedial** actions that were **Active**, the predominant **Last Remedial Phase** was the **RI/FS** (23 sites).

The first 2 sites were started in 1980, and an additional 10 sites were started in the period from 1980 through 1985. Twenty-two sites had **Duration of Response Actions of Less Than 12 Months**. The average **Duration of Response Actions** for 30 sites was 13 months and 25 days for the sites that reported start and completion dates.

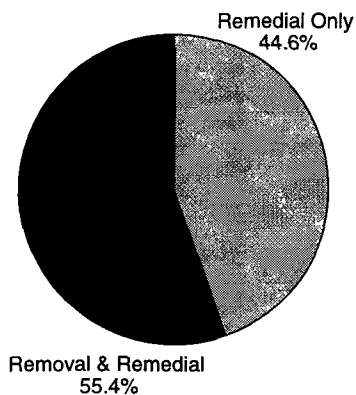
Data Display (Total Sites = 76)

Removal	41	100.00%
Ongoing	8	19.51%
Complete	33	80.49%
Remedial	74	100.00%
Active	34	45.95%
No Further Action	40	54.05%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	7	17.50%
All Remedial Action Complete	33	82.50%
Last Remedial Phase	31	100.00%
PA/SI	2	6.45%
RI/FS	23	74.19%
RD	3	9.68%
RA	3	9.68%
Predominant Remedies	27	100.00%
On-Site Treatment	7	25.93%
On-Site Containment	9	33.33%
Off-Site Containment	4	14.81%
Off-Site Treatment	1	3.70%
Population Protection	0	0.00%
Site Security	6	22.23%
Innovative Technology	0	0.00%
Total Cost	\$32,139,733.00	
State	\$12,524,140.00	
Sites: 54	State Average: \$231,928.52	
PRP	\$19,615,593.00	
Sites: 7	PRP Average: \$2,802,227.57	
Primary Funding	74	100.00%
State	54	72.97%
Federal Government	0	0.00%
Enforcement	2	2.70%
Voluntary/Property Transfer	18	24.33%
Duration of Response Actions	30	100.00%
Less Than 12 Months	22	73.33%
12–23 Months	1	3.33%
24–35 Months	2	6.67%
36–47 Months	2	6.67%
48–59 Months	1	3.33%
60–71 Months	2	6.67%
More Than 71 Months	0	0.00%

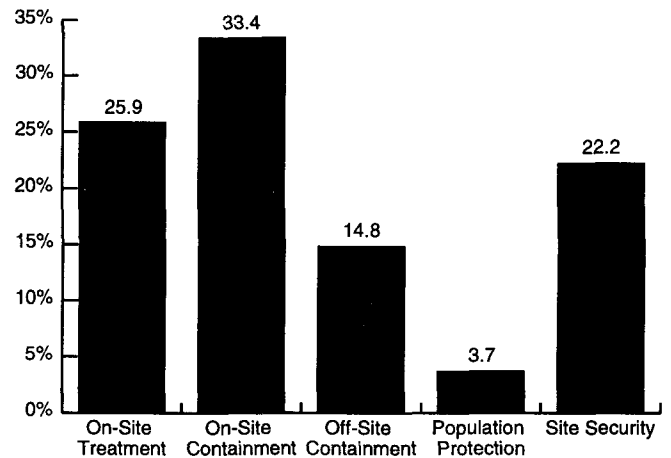
State/Territory—Arizona



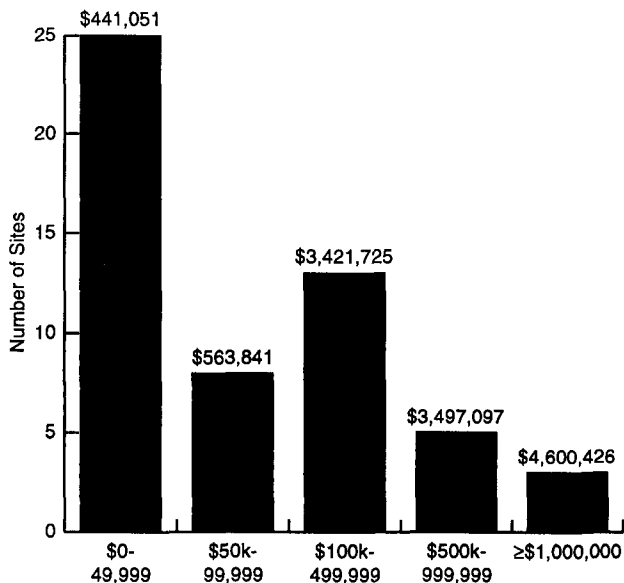
Removal and Remedial
74 Sites



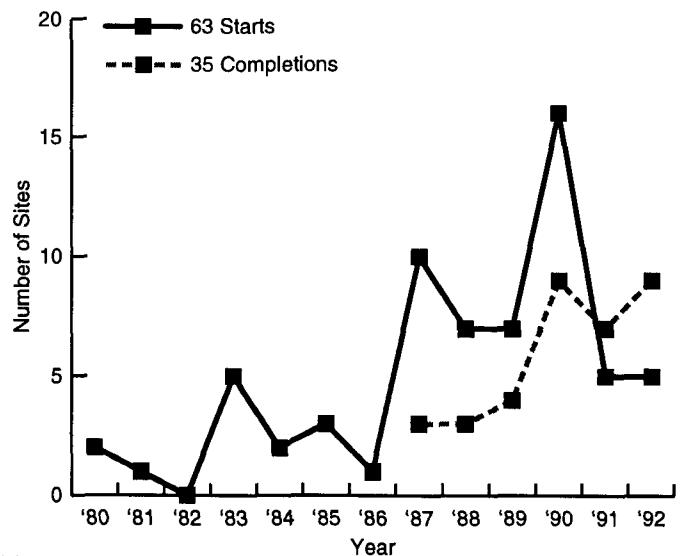
Predominant Remedies
27 Occurrences



State Costs
54 Sites



Start and Completion Dates



State/Territory—California

California stated that it had nearly 2,000 sites. The detailed information provided was for 850 sites. One hundred thirty-eight of the sites had both **Removal** and **Remedial** actions, 34 had only **Removal** actions, and 675 had only **Remedial** actions.

Twenty-nine of the 138 sites that had both **Removal** and **Remedial** actions had **Removal** actions that were **Complete** and the **Remedial** actions that required **No Further Action**. For 14 of the 34 sites that had only **Removal** actions, the actions were **Complete**. For 571 of the 675 sites that had only **Remedial** actions, the actions required **No Further Action**.

The **Predominant Remedy** was **Site Security**, which was reported for all 28 **Predominant Remedy** occurrences.

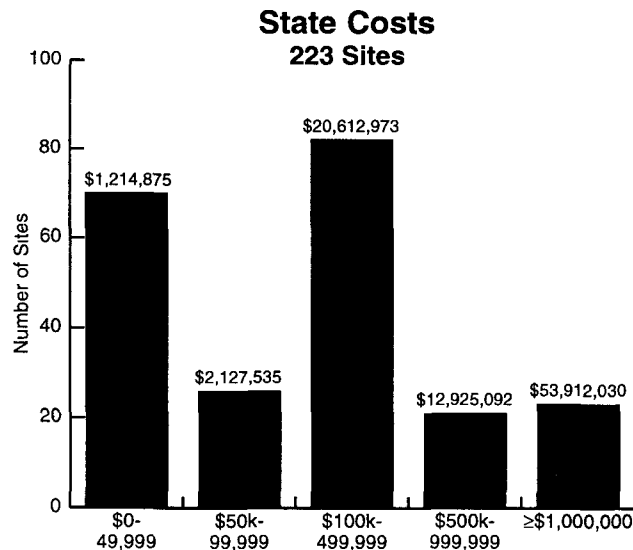
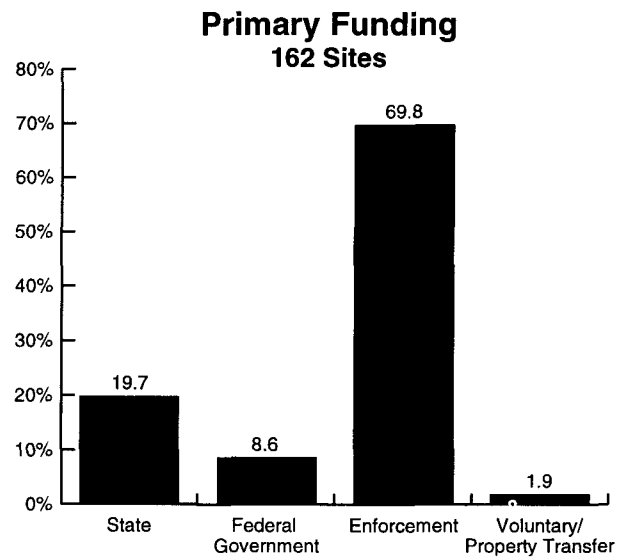
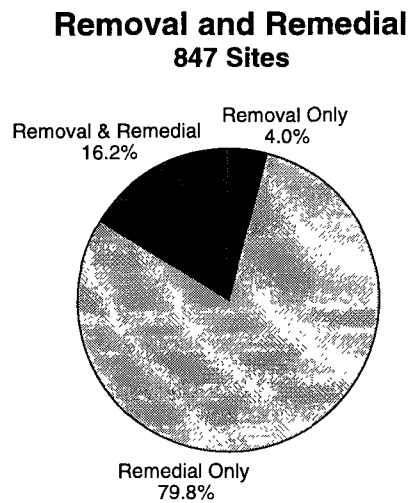
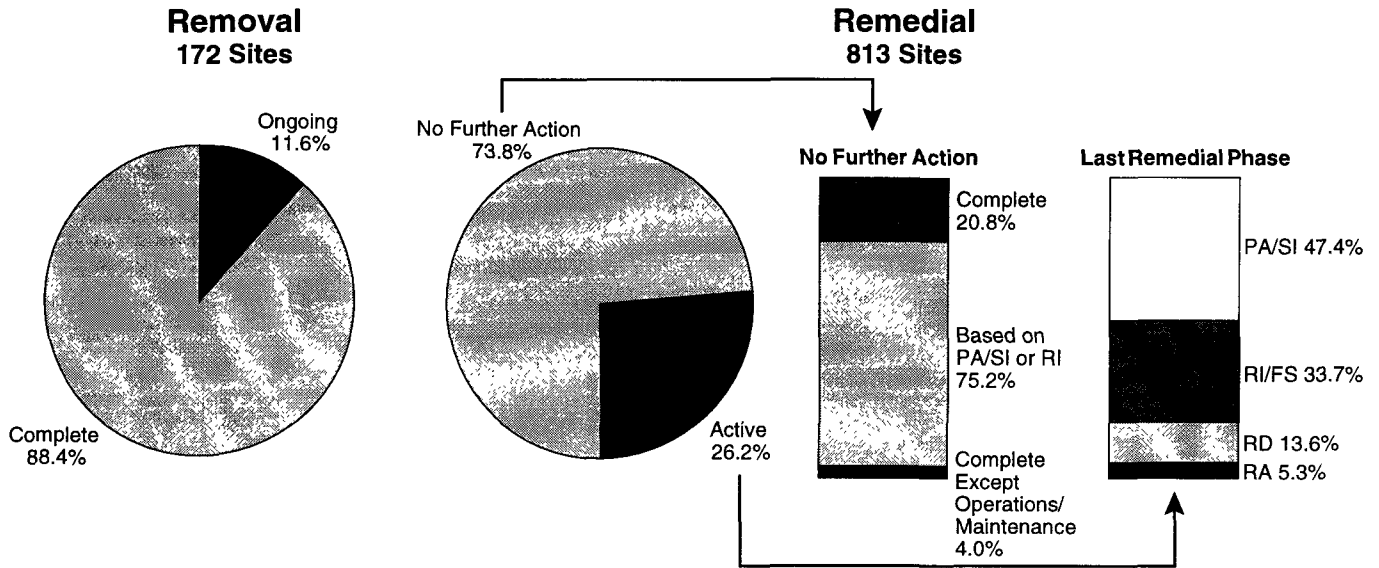
For the 223 sites that reported **State** cost, the total was \$90,792,505 with a per site average of \$407,141. The reported cost for 13 sites with only **Removal** actions that were **Complete** was \$2,849,366. The reported cost for 80 sites with only **Remedial** actions designated as requiring **No Further Action** was \$10,908,703. The respective average of each was \$219,182 and \$136,359.

Enforcement was the **Primary Funding** source at 113 sites, followed by the **State** at 32 sites, the **Federal Government** at 14 sites and **Voluntary/Property Transfer** at 3 sites.

Data Display (Total Sites = 850)

Removal	172	100.00%
Ongoing	20	11.63%
Complete	152	88.37%
Remedial	813	100.00%
Active	213	26.20%
No Further Action	600	73.80%
No Remedial Action Based on PA/SI or RI	451	75.17%
All Remedial Action Complete Except Operations/Maint.	24	4.00%
All Remedial Action Complete	125	20.83%
Last Remedial Phase	95	100.00%
PA/SI	45	47.37%
RI/FS	32	33.68%
RD	13	13.68%
RA	5	5.26%
Predominant Remedies	28	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	28	100.00%
Innovative Technology	0	0.00%
Total Cost	\$90,792,505.00	
State	\$90,792,505.00	
Sites: 223	State Average: \$407,141.28	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	162	100.00%
State	32	19.75%
Federal Government	14	8.65%
Enforcement	113	69.75%
Voluntary/Property Transfer	3	1.85%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—California



State/Territory—Colorado

Colorado reported 11 sites; 6 were sites with only **Removal** actions, 2 were sites with only **Remedial** actions, and 3 were sites with both **Removal** and **Remedial** actions. All of the sites with only **Remedial** actions were classified as **Active**. All of the sites with only **Removal** actions were classified **Complete**. The 3 sites with both **Removal** and **Remedial** actions had **Removal** actions that were **Ongoing** and had **Remedial** actions that were **Active**.

State cost of \$3,200,000 was reported for only one site with **Active Remedial** actions. The **PRP** cost for this site was reported as **Unknown**.

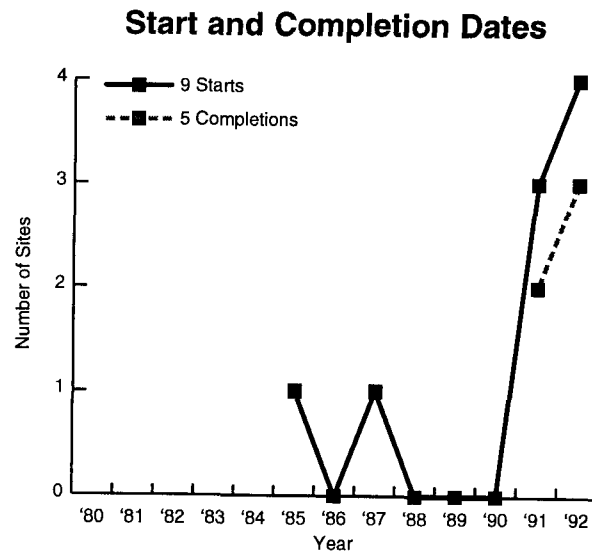
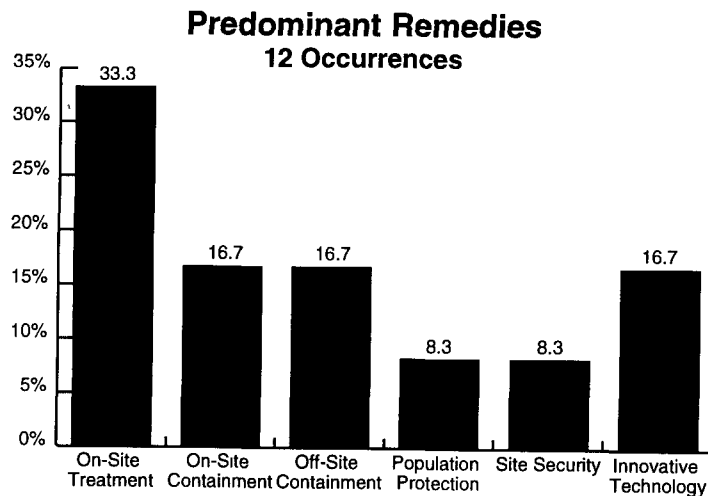
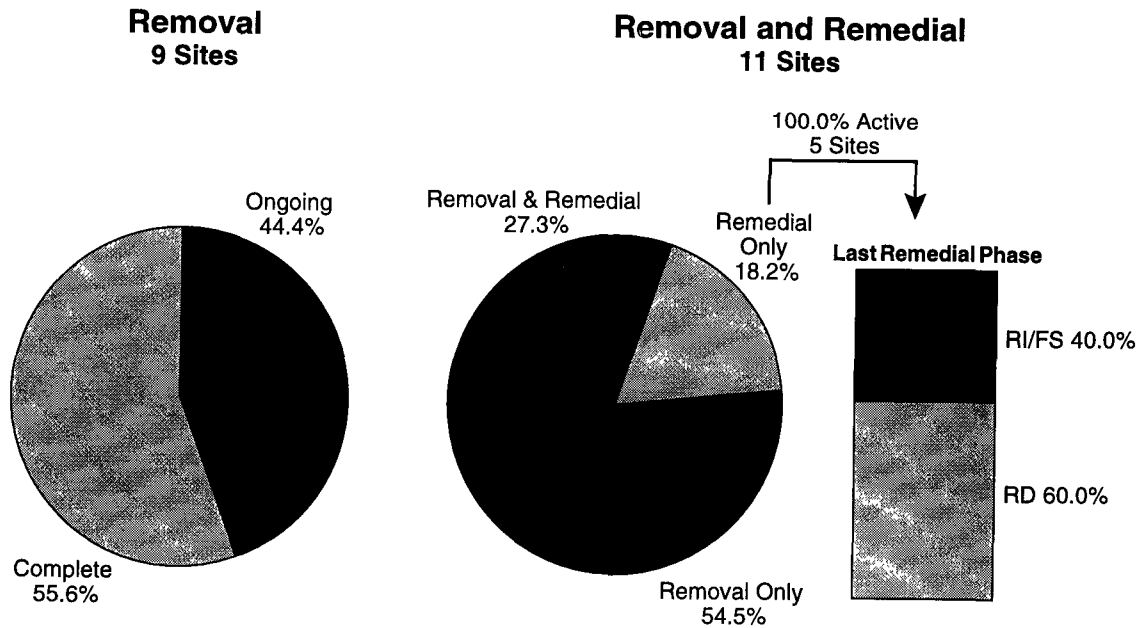
Eight sites were started after 1986, and five sites were completed in the 2-year period of 1991 through 1992. The average **Duration of Response Actions** from start to completion is 3 months and 10 days based on 3 sites.

Colorado does not maintain a database to track cleanup activities, and a thorough review of the files in each of the agencies that perform or require cleanup was not done for this survey because of the large amount of time and effort that it would have required. Therefore, this data significantly underestimates the number of **Remedial** and **Removal** activities that have been performed.

Data Display (Total Sites = 11)

Removal	9	100.00%
Ongoing	4	44.44%
Complete	5	55.56%
Remedial	5	100.00%
Active	5	100.00%
No Further Action	0	0.00%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	5	100.00%
PA/SI	0	0.00%
RI/FS	2	40.00%
RD	3	60.00%
RA	0	0.00%
Predominant Remedies	12	100.00%
On-Site Treatment	4	33.33%
On-Site Containment	2	16.67%
Off-Site Containment	2	16.67%
Off-Site Treatment	0	0.00%
Population Protection	1	8.33%
Site Security	1	8.33%
Innovative Technology	2	16.67%
Total Cost	\$3,200,000.00	
State	\$3,200,000.00	
Sites: 1	State Average: \$3,200,000.00	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	2	100.00%
State	0	0.00%
Federal Government	0	0.00%
Enforcement	2	100.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	3	100.00%
Less Than 12 Months	3	100.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Colorado



State/Territory—Connecticut

Connecticut reported 642 sites. All of the sites had only **Remedial** actions, of which 91 required **No Further Action**. For the sites that had **Active** actions, 551 reported a **Last Remedial Phase** with **PA/SI** being the most prevalent with 375 sites. In addition, there were 20 sites in the **Last Remedial Phase** of **RD/RA** and 156 sites in the **Last Remedial Phase** of **RI/FS**.

A **Primary Funding** source was reported at 242 sites, with **Voluntary/Property Transfer** being reported for 161 of those sites.

From 1980 to 1986, the Connecticut Department of Environmental Protection investigated approximately 5,700 potential sites. Of these, 567 were found to be hazardous waste disposal sites requiring **Remedial** action; the remaining 5,133 were classified as sites requiring **No Further Action**. The sites requiring action were placed on the Dynamic Inventory of Hazardous Waste Disposal Sites (Inventory).

The State Superfund Law was adopted in 1987 with 567 hazardous waste disposal sites listed. Since that time, 75 additional sites have been added to the Inventory. Because Connecticut screens sites prior to listing on the Inventory, very few of the sites that are **Active** are likely to be classified as sites requiring **No Further Action** prior to implementation of **Remedial** measures.

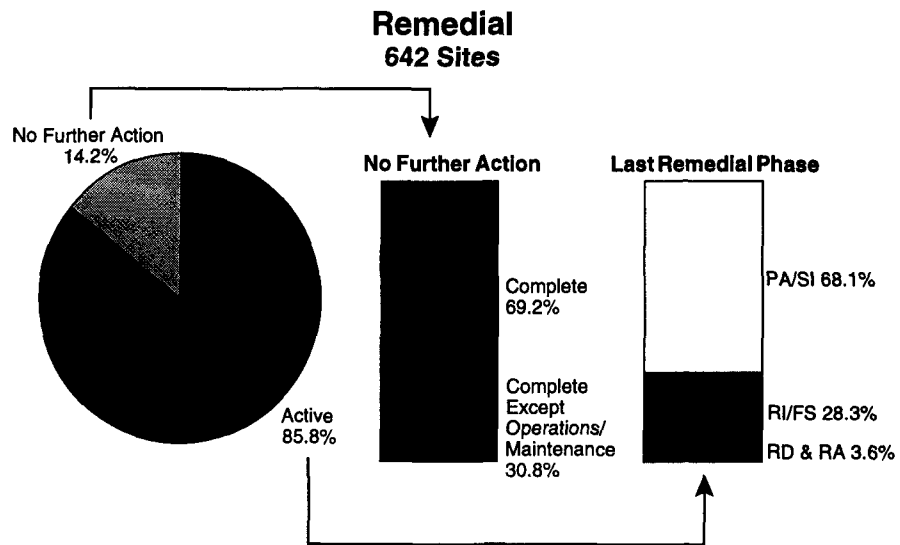
As of December 1992, 63 sites had been fully remediated, and 28 sites were in the post-remediation monitoring phase. The **Predominant Remedy** reported was **Off-Site Treatment**.

Connecticut's remedial programs include the Property Transfer Program (1985), State Superfund Program (1987), both enforcement-driven and State-funded actions, and the Urban Sites Remedial Action Program. Connecticut did not provide data in sufficient detail that could be input to the database; therefore, the data presented herein is not a part of the State/Territory database.

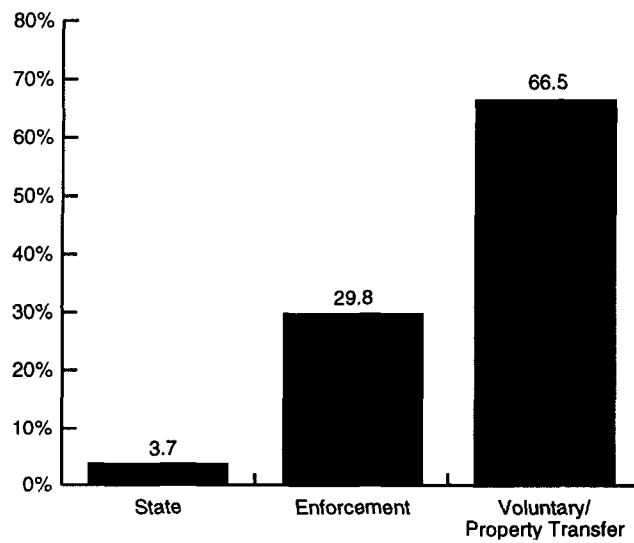
Data Display (Total Sites = 642)

Removal	0	100.00%
Ongoing	0	0.00%
Complete	0	0.00%
Remedial	642	100.00%
Active	551	85.80%
No Further Action	91	14.20%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	28	30.80%
All Remedial Action Complete	63	69.20%
Last Remedial Phase	551	100.00%
PA/SI	375	68.06%
RI/FS	156	28.31%
RD/RA	20	3.63%
Predominant Remedies	0	0.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	242	100.00%
State	9	3.70%
Federal Government	0	0.00%
Enforcement	72	29.80%
Voluntary/Property Transfer	161	66.50%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12-23 Months	0	0.00%
24-35 Months	0	0.00%
36-47 Months	0	0.00%
48-59 Months	0	0.00%
60-71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Connecticut



Primary Funding 242 Sites



State/Territory—Delaware

Delaware reported 185 sites. One of the sites had both **Removal** and **Remedial** actions. Ten sites had only **Removal** actions. One hundred seventy-four sites had only **Remedial** actions. The site with both **Removal** and **Remedial** actions was composed of **Removal** actions that were **Complete** and **Remedial** actions that were **Active**. The **Last Remedial Phase** of these actions was **RI/FS**. The 10 sites with only **Removal** actions were all in an **Ongoing** status. The 83 sites with only **Remedial** actions were all in the **Active** status. The remaining 91 sites required **No Remedial Action Based on PA/SI or RI**.

The most prevalent **Last Remedial Phase** was **PA/SI** with 78 of the 84 sites that reported a **Last Remedial Phase**.

A total of \$1,255,500 was reported for 18 sites, all of which was **State** cost. All **PRP** cost was reported as unknown.

The **Federal Government** was reported as the **Primary Funding** source with 91 sites, followed by **Enforcement** with 75 sites and the **State** with 17 sites. **Voluntary/Property Transfer** was reported for 2 sites.

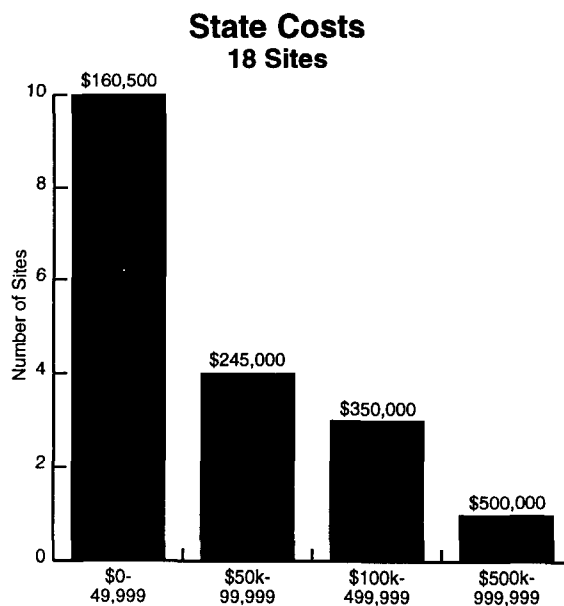
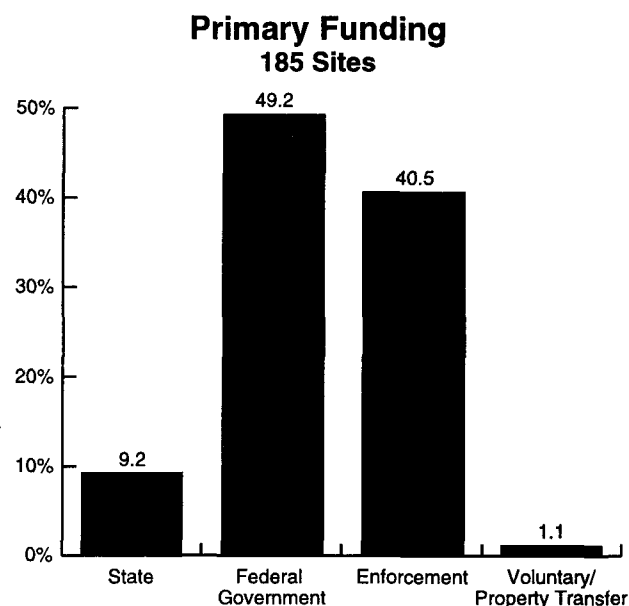
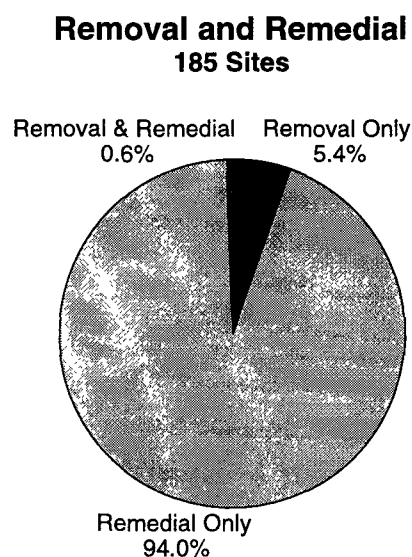
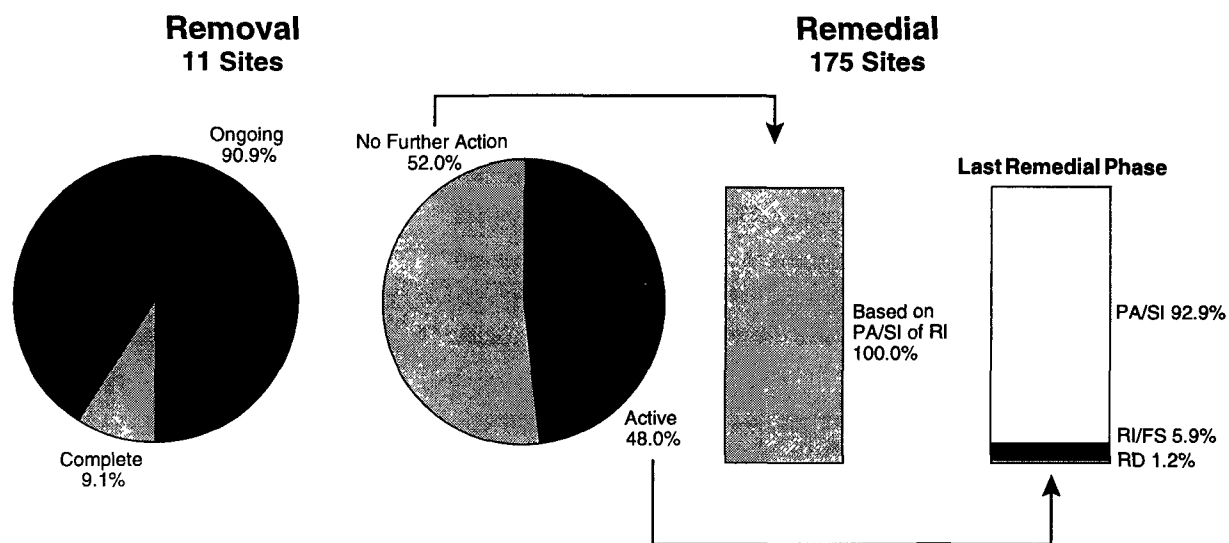
Five sites were started in the 2-year period from 1991 through 1992. Delaware also stated that 91 sites have a completion time frame of less than 24 months but that specific start and completion dates for these sites were not available in time to meet the submission time frame of the survey.

Delaware has a Hazardous Substance Cleanup Act "to accomplish effective and expeditious cleanups to protect the public health or welfare, or the environment."

Data Display (Total Sites = 185)

Removal	11	100.00%
Ongoing	10	90.91%
Complete	1	9.09%
Remedial	175	100.00%
Active	84	48.00%
No Further Action	91	52.00%
No Remedial Action Based on PA/SI or RI	91	100.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	84	100.00%
PA/SI	78	92.86%
RI/FS	5	5.95%
RD	1	1.19%
RA	0	0.00%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$1,255,500.00
State		\$1,255,000.00
Sites: 18	State Average: \$69,750.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	185	100.00%
State	17	9.19%
Federal Government	91	49.19%
Enforcement	75	40.54%
Voluntary/Property Transfer	2	1.08%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12-23 Months	0	0.00%
24-35 Months	0	0.00%
36-47 Months	0	0.00%
48-59 Months	0	0.00%
60-71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Delaware



State/Territory—Florida

Florida reported 36 sites. All of these sites had both **Removal** and **Remedial** actions. At 21 of the sites the **Removal** actions were designated **Complete** and the **Remedial** actions required **No Further Action**. The **Predominant Remedies** reported were **On-Site Treatment** with 18 occurrences and **Off-Site Containment** with 16 occurrences. In all, 40 **Predominant Remedies** were reported.

A **Primary Funding** source was reported for 36 sites: the **State** with 35 sites and the **Federal Government** with 1 site.

Twenty-five sites had **State** cost, which totaled \$12,184,849 for a per site average of \$487,394. The 21 sites with both the **Removal** actions **Complete** and the **Remedial** actions requiring **No Further Action** reported cost that totaled \$9,239,633 for a per site average of \$439,983.

The first cleanup effort was in 1983 and was completed within 1 month. The last completion occurred in 1992. The range from start to completion encompassed from 1 to 83 months, with the average **Duration of Response Actions** having been 32 months.

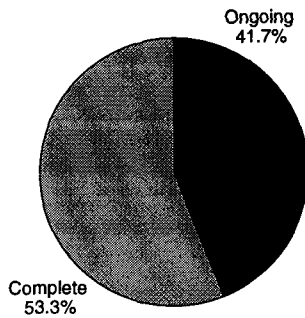
The data presented herein does not include sites in Florida's Enforcement Program.

Data Display (Total Sites = 36)

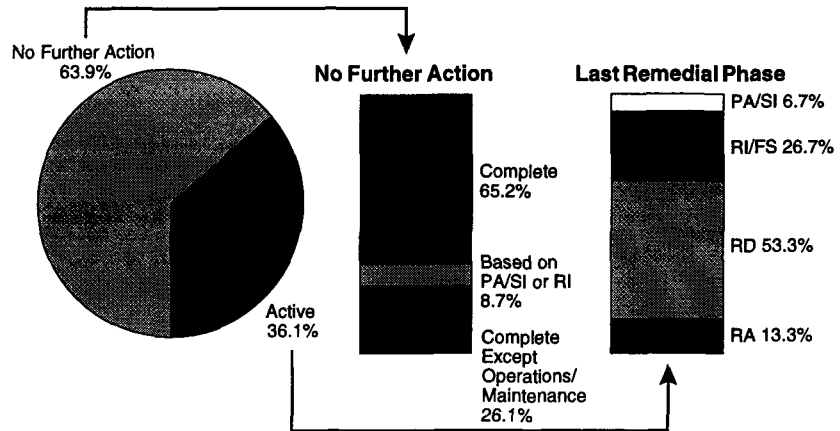
Removal	36	100.00%
Ongoing	15	41.67%
Complete	21	58.33%
Remedial	36	100.00%
Active	13	36.11%
No Further Action	23	63.89%
No Remedial Action Based on PA/SI or RI	2	8.70%
All Remedial Action Complete Except Operations/Maint.	6	26.09%
All Remedial Action Complete	15	65.22%
Last Remedial Phase	15	100.00%
PA/SI	1	6.67%
RI/FS	4	26.67%
RD	8	53.33%
RA	2	13.33%
Predominant Remedies	40	100.00%
On-Site Treatment	18	45.00%
On-Site Containment	0	0.00%
Off-Site Containment	16	40.00%
Off-Site Treatment	3	7.50%
Population Protection	1	2.50%
Site Security	1	2.50%
Innovative Technology	1	2.50%
Total Cost	\$12,184,849.00	
State	\$12,184,849.00	
Sites: 25	State Average: \$487,393.96	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	36	100.00%
State	35	97.22%
Federal Government	1	2.78%
Enforcement	0	0.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	24	100.00%
Less Than 12 Months	6	25.00%
12-23 Months	7	29.17%
24-35 Months	3	12.50%
36-47 Months	1	4.17%
48-59 Months	1	4.17%
60-71 Months	2	8.32%
More Than 71 Months	4	16.67%

State/Territory—Florida

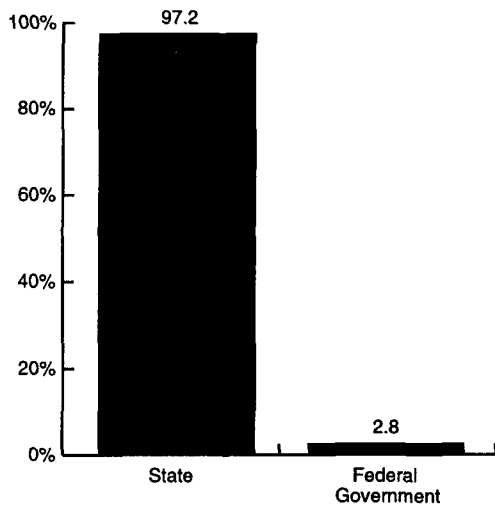
**Removal
36 Sites**



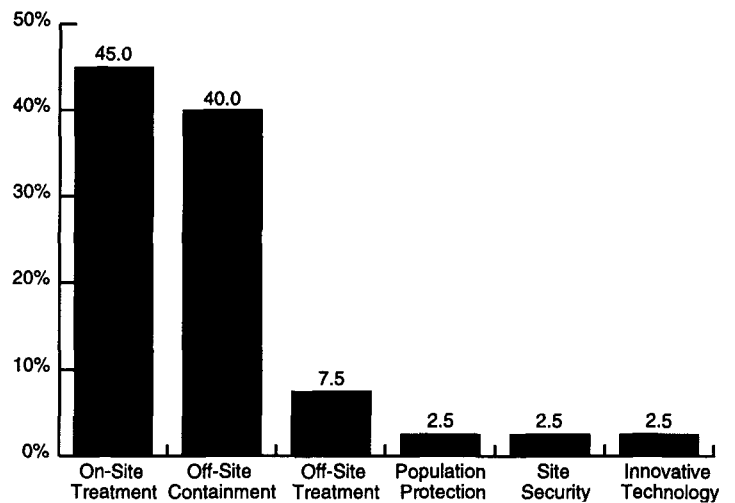
**Remedial
36 Sites**



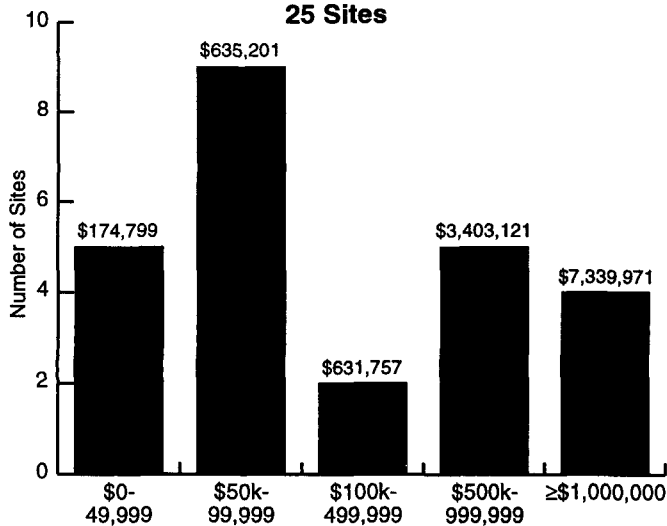
**Primary Funding
36 Sites**



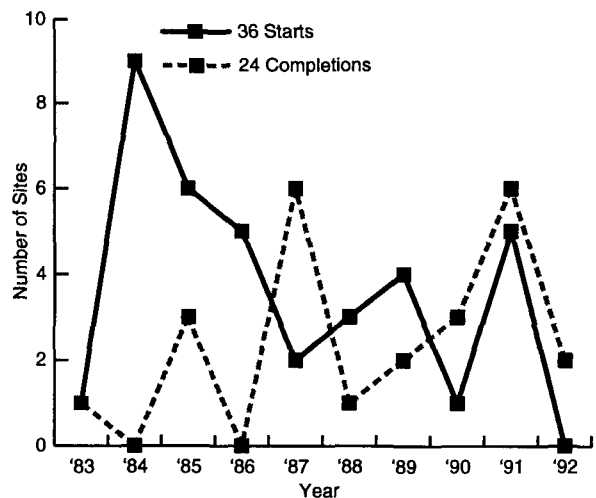
**Predominant Remedies
40 Occurrences**



**State Costs
25 Sites**



Start and Completion Dates



State/Territory—Illinois

Illinois reported 906 sites; 737 of the sites had both **Removal** and **Remedial** actions, 23 of the sites had only **Removal** actions, and 103 of the sites had only **Remedial** actions. Of the 840 total **Remedial** actions reported, 651 were designated as **Active** with **RI/FS** as the **Last Remedial Phase** for 571 of those **Active** actions. The prevalent **Predominant Remedy** was **Off-Site Containment** with 189 occurrences of the 244 **Predominant Remedy** occurrences reported.

The **Total Cost** was \$126,459,118, with the **State** cost being \$62,710,274 for 375 sites and **PRP** cost being \$63,748,844 for 138 sites. The average per site **PRP** cost was \$461,948, which was \$294,721 greater than the per site average for **State** cost of \$167,227.

A **Primary Funding** source was reported for 863 of the 906 sites reporting **Primary Funding**. **Voluntary/Property Transfer** accounted for 613 of the sites which reported a **Primary Funding** source, followed by the **State** with 137.

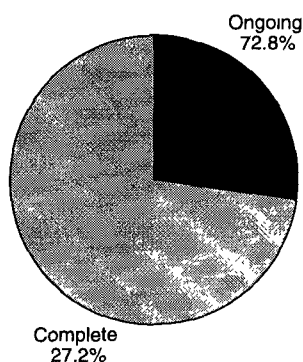
The average **Duration of Response Actions** is 61 months and 21 days based on 209 sites reporting start and completion dates for response actions.

Data Display (Total Sites = 906)

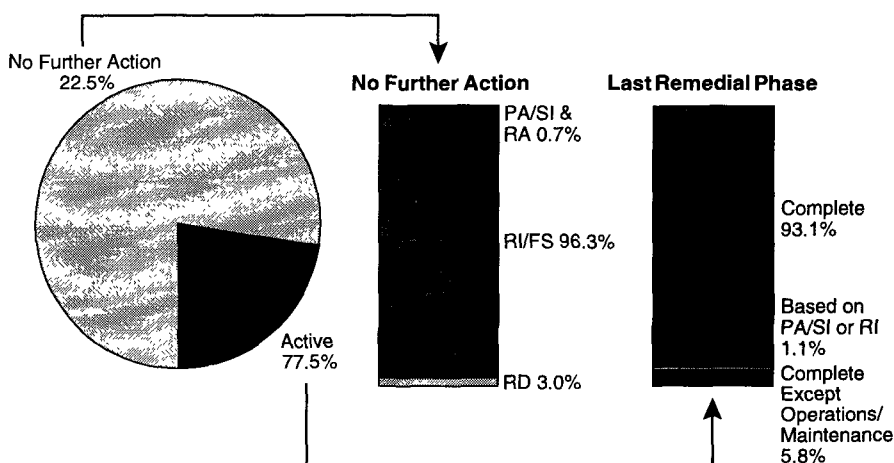
Removal	760	100.00%
Ongoing	553	72.76%
Complete	207	27.24%
Remedial	840	100.00%
Active	651	77.50%
No Further Action	189	22.50%
No Remedial Action Based on PA/SI or RI	2	1.06%
All Remedial Action Complete Except Operations/Maint.	11	5.82%
All Remedial Action Complete	176	93.12%
Last Remedial Phase	593	100.00%
PA/SI	1	0.17%
RI/FS	571	96.28%
RD	18	3.04%
RA	3	0.51%
Predominant Remedies	244	100.00%
On-Site Treatment	25	10.25%
On-Site Containment	15	6.15%
Off-Site Containment	189	77.45%
Off-Site Treatment	7	2.87%
Population Protection	4	1.64%
Site Security	3	1.23%
Innovative Technology	1	0.41%
Total Cost	\$126,459,118.00	
State	\$62,710,274.00	
Sites: 375	State Average: \$167,227.40	
PRP	\$63,748,844.00	
Sites: 138	PRP Average: \$461,948.14	
Primary Funding	863	100.00%
State	137	15.87%
Federal Government	18	2.09%
Enforcement	95	11.01%
Voluntary/Property Transfer	613	71.03%
Duration of Response Actions	209	100.00%
Less Than 12 Months	128	61.24%
12-23 Months	21	10.05%
24-35 Months	11	5.26%
36-47 Months	7	3.35%
48-59 Months	8	3.83%
60-71 Months	8	3.83%
More Than 71 Months	26	12.44%

State/Territory—Illinois

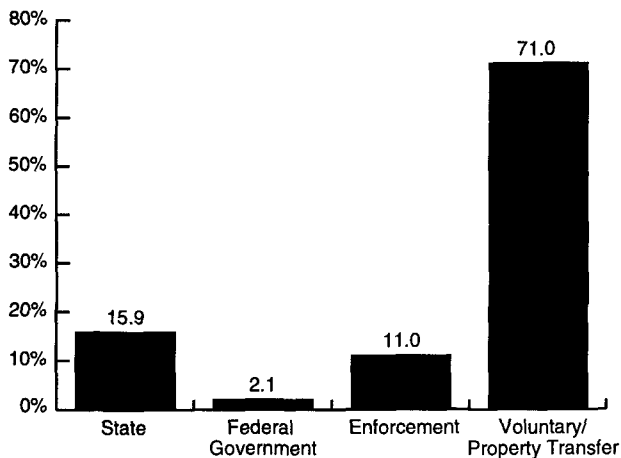
**Removal
760 Sites**



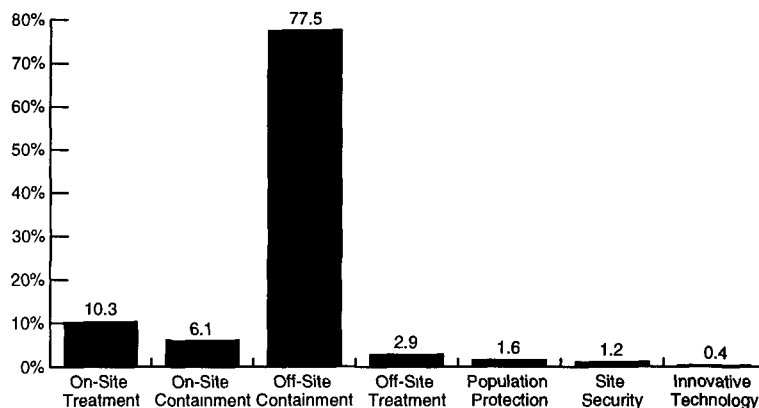
**Remedial
840 Sites**



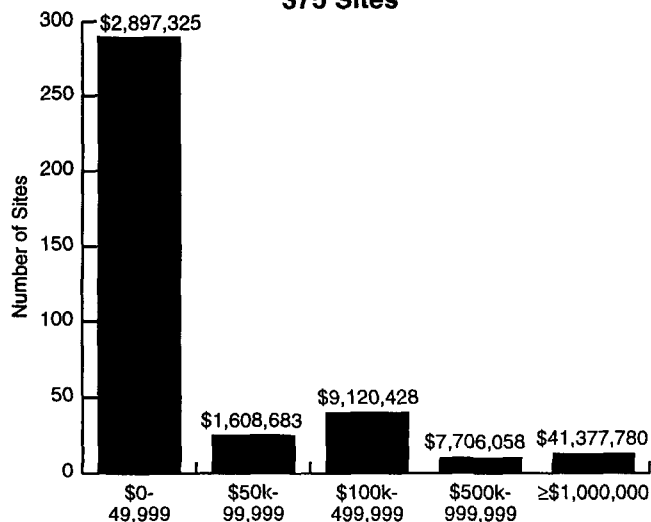
**Primary Funding
863 Sites**



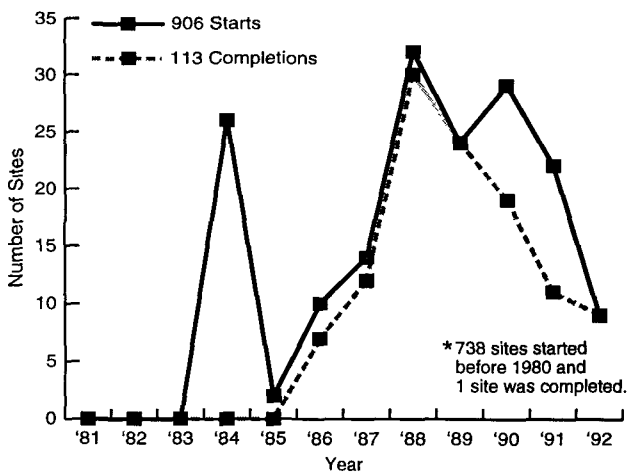
**Predominant Remedies
244 Occurrences**



**State Costs
375 Sites**



Start and Completion Dates



State/Territory—Indiana

Indiana reported 79 sites; 4 were sites with both **Removal** and **Remedial** actions, 41 were sites with only **Removal** actions, 23 were sites with only **Remedial** actions, and 11 were reported without a status designation. These last sites were approved, but work did not begin as of December 31, 1992.

Of the 4 sites with both **Removal** and **Remedial** actions, 1 site had the **Removal** actions designated as **Ongoing** and the **Remedial** actions designated as **Active**. Twenty-one of the 23 sites with only **Remedial** actions had the actions designated as **Active**, and 26 of the sites with only **Removal** actions had the actions designated as **Ongoing**.

Six sites with only **Removal** actions that were **Complete** reported **State** cost of \$869,559 for a per site average of \$144,926. Total **PRP** cost of \$1,000 was reported for 1 site. Total **State** cost of \$1,681,128 was reported for 10 sites.

The **Predominant Remedies** were **Off-Site Containment** with 14 occurrences and **Off-Site Treatment** with 9 occurrences.

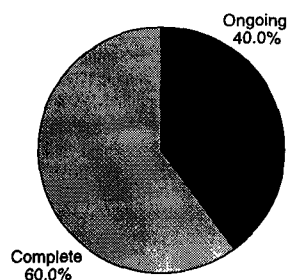
The first site was started in 1972. The average **Duration of Response Actions** for 15 sites reporting start and completion dates was 12 months and 15 days.

Data Display (Total Sites = 79)

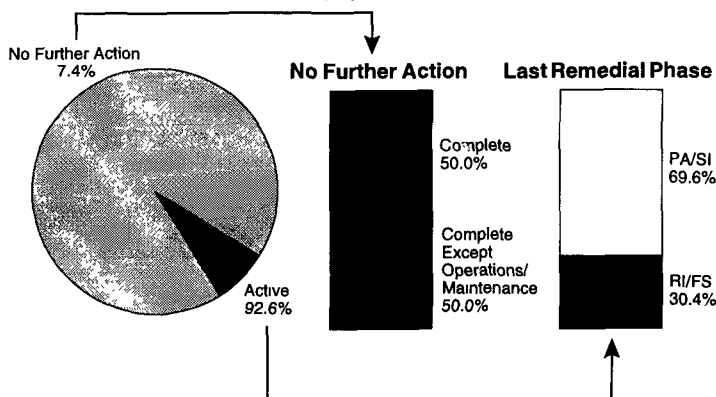
Removal	45	100.00%
Ongoing	27	60.00%
Complete	18	40.00%
Remedial	27	100.00%
Active	25	92.59%
No Further Action	2	7.41%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	1	50.00%
All Remedial Action Complete	1	50.00%
Last Remedial Phase	23	100.00%
PA/SI	16	69.57%
RI/FS	7	30.43%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	33	100.00%
On-Site Treatment	2	6.06%
On-Site Containment	3	9.09%
Off-Site Containment	14	42.43%
Off-Site Treatment	9	27.27%
Population Protection	2	6.06%
Site Security	3	9.09%
Innovative Technology	0	0.00%
Total Cost		\$1,682,128.00
State		\$1,681,128.00
Sites: 10	State Average: \$168,112.80	
PRP		\$1,000.00
Sites: 1	PRP Average: \$1,000.00	
Primary Funding	27	100.00%
State	12	44.44%
Federal Government	0	0.00%
Enforcement	3	11.12%
Voluntary/Property Transfer	12	44.44%
Duration of Response Actions	15	100.00%
Less Than 12 Months	10	66.67%
12–23 Months	2	13.33%
24–35 Months	1	6.67%
36–47 Months	2	13.33%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Indiana

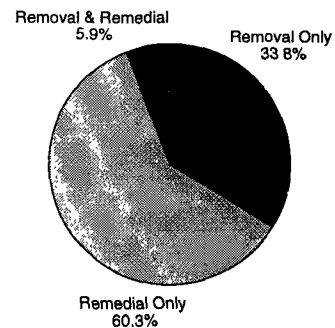
**Removal
45 Sites**



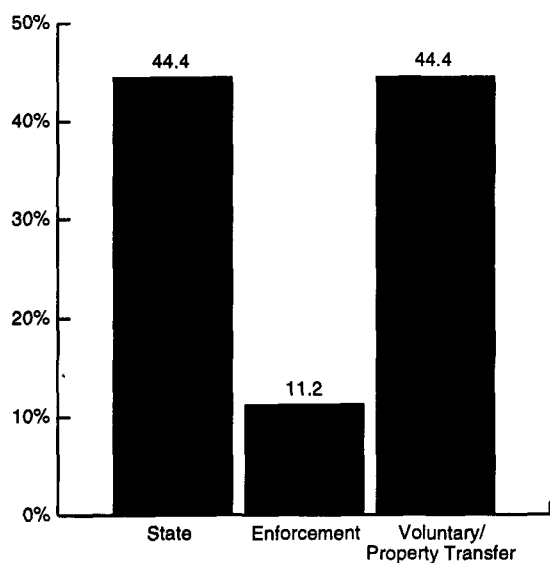
**Remedial
27 Sites**



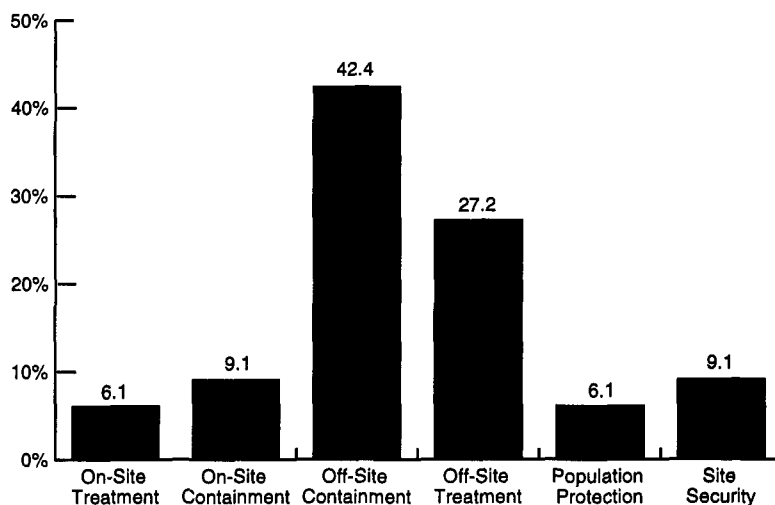
**Removal and Remedial
68 Sites**



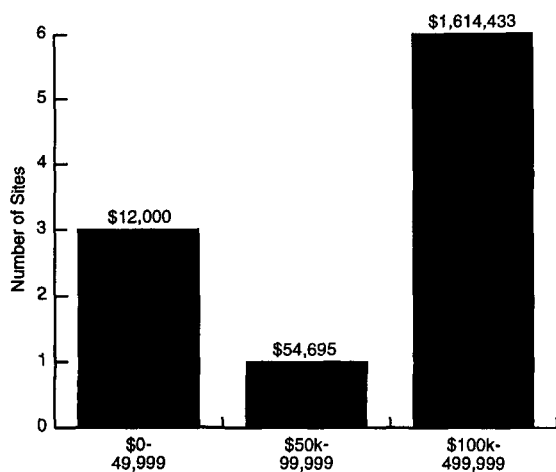
**Primary Funding
27 Sites**



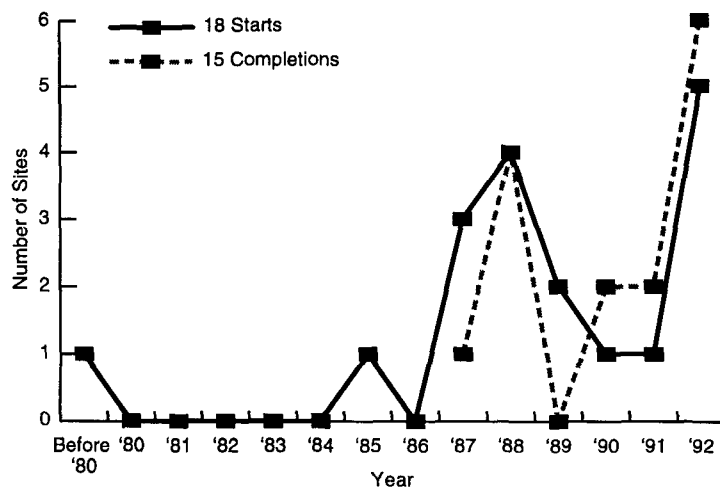
**Predominant Remedies
33 Occurrences**



**State Costs
10 Sites**



Start and Completion Dates



State/Territory—Kansas

Kansas reported 183 sites. Sixty-six were sites with both **Removal** and **Remedial** actions, 1 was a site with only **Removal** actions and 116 were sites with only **Remedial** actions. Two of the 66 sites with both **Removal** and **Remedial** actions had **Removal** actions that were **Complete** and **Remedial** actions that required **No Further Action**. The 1 site with only **Removal** actions designated the actions as **Ongoing**, and all but one of the 116 sites with only **Remedial** actions designated those actions as **Active**.

Predominant Remedies had 106 reported occurrences. The most prevalent was **On-Site Treatment** with 81 of the 106 reported occurrences.

Total Cost of \$33,053,000 had been reported for 16 sites. **State** cost for 2 of the sites was \$167,000, and **PRP** cost for the other 14 sites was \$32,886,000.

Enforcement was the **Primary Funding** source for 96 sites, followed by **Voluntary/Property Transfer** for 45 sites, the **Federal Government** for 25 sites, and the **State** for 17 sites.

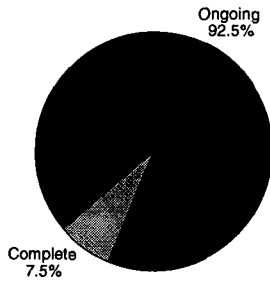
Seventeen sites were started prior to 1986, and 166 were started in the period 1986 through 1992.

Data Display (Total Sites = 183)

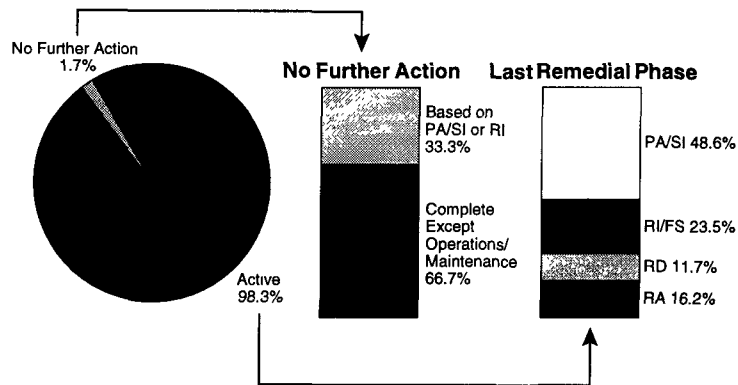
Removal			67	100.00%
Ongoing			62	92.54%
Complete			5	7.46%
Remedial			182	100.00%
Active			179	98.35%
No Further Action			3	1.65%
No Remedial Action Based on PA/SI or RI			1	33.33%
All Remedial Action Complete Except Operations/Maint.			2	66.67%
All Remedial Action Complete			0	0.00%
Last Remedial Phase			179	100.00%
PA/SI			87	48.61%
RI/FS			42	23.46%
RD			21	11.73%
RA			29	16.20%
Predominant Remedies			106	100.00%
On-Site Treatment			81	76.42%
On-Site Containment			12	11.32%
Off-Site Containment			5	4.72%
Off-Site Treatment			0	0.00%
Population Protection			4	3.77%
Site Security			1	0.94%
Innovative Technology			3	2.83%
Total Cost			\$33,053,000.00	
State			\$167,000.00	
Sites: 2	State Average: \$83,500.00			
PRP			\$32,886,000.00	
Sites: 14	PRP Average: \$2,349,000.00			
Primary Funding			183	100.00%
State			17	9.29%
Federal Government			25	13.66%
Enforcement			96	52.46%
Voluntary/Property Transfer			45	24.59%
Duration of Response Actions			0	100.00%
Less Than 12 Months			0	0.00%
12–23 Months			0	0.00%
24–35 Months			0	0.00%
36–47 Months			0	0.00%
48–59 Months			0	0.00%
60–71 Months			0	0.00%
More Than 71 Months			0	0.00%

State/Territory—Kansas

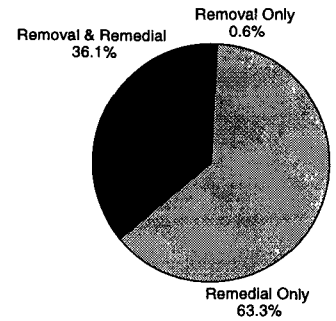
**Removal
67 Sites**



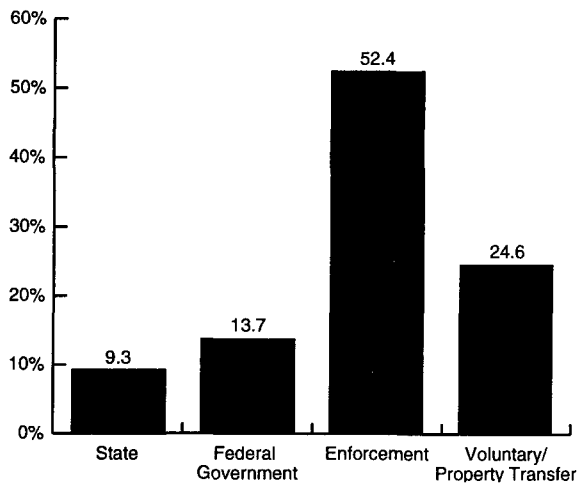
**Remedial
182 Sites**



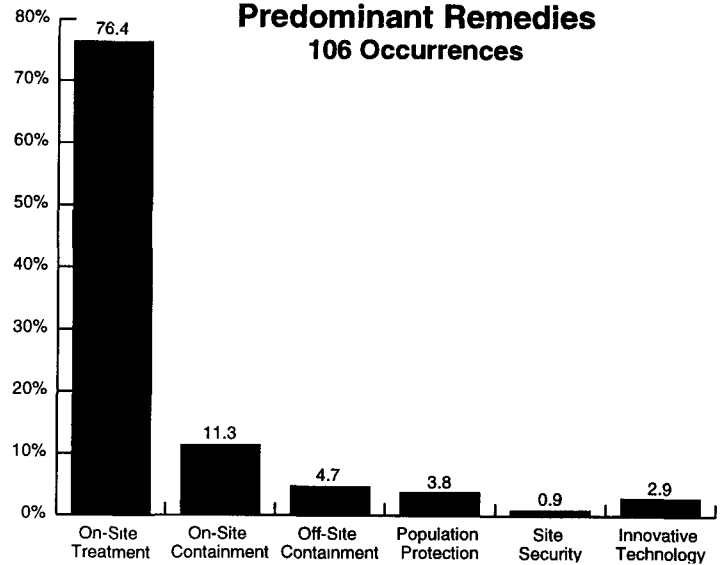
**Removal and Remedial
183 Sites**



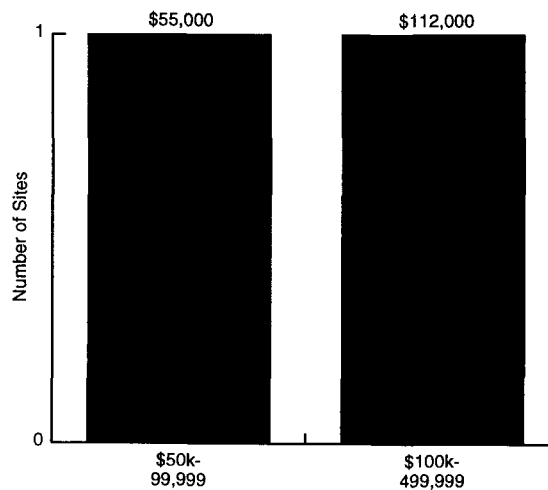
**Primary Funding
183 Sites**



**Predominant Remedies
106 Occurrences**



**State Costs
2 Sites**



State/Territory—Louisiana

Louisiana reported 101 sites. Ten of the sites had only **Removal** actions and 90 of the sites had only **Remedial** actions. None of the sites had both **Removal** and **Remedial** actions. Five of the 10 sites with only **Removal** actions designated those actions as **Ongoing** and 69 of the 90 of the sites with only **Remedial** actions designated those actions as **Active**. The prevalent **Last Remedial Phase** was **PA/SI** with 55 sites out of the 66 sites that reported a **Last Remedial Phase**.

The most prevalent **Predominant Remedy** was **Off-Site Containment** with 22 occurrences.

State cost was reported for 24 sites for a total of \$985,483 with an average of \$41,062 per site. For the 13 construction completion sites that reported cost, the average was \$6,489 per site.

Voluntary/Property Transfer accounted for 63 of the 93 sites with a **Primary Funding** source.

The average **Duration of Response Actions** for the 23 sites with start and completion dates was 30 months and 5 days, with a range from 1 month to 88 months.

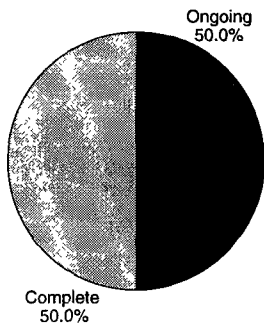
Louisiana has environmental quality legislation, amended in 1992, which has regulations controlling hazardous waste actions within the State.

Data Display (Total Sites = 101)

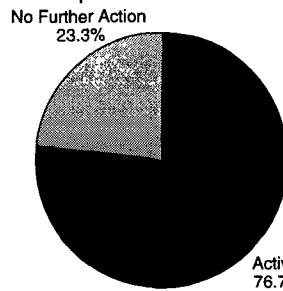
Removal	10	100.00%
Ongoing	5	50.00%
Complete	5	50.00%
Remedial	90	100.00%
Active	69	76.67%
No Further Action	21	23.33%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	2	9.52%
All Remedial Action Complete	19	90.48%
Last Remedial Phase	66	100.00%
PA/SI	55	83.33%
RI/FS	10	15.15%
RD	1	1.52%
RA	0	0.00%
Predominant Remedies	41	100.00%
On-Site Treatment	4	9.76%
On-Site Containment	9	21.95%
Off-Site Containment	22	53.66%
Off-Site Treatment	3	7.32%
Population Protection	0	0.00%
Site Security	3	7.32%
Innovative Technology	0	0.00%
Total Cost	\$985,483.00	
State	\$985,483.00	
Sites: 24	State Average: \$41,061.79	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	93	100.00%
State	13	13.98%
Federal Government	4	4.30%
Enforcement	13	13.98%
Voluntary/Property Transfer	63	67.74%
Duration of Response Actions	23	100.00%
Less Than 12 Months	5	21.73%
12–23 Months	2	8.70%
24–35 Months	6	26.09%
36–47 Months	7	30.43%
48–59 Months	1	4.35%
60–71 Months	1	4.35%
More Than 71 Months	1	4.35%

State/Territory—Louisiana

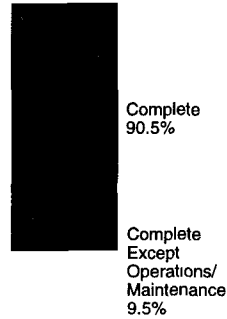
**Removal
10 Sites**



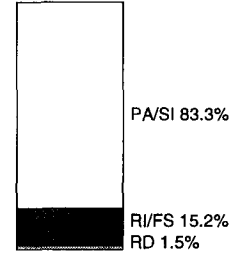
**Remedial
90 Sites**



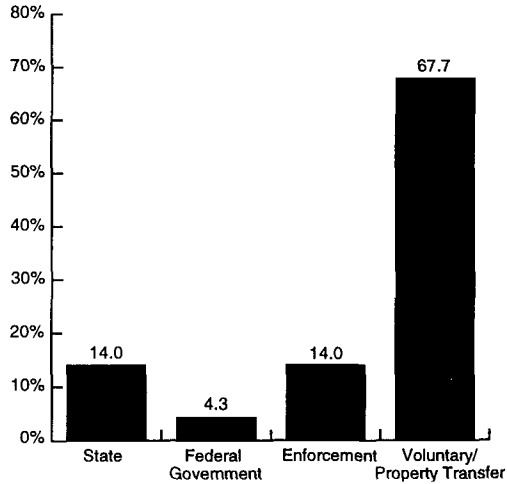
No Further Action



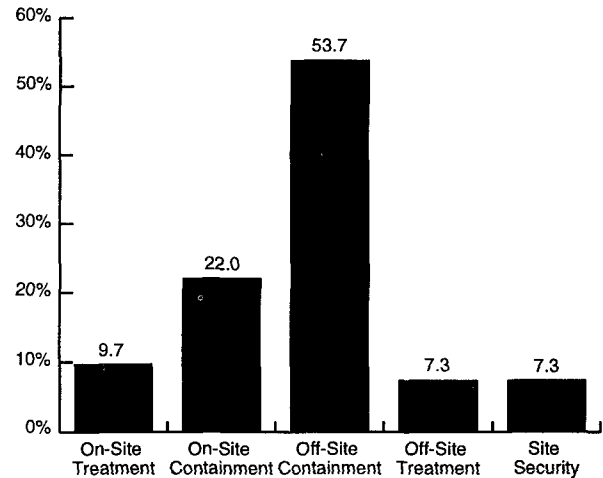
Last Remedial Phase



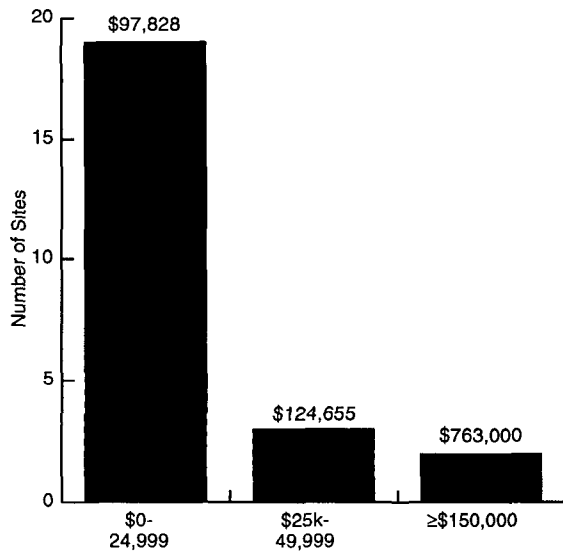
**Primary Funding
93 Sites**



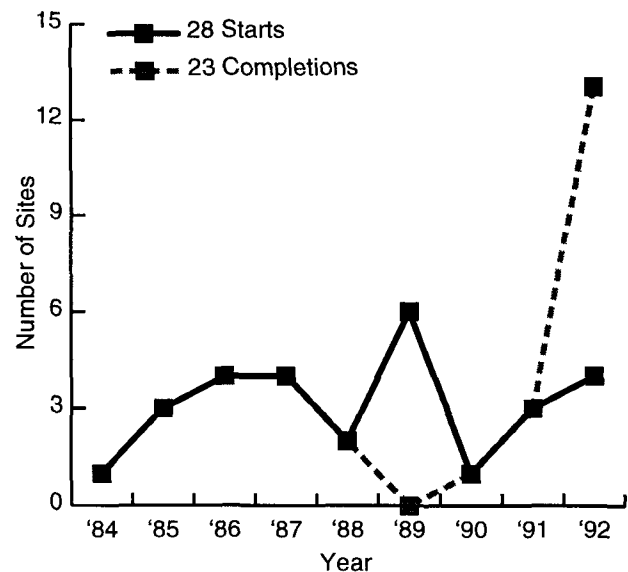
**Predominant Remedies
41 Occurrences**



**State Costs
24 Sites**



Start and Completion Dates



State/Territory—Maine

Maine reported 70 sites. Twenty-eight of the sites had both **Removal** and **Remedial** actions, 7 had only **Removal** actions and 35 had only **Remedial** Actions. Two of the sites with both **Removal** and **Remedial** actions designated the **Removal** actions as **Complete** and the **Remedial** actions as requiring **No Further Action**. Six of the 7 sites with only **Removal** actions designated those actions as **Complete** and 9 of the 35 sites with only **Remedial** actions designated those actions as requiring **No Further Action**.

Seventeen of the sites with only **Remedial** actions that were **Active** had a **Last Remedial Phase** of **PA/SI**. Fourteen of the sites with both **Removal** actions that were **Ongoing** and **Remedial** actions that were **Active** also had a **Last Remedial Phase** of **PA/SI**.

The **Predominant Remedies** were **Off-Site Treatment** with 11 occurrences and **On-Site Treatment** with 10 occurrences.

The **Total Cost** for 29 sites was \$3,337,516, shared by **State** cost of \$2,602,516 for all 29 sites and **PRP** cost of \$735,000 at 2 of the 29 sites.

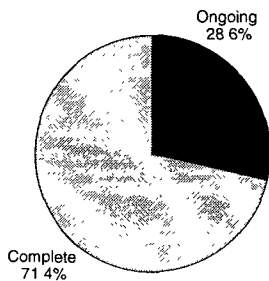
The average **Duration of Response Actions** was 54 months and 13 days based upon 34 sites reporting start and completion dates. Twelve sites had a **Duration of Response Actions** of **Less Than 12 Months**.

Data Display (Total Sites = 70)

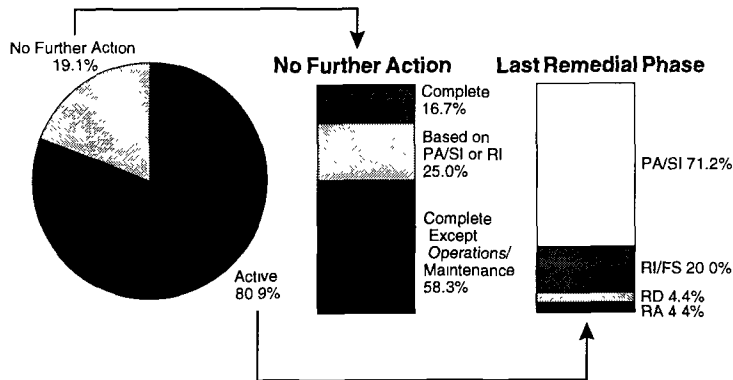
Removal	35	100.00%
Ongoing	10	28.57%
Complete	25	71.43%
Remedial	63	100.00%
Active	51	80.95%
No Further Action	12	19.05%
No Remedial Action Based on PA/SI or RI	3	25.00%
All Remedial Action Complete Except Operations/Maint.	7	58.33%
All Remedial Action Complete	2	16.67%
Last Remedial Phase	45	100.00%
PA/SI	32	71.12%
RI/FS	9	20.00%
RD	2	4.44%
RA	2	4.44%
Predominant Remedies	47	100.00%
On-Site Treatment	10	21.28%
On-Site Containment	7	14.89%
Off-Site Containment	8	17.03%
Off-Site Treatment	11	23.40%
Population Protection	7	14.89%
Site Security	4	8.51%
Innovative Technology	0	0.00%
Total Cost	\$3,337,516.00	
State	\$2,602,516.00	
Sites: 29	State Average: \$89,741.93	
PRP	\$735,000.00	
Sites: 2	PRP Average: \$367,500.00	
Primary Funding	39	100.00%
State	13	33.33%
Federal Government	6	15.39%
Enforcement	7	17.95%
Voluntary/Property Transfer	13	33.33%
Duration of Response Actions	34	100.00%
Less Than 12 Months	12	35.29%
12–23 Months	6	17.65%
24–35 Months	5	14.71%
36–47 Months	5	14.71%
48–59 Months	3	8.82%
60–71 Months	1	2.94%
More Than 71 Months	2	5.88%

State/Territory—Maine

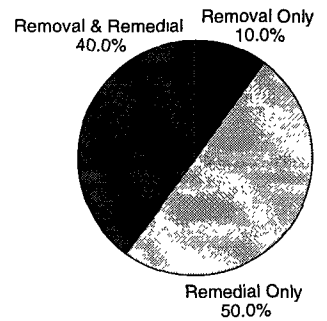
**Removal
35 Sites**



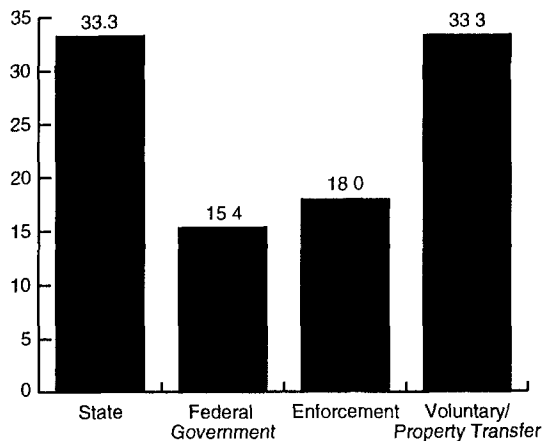
**Remedial
63 Sites**



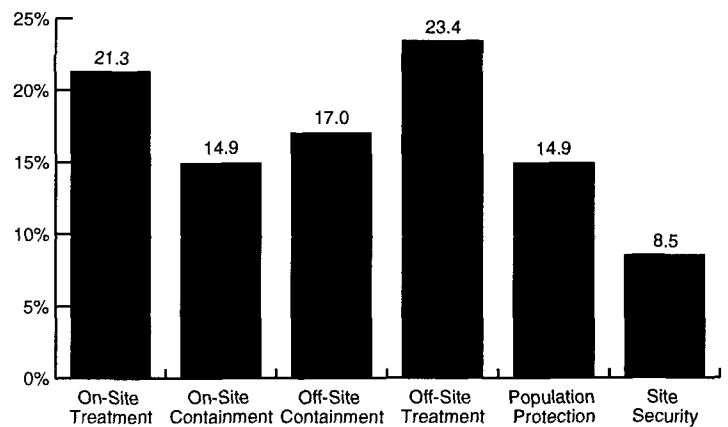
**Removal and Remedial
70 Sites**



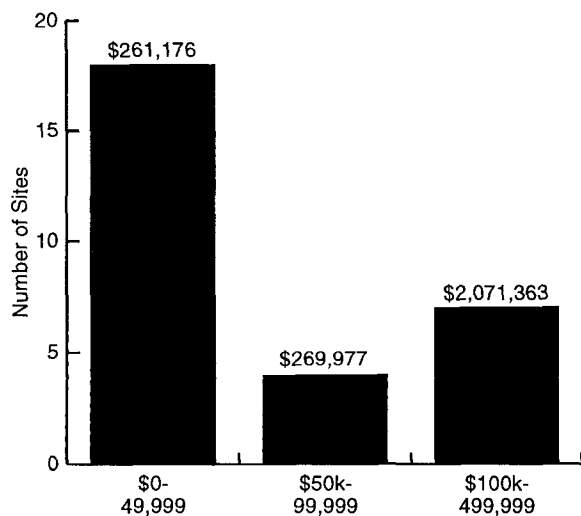
**Primary Funding
39 Sites**



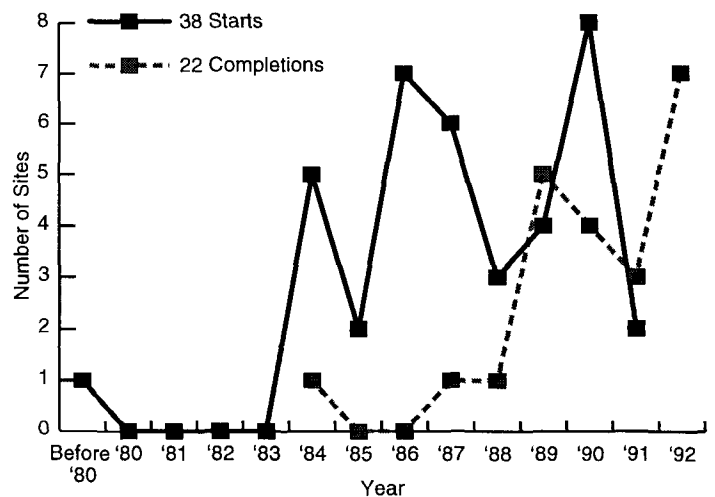
**Predominant Remedies
47 Occurrences**



**State Costs
29 Sites**



Start and Completion Dates



State/Territory—Maryland

Maryland reported 378 sites. Thirty of these sites had both **Removal** and **Remedial** actions. The remaining 348 sites had only **Remedial** actions. Twenty-six of the sites had **Removal** actions that were **Complete** and 212 of the sites had **Remedial** actions that required **No Further Action**. One of the sites in the **No Further Action** designation is a construction completion. All completed actions were as of December 31, 1992.

The most prevalent **Predominant Remedies** were **Off-Site Containment** with 70 occurrences and **On-Site Containment** with 62 occurrences. The total number of **Predominant Remedies** reported was 163.

The **Total Cost** reported was \$2,036,816. **State** cost accounted for \$619,750 with 8 sites, and **PRP** cost accounted for \$1,417,066 with 6 sites. One site had a **PRP** cost of \$875,000.

A **Primary Funding** source was reported for 71 sites, with **Enforcement** at 34 sites, the **Federal Government** at 19, **Voluntary/Property Transfer** at 13, and the **State** at 5.

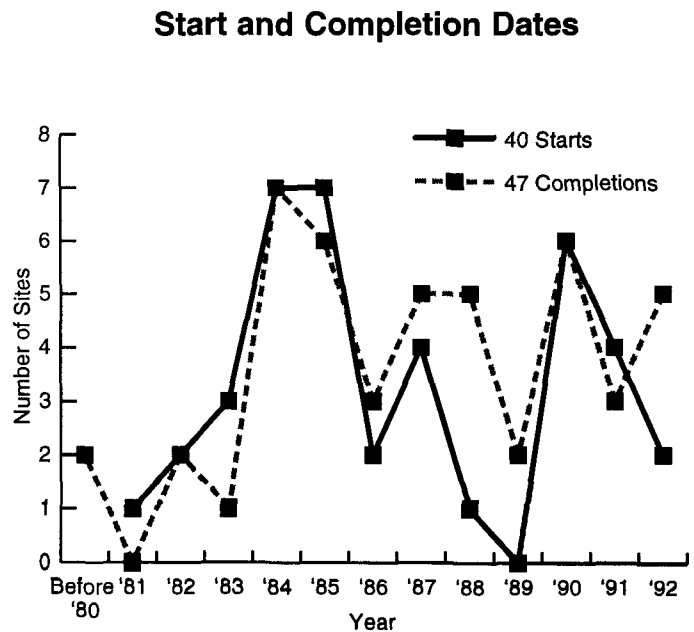
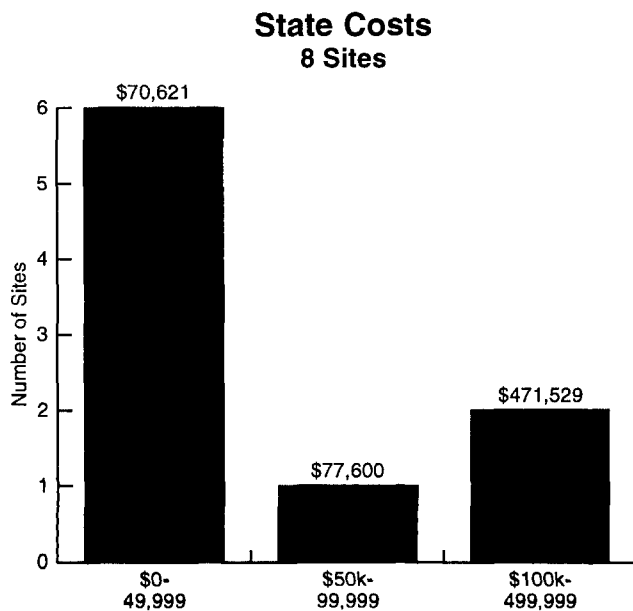
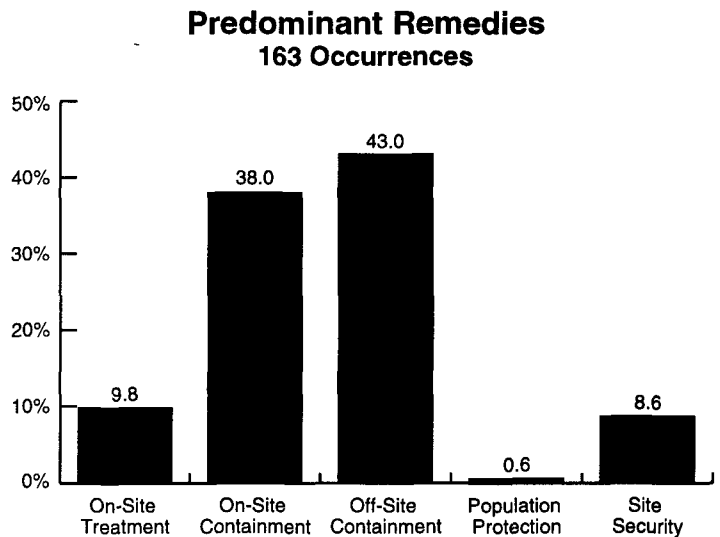
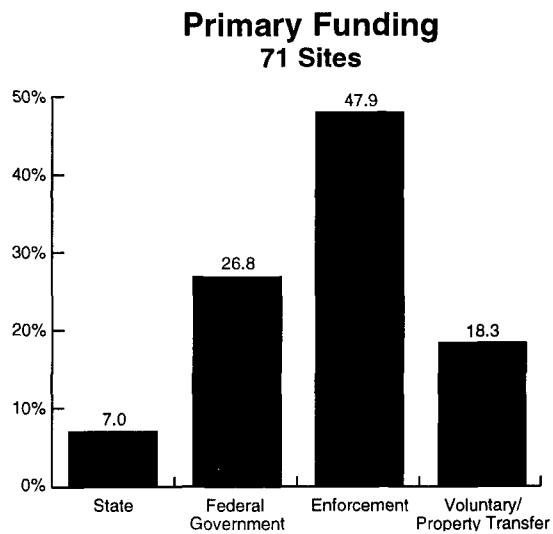
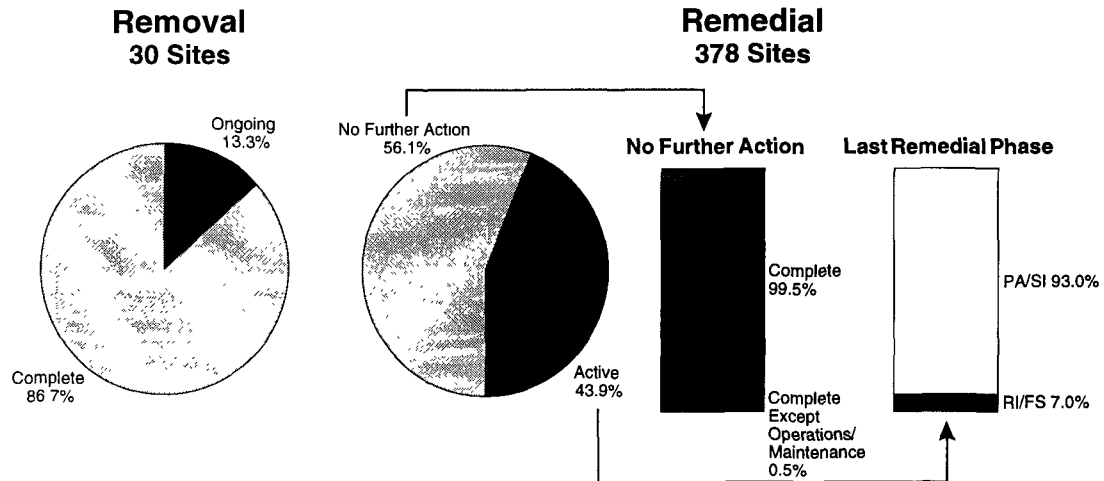
Two sites were completed prior to 1980. Thirty-one sites had **Duration of Response Actions** of **Less Than 12 Months**. The average **Duration of Response Actions** was 6 months and 10 days based on the 40 sites that reported start and completion dates.

Maryland has Hazardous Materials and Hazardous Substances Regulations that permit cost recovery and provide for community awareness.

Data Display (Total Sites = 378)

Removal	30	100.00%
Ongoing	4	13.33%
Complete	26	86.67%
Remedial	378	100.00%
Active	166	43.92%
No Further Action	212	56.08%
No Remedial Action Based on PA/SI or RI	211	99.53%
All Remedial Action Complete Except Operations/Maint.	1	0.47%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	43	100.00%
PA/SI	40	93.02%
RI/FS	3	6.98%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	163	100.00%
On-Site Treatment	16	9.82%
On-Site Containment	62	38.04%
Off-Site Containment	70	42.94%
Off-Site Treatment	0	0.00%
Population Protection	1	0.61%
Site Security	14	8.59%
Innovative Technology	0	0.00%
Total Cost	\$2,036,816.00	
State	\$619,750.00	
Sites: 8	State Average: \$77,468.75	
PRP	\$1,417,066.00	
Sites: 6	PRP Average: \$236,177.67	
Primary Funding	71	100.00%
State	5	7.04%
Federal Government	19	26.76%
Enforcement	34	47.89%
Voluntary/Property Transfer	13	18.31%
Duration of Response Actions	40	100.00%
Less Than 12 Months	31	77.50%
12-23 Months	8	20.00%
24-35 Months	1	2.50%
36-47 Months	0	0.00%
48-59 Months	0	0.00%
60-71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Maryland



State/Territory—Massachusetts

Massachusetts reported 3,089 sites. All of these sites had both **Removal** and **Remedial** actions. Four hundred twenty of the sites had **Removal** actions that were **Complete**, and 536 of the sites had **Remedial** actions that required **No Further Action**. Of the 2,553 sites with **Active Remedial** actions that reported a **Last Remedial Phase**, 1,522 were **RI/FS**, 929 were **PA/SI**, 110 were **RA**, and 64 were **RD**.

For sites with **Removal** actions that were **Complete** or **Remedial** actions that required **No Further Action**, the prevalent **Predominant Remedies** were **Off-Site Containment** with 257 occurrences and **On-Site Containment** with 102 occurrences.

State cost was reported for 33 sites for a total of \$2,553,857. Thirty-one of these sites had cost less than \$50,000 per site.

Although there was no **PRP** cost reported and the **Primary Funding** source was reported as **Voluntary/Property Transfer** for 523 of the 550 sites, this result is somewhat misleading. The **Enforcement** and **Voluntary/Property Transfer** categories should be combined to account for 95% of the **Primary Funding**. This is because the Massachusetts Superfund Law has strict joint and severe liability, driving **Voluntary** and **Property Transfer** activities because of the threat of successful enforcement.

Three hundred and ninety-one sites were started and completed. Thirty-four sites were started prior to 1986, and 441 sites were started in 1986 or later. All completed actions occurred after 1986.

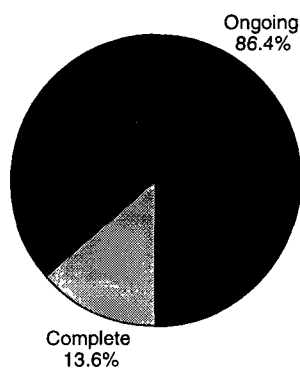
The Massachusetts Superfund Law enacted in 1983 and amended in July 1992 gave the Department of Environmental Protection the task of ensuring permanent cleanup of oil and hazardous materials releases, defined who is legally responsible for assessment and cleanup, and required them to either perform cleanups themselves or reimburse the State for doing so. Newly promulgated regulations in the Massachusetts Contingency Plan contain a push for faster and more streamlined voluntary cleanups through the use of Licensed Site Professionals. This new program is intended to use government resources more efficiently to address a large number of sites.

Data Display (Total Sites = 3,089)

Removal	3,089	100.00%
Ongoing	2,669	86.40%
Complete	420	13.60%
Remedial	3,089	100.00%
Active	2,553	82.65%
No Further Action	536	17.35%
No Remedial Action Based on PA/SI or RI	157	29.29%
All Remedial Action Complete Except Operations/Maint.	28	5.22%
All Remedial Action Complete	351	65.49%
Last Remedial Phase	2,625	100.00%
PA/SI	929	35.39%
RI/FS	1,522	57.98%
RD	64	2.44%
RA	110	4.19%
Predominant Remedies	383	100.00%
On-Site Treatment	24	6.27%
On-Site Containment	102	26.63%
Off-Site Containment	257	67.10%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost	\$2,553,857.00	
State	\$2,553,857.00	
Sites: 33	State Average: \$77,389.61	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	550	100.00%
State	27	4.91%
Federal Government	0	0.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	523	95.09%
Duration of Response Actions	391	100.00%
Less Than 12 Months	169	43.22%
12–23 Months	118	30.18%
24–35 Months	46	11.76%
36–47 Months	22	5.64%
48–59 Months	10	2.56%
60–71 Months	13	3.32%
More Than 71 Months	13	3.32%

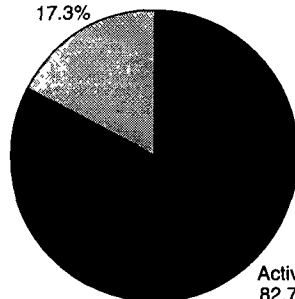
State/Territory—Massachusetts

**Removal
3,089 Sites**

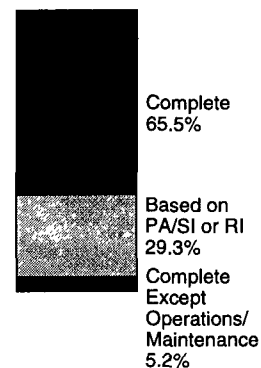


**Remedial
3,089 Sites**

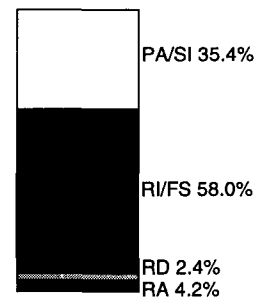
No Further Action
17.3%



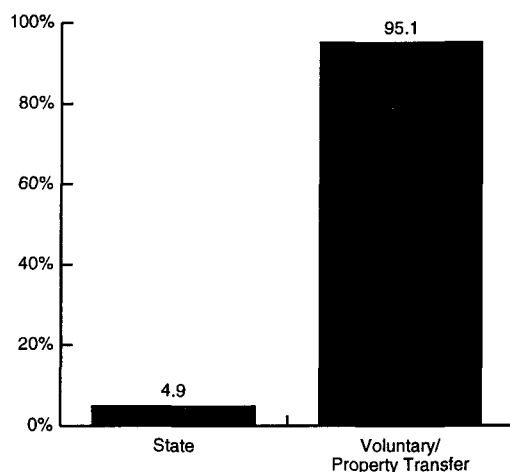
No Further Action



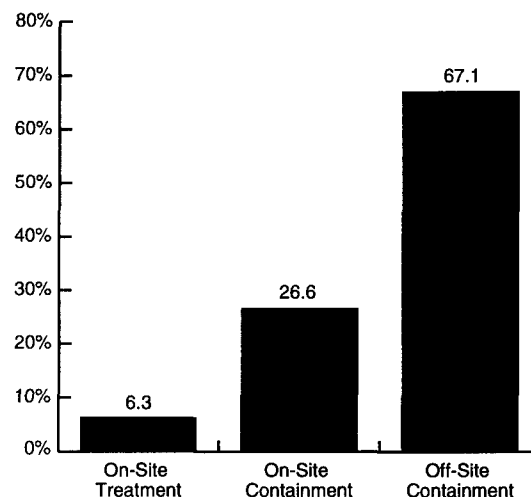
Last Remedial Phase



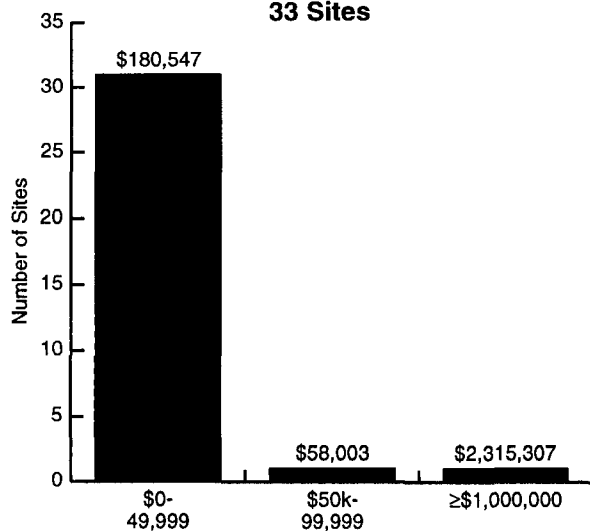
**Primary Funding
550 Sites**



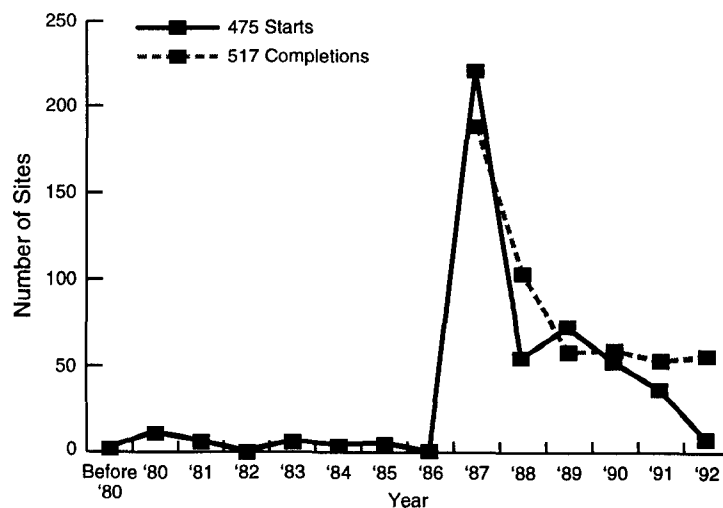
**Predominant Remedies
383 Occurrences**



**State Costs
33 Sites**



Start and Completion Dates



State/Territory—Michigan

Michigan reported 2,662 sites, of which 1,927 had both **Removal** and **Remedial** actions and 735 had only **Remedial** actions. There were no sites that had only **Removal** actions. All of the sites with only **Remedial** actions are designated as **No Further Action Based on PA/SI or RI**. Three hundred forty-three of the sites with both **Removal** and **Remedial** actions were designated as construction completions.

RI/FS was reported as the **Last Remedial Phase** for 1,701 of the 1,713 sites reporting a **Last Remedial Phase**.

Total Cost was reported for 496 sites, in the amount of \$159,226,582. All reported cost was **State** cost. For the 254 sites reporting cost under \$50,000 per site, the average cost was \$13,455.

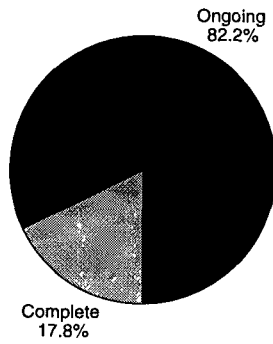
One thousand seven hundred ninety-six sites reported a **Primary Funding** source, of which 1,353 reported **Enforcement** and 443 reported the **State**.

Michigan has enacted and amended environmental acts dating back to 1929. The acts passed or amended since 1979 include regulations for the management, evaluation, and cleanup of hazardous waste. Michigan also publishes a yearly listing of environmental containment sites within the State.

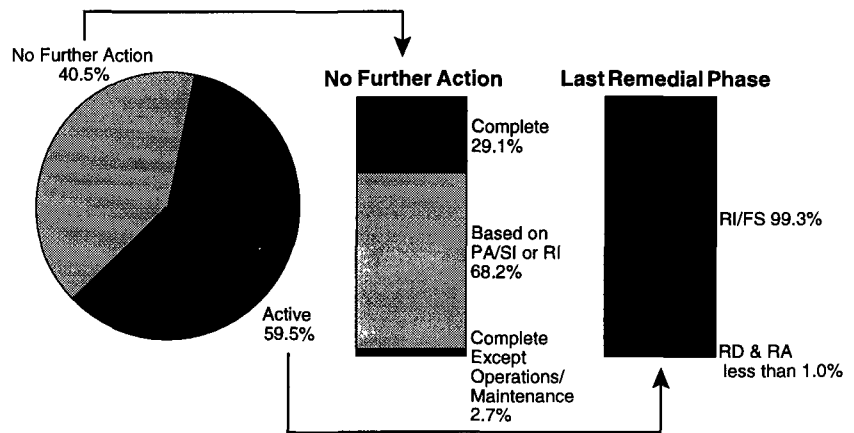
Data Display (Total Sites = 2,662)		
Removal	1,927	100.00%
Ongoing	1,584	82.20%
Complete	343	17.80%
Remedial	2,662	100.00%
Active	1,584	59.50%
No Further Action	1,078	40.50%
No Remedial Action Based on PA/SI or RI	735	68.18%
All Remedial Action Complete Except Operations/Maint.	29	2.69%
All Remedial Action Complete	314	29.13%
Last Remedial Phase	1,713	100.00%
PA/SI	0	0.00%
RI/FS	1,701	99.30%
RD	2	0.12%
RA	10	0.58%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost	\$159,226,582.00	
State	\$159,226,582.00	
Sites: 496	State Average: \$321,021.33	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	1,796	100.00%
State	443	24.68%
Federal Government	0	0.00%
Enforcement	1,353	75.32%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Michigan

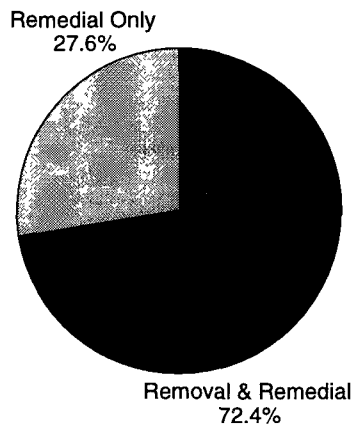
**Removal
1,927 Sites**



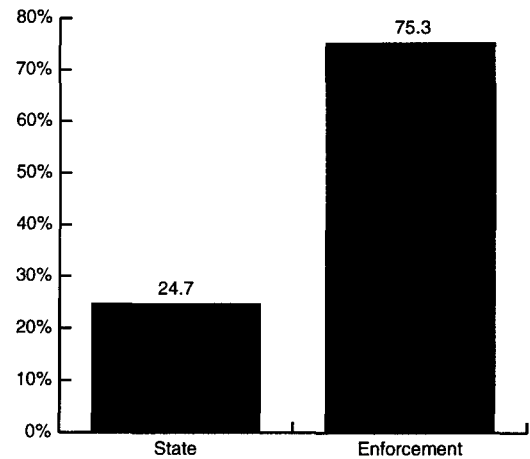
**Remedial
2,662 Sites**



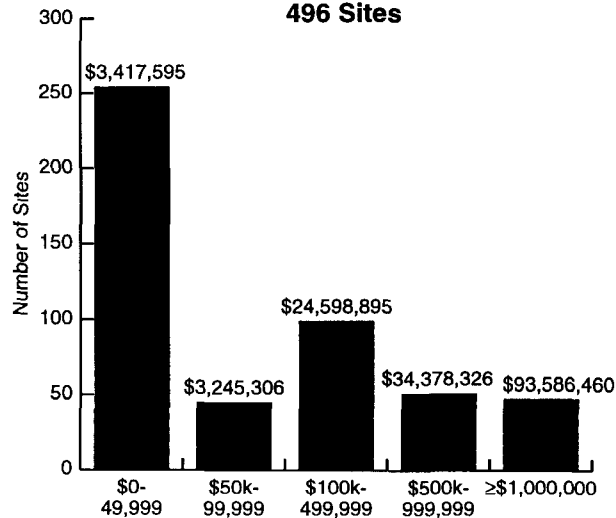
**Removal and Remedial
2,662 Sites**



**Primary Funding
1,796 Sites**



**State Costs
496 Sites**



State/Territory—Minnesota

Minnesota reported 414 sites, of which 36 had both **Removal** and **Remedial** actions, 6 had only **Removal** actions and 365 had only **Remedial** actions. Four of the 6 sites with only **Removal** actions were **Complete**. Eighty-six of the 365 sites with only **Remedial** actions were designated as requiring **No Further Action**.

The prevalent **Last Remedial Phase** for the sites with **Remedial** actions that were **Active** was **PA/SI** with 117, followed by **RI/FS** with 95, **RD** with 60, and **RA** with 16.

The **Predominant Remedies** were **On-Site Containment** with 114 occurrences and **On-Site Treatment** with 83 occurrences.

Total Cost was \$92,525,000 and was segmented as **State** cost of \$11,353,000 for 89 sites and **PRP** cost of \$81,172,000 for 89 sites.

Voluntary/Property Transfer was the **Primary Funding** source at 220 sites.

Thirty-nine of the sites had a **Duration of Response Actions** of **Less Than 12 Months**, with the first site started and completed in 1978. Eighteen sites were started in 1992 and 11 were completed in that year.

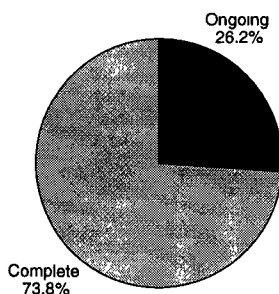
In 1983, Minnesota passed an Environmental Response and Liability Act, which permits the State to spend funds to investigate and clean up hazardous substances.

Data Display (Total Sites = 414)

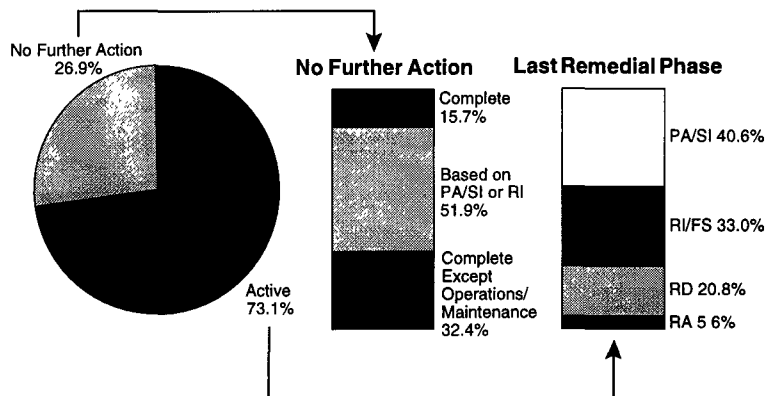
Removal	42	100.00%
Ongoing	11	26.19%
Complete	31	73.81%
Remedial	401	100.00%
Active	293	73.07%
No Further Action	108	26.93%
No Remedial Action Based on PA/SI or RI	56	51.85%
All Remedial Action Complete Except Operations/Maint.	35	32.41%
All Remedial Action Complete	17	15.74%
Last Remedial Phase	288	100.00%
PA/SI	117	40.62%
RI/FS	95	32.99%
RD	60	20.83%
RA	16	5.56%
Predominant Remedies	297	100.00%
On-Site Treatment	83	27.95%
On-Site Containment	114	38.38%
Off-Site Containment	45	15.15%
Off-Site Treatment	27	9.09%
Population Protection	17	5.72%
Site Security	10	3.37%
Innovative Technology	1	0.34%
Total Cost	\$92,525,000.00	
State	\$11,353,000.00	
Sites: 89	State Average: \$127,561.80	
PRP	\$81,172,000.00	
Sites: 89	PRP Average: \$912,044.94	
Primary Funding	343	100.00%
State	61	17.78%
Federal Government	6	1.75%
Enforcement	56	16.33%
Voluntary/Property Transfer	220	64.14%
Duration of Response Actions	80	100.00%
Less Than 12 Months	39	48.75%
12–23 Months	13	16.25%
24–35 Months	14	17.50%
36–47 Months	9	11.25%
48–59 Months	2	2.50%
60–71 Months	0	0.00%
More Than 71 Months	3	3.75%

State/Territory—Minnesota

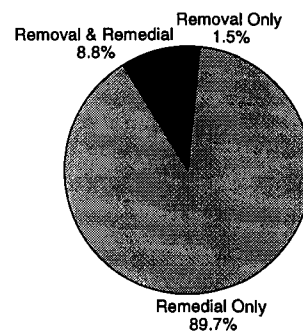
**Removal
42 Sites**



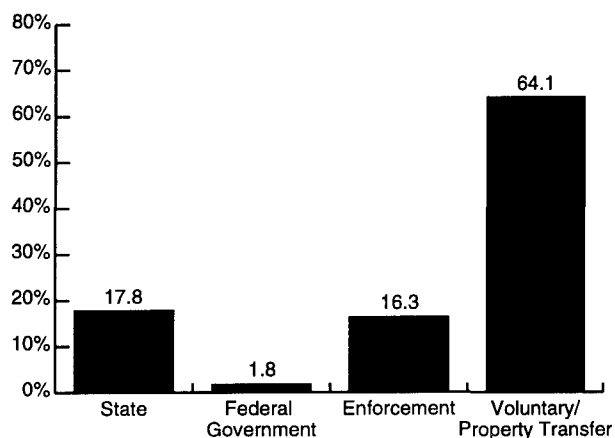
**Remedial
401 Sites**



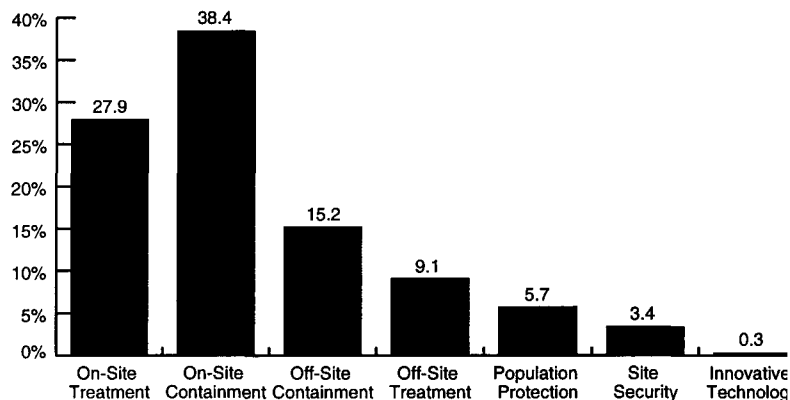
**Removal and Remedial
407 Sites**



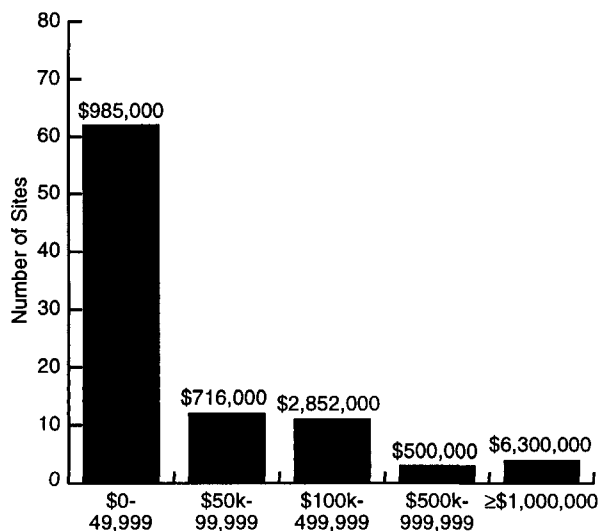
**Primary Funding
343 Sites**



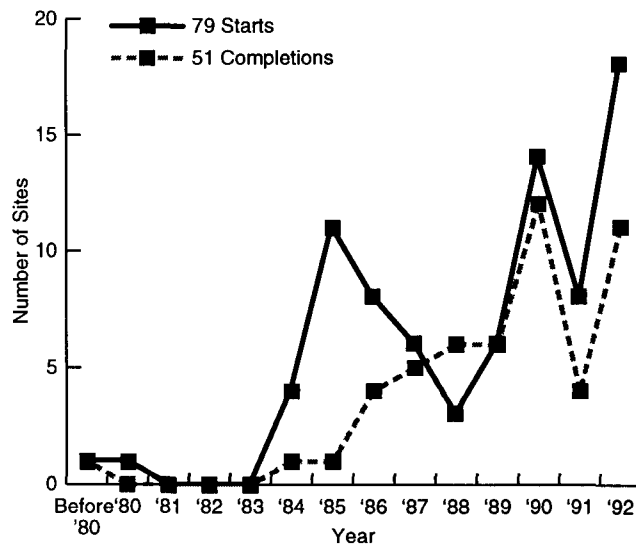
**Predominant Remedies
297 Occurrences**



**State Costs
89 Sites**



Start and Completion Dates



State/Territory—Mississippi

Mississippi reported 110 sites. Twelve of these sites had both **Removal** and **Remedial** actions, 5 had only **Removal** actions and 93 had only **Remedial** actions. Two of the sites with both **Removal** and **Remedial** actions had the **Removal** actions designated as **Complete** and the **Remedial** actions designated as requiring **No Further Action**. For the remaining 10 sites with both **Removal** and **Remedial** actions, all the **Removal** actions were designated **Complete** and all of the **Remedial** actions were designated **Active**. All 5 sites with only **Removal** actions were **Complete** (i.e., the **Removal** actions were **Complete**). Fourteen of the 93 sites with only **Remedial** actions were designated as requiring **No Further Action**.

The **Predominant Remedies** were **Off-Site Containment** with 22 occurrences and **On-Site Treatment** with 13 occurrences.

For the sites with **Remedial** actions that were **Active**, the most prevalent **Last Remedial Phase** was **RI/FS** with 49 of the 89 sites that reported a **Last Remedial Phase**, followed by **PA/SI** with 25 sites, **RA** with 11 sites and **RD** with 4 sites.

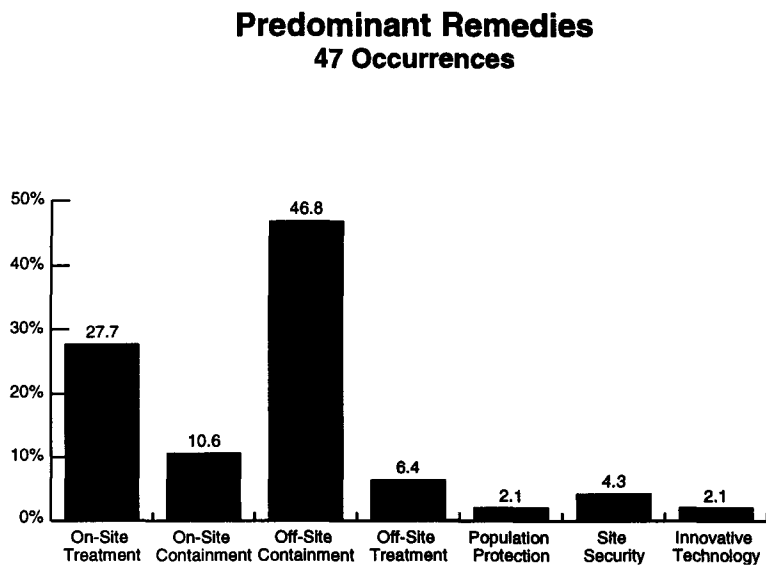
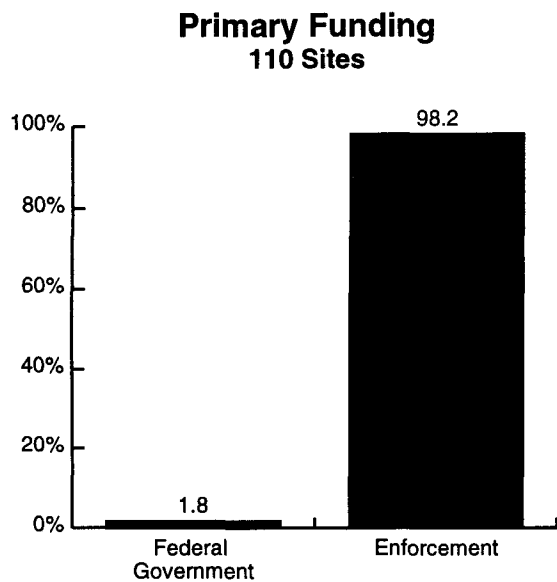
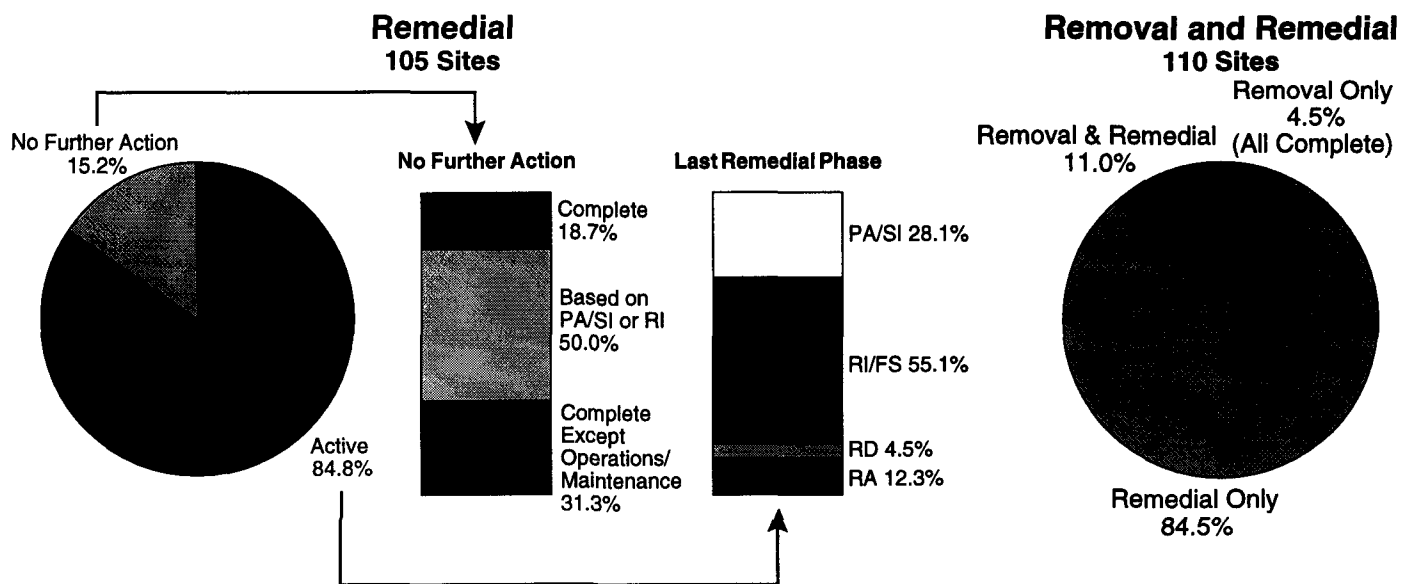
Enforcement was the prevalent **Primary Funding** source with 108 of the 110 sites that reported a **Primary Funding** source. The remaining 2 sites had reported the **Federal Government** as the **Primary Funding** source.

Twenty-four of the sites had reported a **Duration of Response Actions** with a range from **Less Than 12 Months** to **More Than 71 Months**. The average **Duration of Response Actions** for these 24 sites was 31 months and 8 days.

Data Display (Total Sites = 110)

Removal	17	100.00%
Ongoing	0	0.00%
Complete	17	100.00%
Remedial	105	100.00%
Active	89	84.76%
No Further Action	16	15.24%
No Remedial Action Based on PA/SI or RI	8	50.00%
All Remedial Action Complete Except Operations/Maint.	5	31.25%
All Remedial Action Complete	3	18.75%
Last Remedial Phase	89	100.00%
PA/SI	25	28.09%
RI/FS	49	55.06%
RD	4	4.49%
RA	11	12.36%
Predominant Remedies	47	100.00%
On-Site Treatment	13	27.66%
On-Site Containment	5	10.64%
Off-Site Containment	22	46.80%
Off-Site Treatment	3	6.38%
Population Protection	1	2.13%
Site Security	2	4.26%
Innovative Technology	1	2.13%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	110	100.00%
State	0	0.00%
Federal Government	2	1.82%
Enforcement	108	98.18%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	24	100.00%
Less Than 12 Months	3	12.50%
12–23 Months	5	20.83%
24–35 Months	3	12.50%
36–47 Months	11	45.84%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	2	8.33%

State/Territory—Mississippi



State/Territory—Missouri

Missouri reported 44 sites, which consisted of 23 sites with only **Removal** actions and 21 sites with only **Remedial** actions. All of the **Removal** actions were **Complete** and 10 of the **Remedial** actions were designated as **All Remedial Action Complete Except Operations/Maintenance**.

The prevalent **Last Remedial Phase** for the 11 **Remedial** actions that were **Active** was **RI/FS** with 6 sites.

The **Predominant Remedies** were **Off-Site Containment** with 29 occurrences and **Site Security** with 11 occurrences.

PRP cost was reported for 5 sites, of which 2 were sites had only **Removal** actions that were **Complete**. The total for these 2 sites was \$7,500,000. **State** cost of \$28,000 was reported for 2 other sites with only **Removal** actions that were **Complete**. The **Total Cost** reported was \$11,218,000: **PRP** cost with \$11,090,000 and **State** cost with \$128,000.

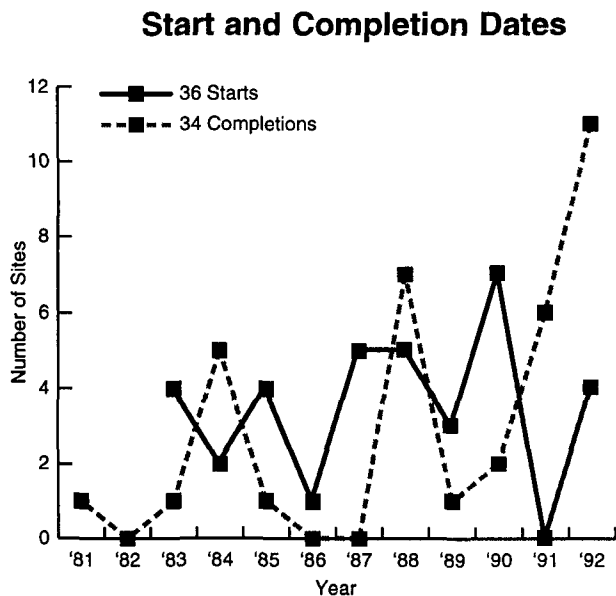
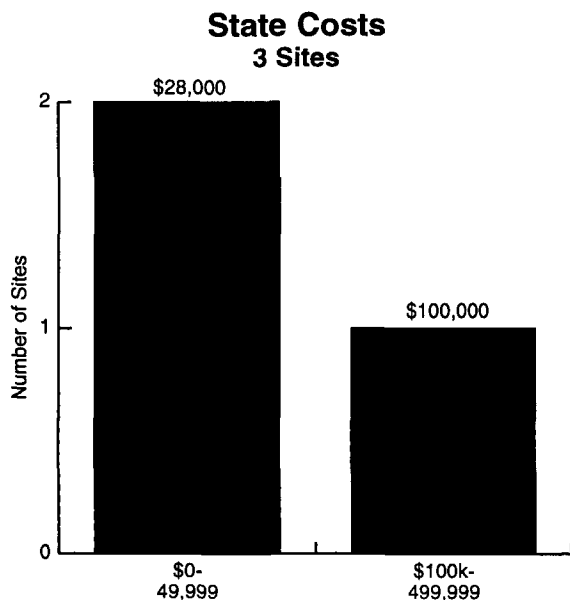
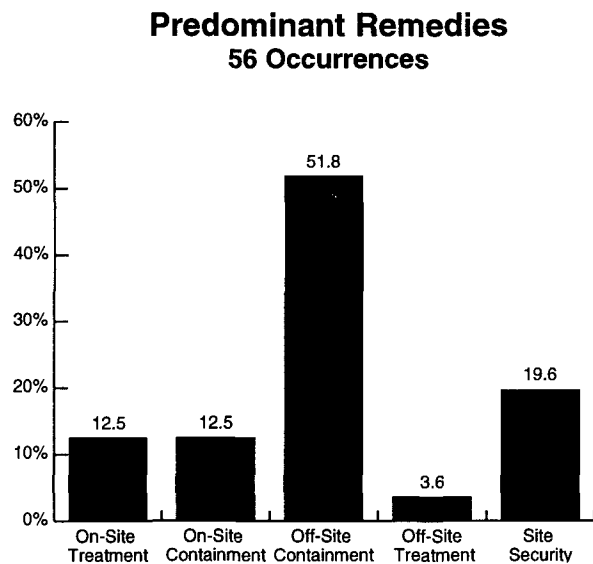
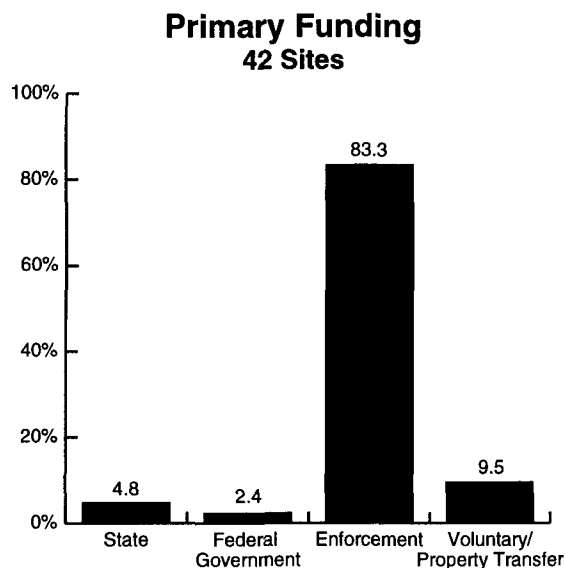
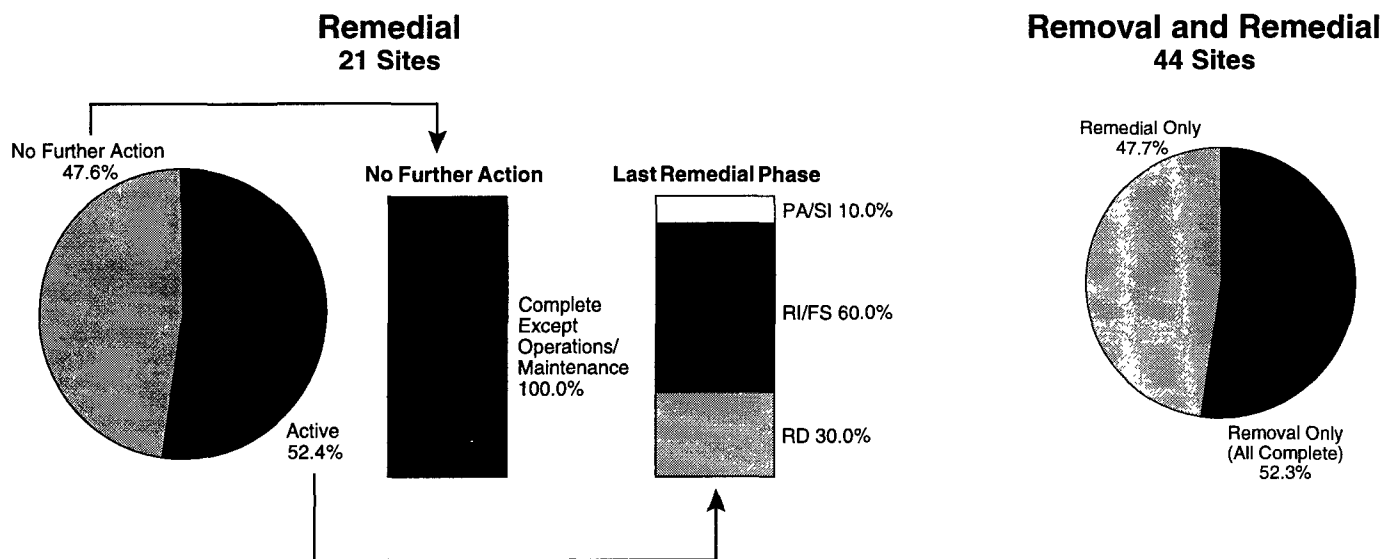
The **Primary Funding** source was **Enforcement** with 35 sites.

Twenty-three sites had a **Duration of Response Actions** of 2 years or less. The average **Duration of Response Actions** was 20 months and 24 days for the 34 sites that reported start and completion dates. Prior to 1986, 10 sites were started, and 8 sites were completed.

Data Display (Total Sites = 44)

Removal	23	100.00%
Ongoing	0	0.00%
Complete	23	100.00%
Remedial	21	100.00%
Active	11	52.38%
No Further Action	10	47.62%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	10	100.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	10	100.00%
PA/SI	1	10.00%
RI/FS	6	60.00%
RD	3	30.00%
RA	0	0.00%
Predominant Remedies	56	100.00%
On-Site Treatment	7	12.50%
On-Site Containment	7	12.50%
Off-Site Containment	29	51.79%
Off-Site Treatment	2	3.57%
Population Protection	0	0.00%
Site Security	11	19.64%
Innovative Technology	0	0.00%
Total Cost	\$11,218,000.00	
State	\$128,000.00	
Sites: 3	State Average: \$42,666.67	
PRP	\$11,090,000.00	
Sites: 5	PRP Average: \$2,218,000.00	
Primary Funding	42	100.00%
State	2	4.76%
Federal Government	1	2.39%
Enforcement	35	83.33%
Voluntary/Property Transfer	4	9.52%
Duration of Response Actions	34	100.00%
Less Than 12 Months	13	38.24%
12-23 Months	10	29.41%
24-35 Months	5	14.71%
36-47 Months	2	5.88%
48-59 Months	2	5.88%
60-71 Months	1	2.94%
More Than 71 Months	1	2.94%

State/Territory—Missouri



State/Territory—Montana

Montana reported 214 sites. Forty-seven of these sites had both **Removal** and **Remedial** actions, 6 of the sites had only **Removal** actions and 129 of the sites had only **Remedial** actions. There were also 32 sites that were under tribal jurisdiction, but their status was unknown.

The total number of sites with **Removal** actions was 53, with 26 of the actions being **Complete**. The total number of sites with **Remedial** actions was 176, with 7 requiring **No Further Action**; 4 of the 7 were designated as construction completions.

The two prevalent **Predominant Remedies** were **Off-Site Containment** and **Off-Site Treatment**, both with 14 occurrences.

For the 169 sites with **Remedial** actions that were **Active** the prevalent **Last Remedial Phase** was **PA/SI** with 132 sites.

Because most **Removal** and **Remedial** actions are conducted by responsible parties and Montana did not, generally, have cost information on actions conducted by responsible parties, Montana's cost information was only available for 4 sites. For these sites, the **State** cost was \$760,000 for 3 sites, and the one site with **PRP** cost reported a cost of \$250,000.

The **Primary Funding** source was the **Federal Government** with 92 sites, followed by **Voluntary/Property Transfer** with 37, the **State** with 33, and **Enforcement** with 15.

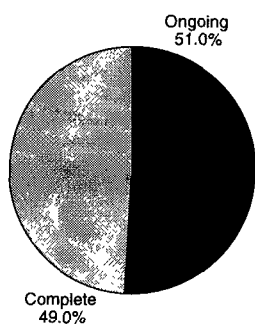
Montana produced a report in November 1993 on its Superfund accomplishments for the period 1983–1993.

Data Display (Total Sites = 214)

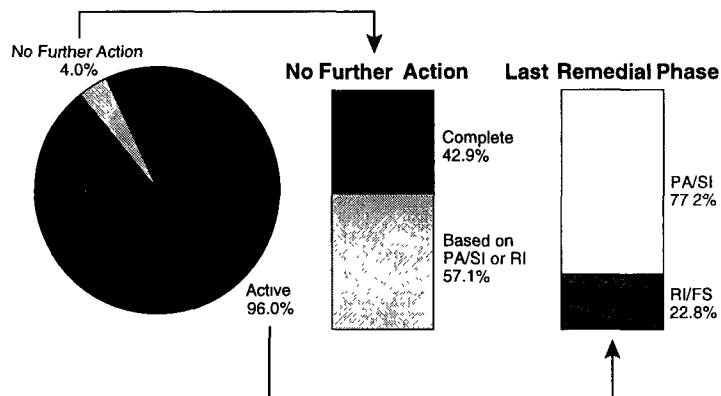
Removal	53	100.00%
Ongoing	27	50.94%
Complete	26	49.06%
Remedial	176	100.00%
Active	169	96.02%
No Further Action	7	3.98%
No Remedial Action Based on PA/SI or RI	3	42.86%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	4	57.14%
Last Remedial Phase	171	100.00%
PA/SI	132	77.19%
RI/FS	39	22.81%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	50	100.00%
On-Site Treatment	3	6.00%
On-Site Containment	12	24.00%
Off-Site Containment	14	28.00%
Off-Site Treatment	14	28.00%
Population Protection	3	6.00%
Site Security	4	8.00%
Innovative Technology	0	0.00%
Total Cost	\$1,010,000.00	
State	\$760,000.00	
Sites: 3	State Average: \$253,333.33	
PRP	\$250,000.00	
Sites: 1	PRP Average: \$250,000.00	
Primary Funding	177	100.00%
State	33	18.64%
Federal Government	92	51.98%
Enforcement	15	8.48%
Voluntary/Property Transfer	37	20.90%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Montana

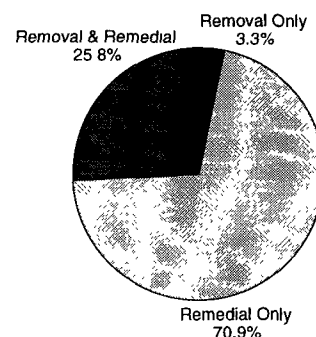
**Removal
53 Sites**



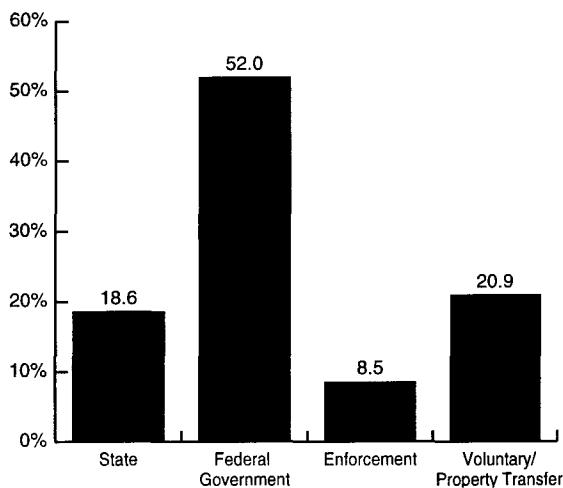
**Remedial
176 Sites**



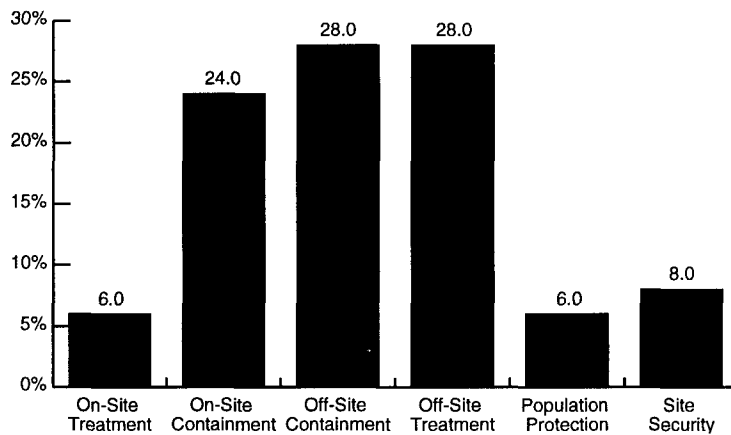
**Removal and Remedial
182 Sites**



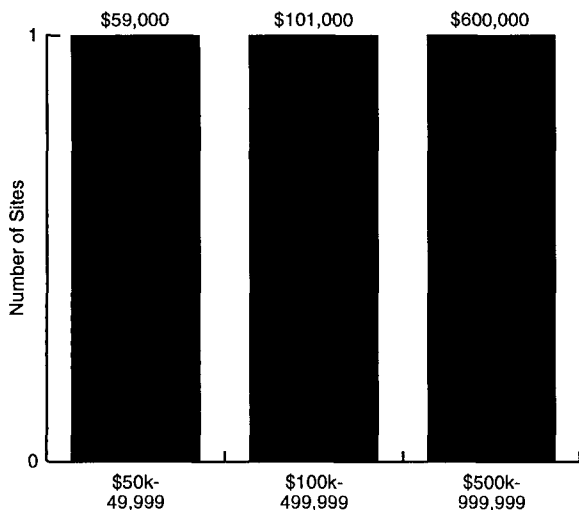
**Primary Funding
177 Sites**



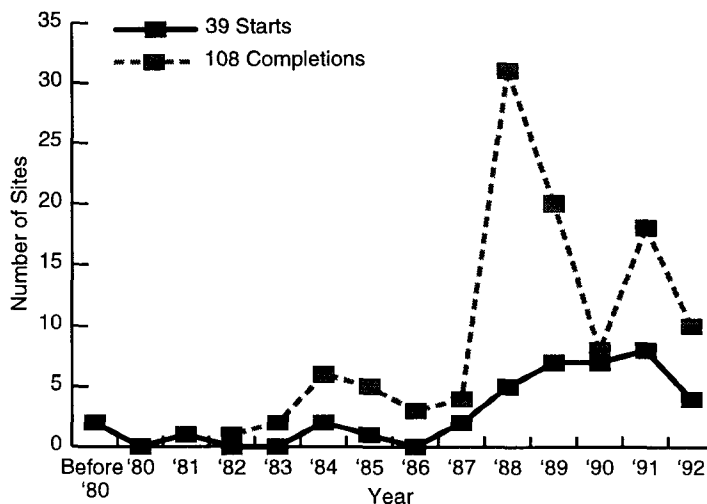
**Predominant Remedies
50 Occurrences**



**State Costs
3 Sites**



Start and Completion Dates



State/Territory—Nebraska

Nebraska reported 15 sites. All of these were sites that had only **Remedial** actions that were **Active** and a **Last Remedial Phase** of **PA/SI**.

The **Primary Funding** source for 10 sites was **Enforcement**.

Nine of Nebraska's sites had landfills.

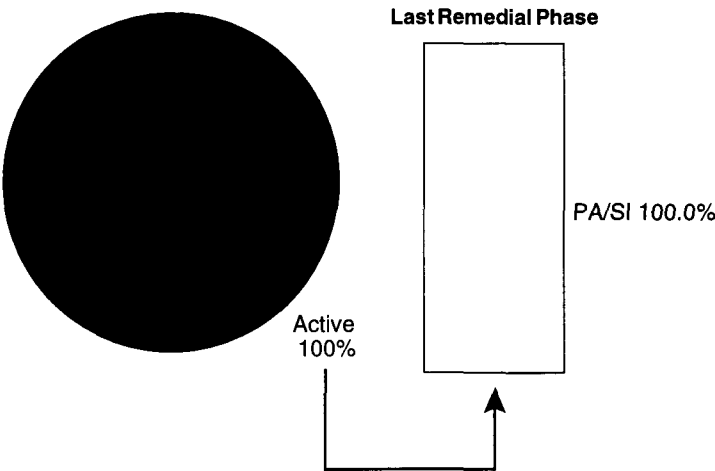
Nebraska has the Nebraska Ground Water Quality Standards, which are used by all programs such as solid waste, Resource Conservation and Recovery Act, and leaking underground storage tanks.

Data Display (Total Sites = 15)

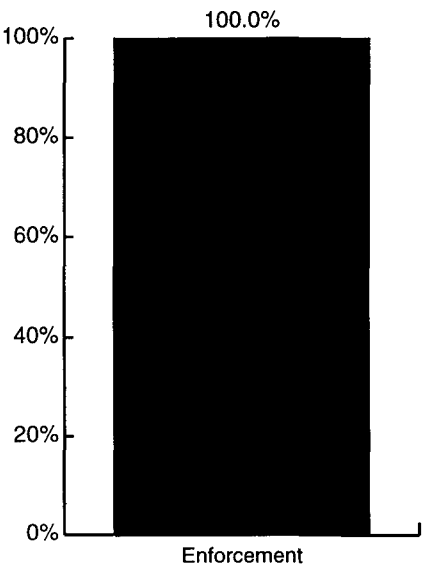
Removal	0	100.00%
Ongoing	0	0.00%
Complete	0	0.00%
Remedial	15	100.00%
Active	15	100.00%
No Further Action	0	0.00%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	15	100.00%
PA/SI	15	100.00%
RI/FS	0	0.00%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	10	100.00%
State	0	0.00%
Federal Government	0	0.00%
Enforcement	10	100.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Nebraska

Remedial 15 Sites



Primary Funding 10 Sites



State/Territory—Nevada

Nevada reported 34 sites, all of which were sites with only **Remedial** actions. Ten of these sites required **No Further Action**, of which 9 were designated as construction completions.

The **Predominant Remedy** was **On-Site Treatment** with 11 occurrences.

Voluntary/Property Transfer was the **Primary Funding** source with 21 sites. **Enforcement** followed with 10 sites.

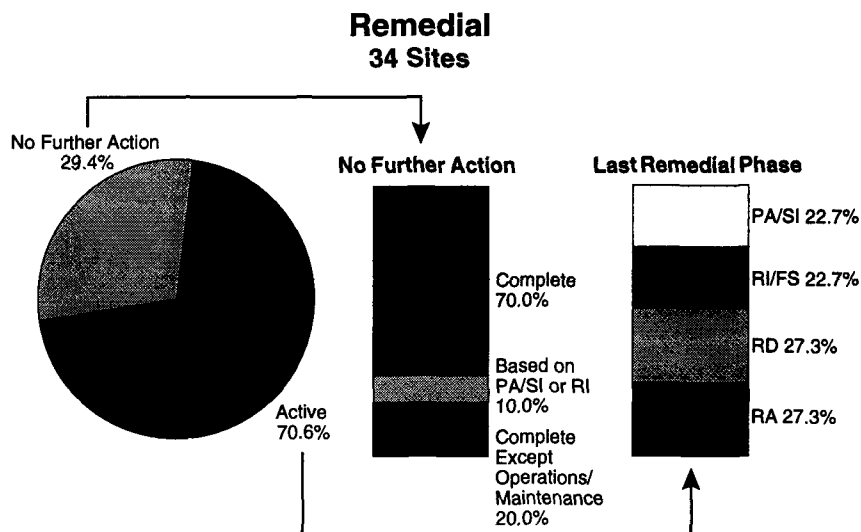
One site was started prior to 1986. Of the remaining 33 other sites, 25 were started in the 3-year period 1990–1992. The average **Duration of Response Actions** was 15 months for the 7 sites reporting start and completion dates.

Nevada's program began in 1986 with the passage of legislation for the disposal of hazardous waste. This legislation makes State funds available if a viable PRP is not present.

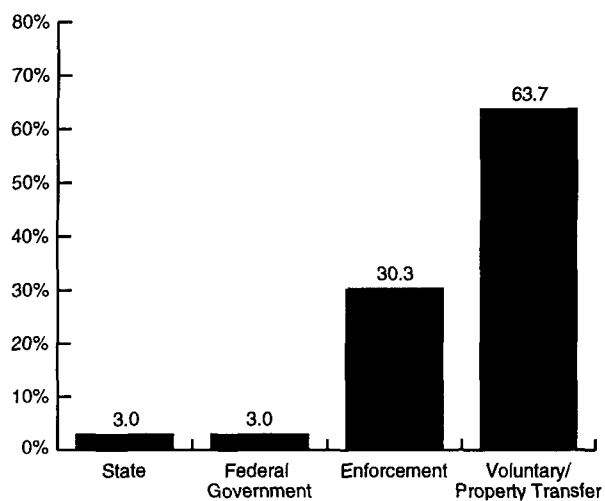
Data Display (Total Sites = 34)

Removal	0	100.00%
Ongoing	0	0.00%
Complete	0	0.00%
Remedial	34	100.00%
Active	24	70.59%
No Further Action	10	29.41%
No Remedial Action Based on PA/SI or RI	1	10.00%
All Remedial Action Complete Except Operations/Maint.	2	20.00%
All Remedial Action Complete	7	70.00%
Last Remedial Phase	22	100.00%
PA/SI	5	22.73%
RI/FS	5	22.73%
RD	6	27.27%
RA	6	27.27%
Predominant Remedies	18	100.00%
On-Site Treatment	11	61.11%
On-Site Containment	1	5.56%
Off-Site Containment	2	11.11%
Off-Site Treatment	4	22.22%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	33	100.00%
State	1	3.03%
Federal Government	1	3.03%
Enforcement	10	30.30%
Voluntary/Property Transfer	21	63.64%
Duration of Response Actions	7	100.00%
Less Than 12 Months	4	57.14%
12–23 Months	2	28.57%
24–35 Months	0	0.00%
36–47 Months	1	14.29%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

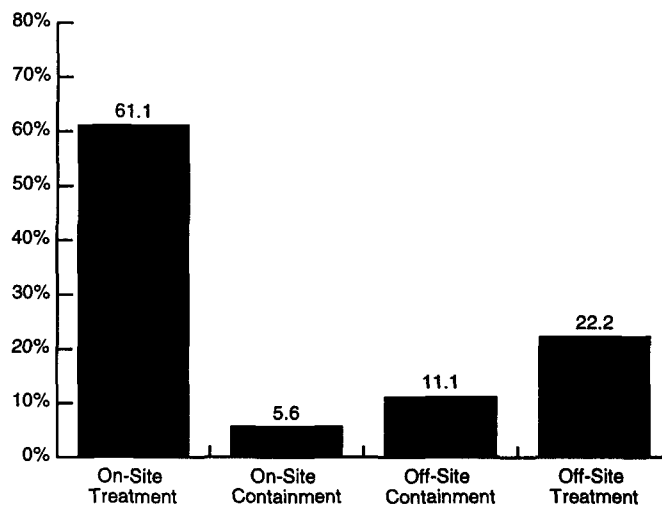
State/Territory—Nevada



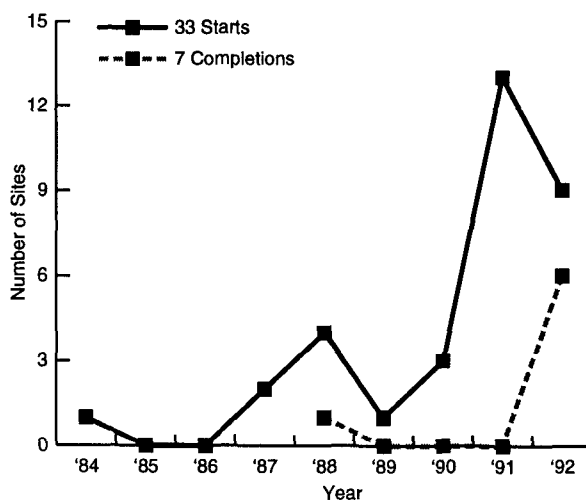
**Primary Funding
33 Sites**



**Predominant Remedies
18 Occurrences**



Start and Completion Dates



State/Territory—New Jersey

New Jersey reported 5,996 sites. Of these, 1,827 had both **Removal** and **Remedial** actions. There was 1 site with only **Removal** actions and 4,168 sites with only **Remedial** actions. The total number of sites with **Removal** actions was 1,828, with 1,030 designated **Complete**. The sites with **Remedial** actions totaled 5,995, with 4,621 requiring **No Further Action**. For sites with **Remedial** actions that were **Active**, 1,121 reported a **Last Remedial Phase**, with **PA/SI** being the most prevalent with 546 sites.

The most prevalent **Predominant Remedy** was **Off-Site Containment** with 1,017 occurrences.

Total Cost reported was \$343,694,743 for 25 sites with only **State** cost, 1,076 sites with only **PRP** costs, and 7 sites with both **State** and **PRP** cost. The average cost for all sites that reported **PRP** cost was \$288,565 per site, and the average cost for all sites that reported **State** cost was \$974,329 per site.

Primary Funding source was reported for 4,956 sites, with **Voluntary/Property Transfer** being reported for 4,786 of those sites.

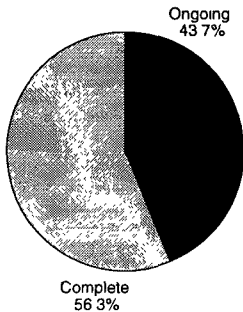
Five sites were started and 2 completed prior to 1980. From 1980 to 1986, 669 sites were started and 439 were completed. For 3,389 sites, the **Duration of Response Actions** was **Less Than 12 Months**. New Jersey reported an additional 300 sites with durations less than 1 month, giving the State a total of 3,689 sites with **Durations of Response Actions of Less Than 12 Months**. The average **Duration of Response Actions** for all 4,440 sites reporting start and completion dates was 9 months and 10 days.

Data Display (Total Sites = 5,996)

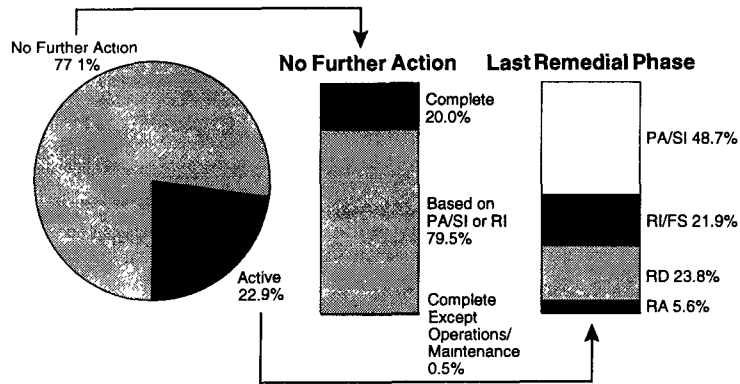
Removal	1,828	100.00%
Ongoing	798	43.65%
Complete	1,030	56.35%
Remedial	5,995	100.00%
Active	1,374	22.92%
No Further Action	4,621	77.08%
No Remedial Action Based on PA/SI or RI	3,673	79.48%
All Remedial Action Complete Except Operations/Maint.	23	0.50%
All Remedial Action Complete	925	20.02%
Last Remedial Phase	1,121	100.00%
PA/SI	546	48.70%
RI/FS	245	21.86%
RD	267	23.82%
RA	63	5.62%
Predominant Remedies	1,283	100.00%
On-Site Treatment	37	2.88%
On-Site Containment	149	11.61%
Off-Site Containment	1,017	79.27%
Off-Site Treatment	42	3.27%
Population Protection	2	0.16%
Site Security	35	2.73%
Innovative Technology	1	0.08%
Total Cost	\$343,694,743.00	
State	\$31,178,532.00	
Sites: 32	State Average: \$974,329.13	
PRP	\$312,865,840.00	
Sites: 1,083	PRP Average: \$288,565.29	
Primary Funding	4,956	100.00%
State	31	0.63%
Federal Government	4	0.08%
Enforcement	135	2.72%
Voluntary/Property Transfer	4,786	96.57%
Duration of Response Actions	4,440	100.00%
Less Than 12 Months	3,389	76.33%
12–23 Months	537	12.09%
24–35 Months	208	4.68%
36–47 Months	141	3.18%
48–59 Months	77	1.73%
60–71 Months	36	0.82%
More Than 71 Months	52	1.17%

State/Territory—New Jersey

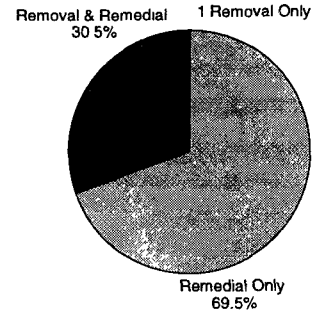
**Removal
1,828 Sites**



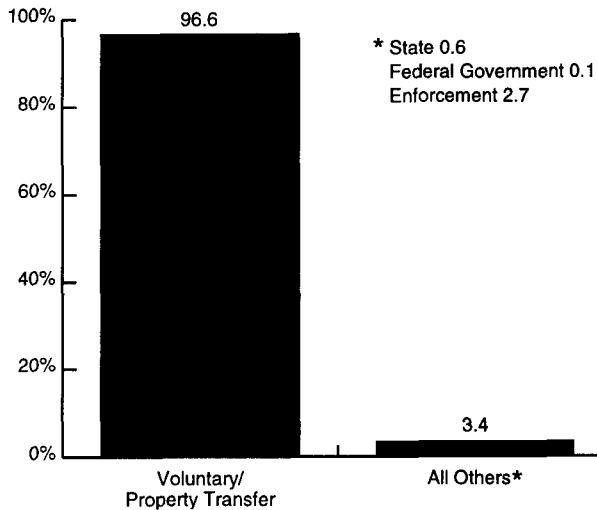
**Remedial
5,995 Sites**



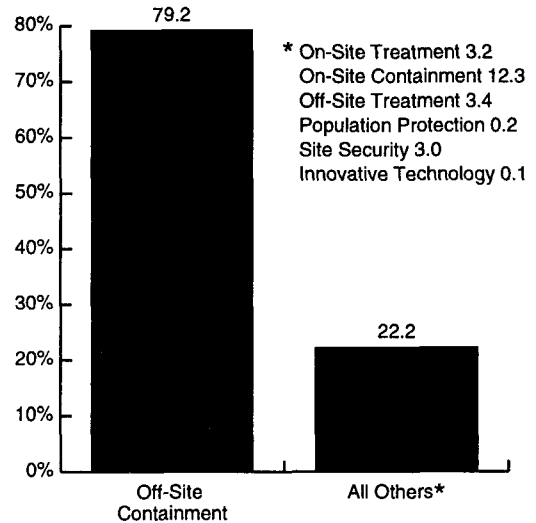
**Removal and Remedial
5,996 Sites**



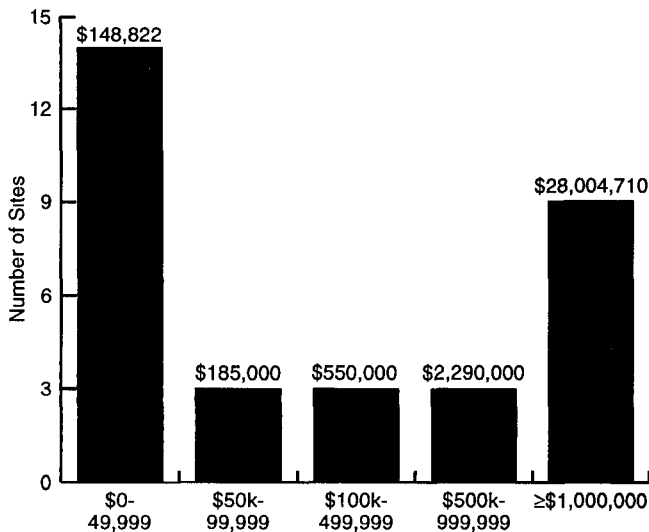
**Primary Funding
4,956 Sites**



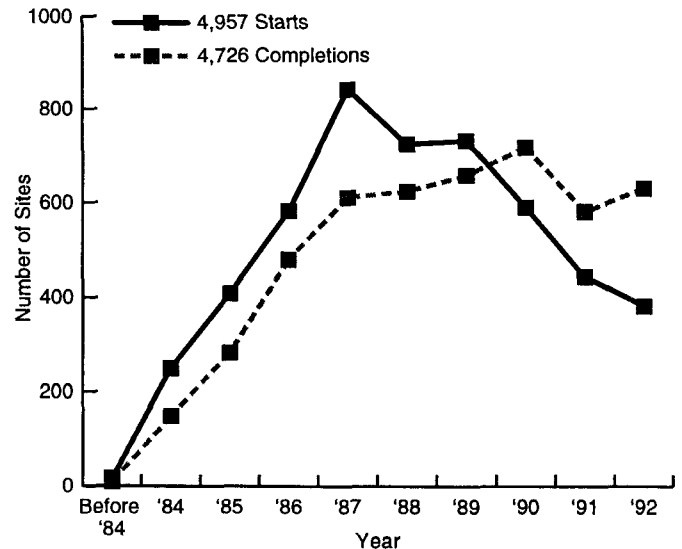
**Predominant Remedies
1,283 Occurrences**



**State Costs
32 Sites**



Start and Completion Dates



State/Territory—New Mexico

New Mexico reported 58 sites. Of these sites, 8 had only **Removal** actions and 50 had only **Remedial** actions. One of the sites had **Removal** actions that were **Ongoing** and 49 had **Remedial** actions that were **Active**.

The seven sites with **Removal** actions that were **Complete** used three **Predominant Remedies: Off-Site Containment, Off-Site Treatment, and Population Protection**.

The only site designated as requiring **No Remedial Action Based on PA/SI or RI** reported a **State** cost of \$100,000. Also, one site with only a **Removal** action that was **Complete** reported a **State** cost of \$35,000. A **PRP** cost of \$5,000,000 was reported for one site with **Remedial** actions that were **Active**. The **Last Remedial Phase** for that site was **RD**.

Fifty-seven of the sites reported a **Primary Funding** source, with the **Federal Government** reporting 19 sites being the most prevalent, followed by **Voluntary/Property Transfer** with 16 sites, the **State** with 12 sites and **Enforcement** with 10 sites.

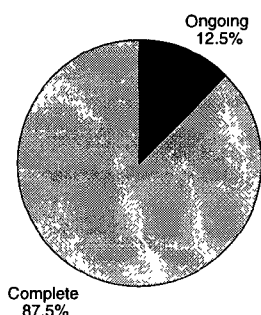
The average **Duration of Response Actions** was 5 months and 17 days.

Data Display (Total Sites = 58)

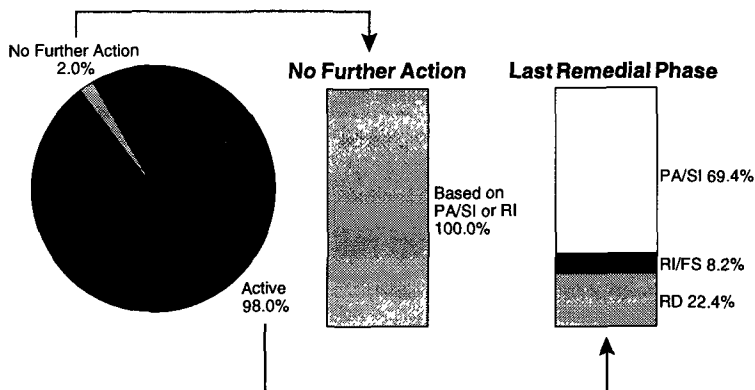
Removal	8	100.00%
Ongoing	1	12.50%
Complete	7	87.50%
Remedial	50	100.00%
Active	49	98.00%
No Further Action	1	2.00%
No Remedial Action Based on PA/SI or RI	1	100.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	49	100.00%
PA/SI	34	69.39%
RI/FS	4	8.16%
RD	11	22.45%
RA	0	0.00%
Predominant Remedies	14	100.00%
On-Site Treatment	1	7.14%
On-Site Containment	2	14.29%
Off-Site Containment	7	50.00%
Off-Site Treatment	2	14.29%
Population Protection	1	7.14%
Site Security	1	7.14%
Innovative Technology	0	0.00%
Total Cost	\$5,135,000.00	
State	\$135,000.00	
Sites: 2	State Average: \$67,500.00	
PRP	\$5,000,000.00	
Sites: 1	PRP Average: \$5,000,000.00	
Primary Funding	57	100.00%
State	12	21.05%
Federal Government	19	33.33%
Enforcement	10	17.55%
Voluntary/Property Transfer	16	28.07%
Duration of Response Actions	7	100.00%
Less Than 12 Months	5	71.43%
12–23 Months	2	28.57%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—New Mexico

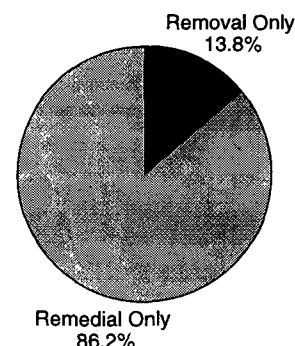
**Removal
8 Sites**



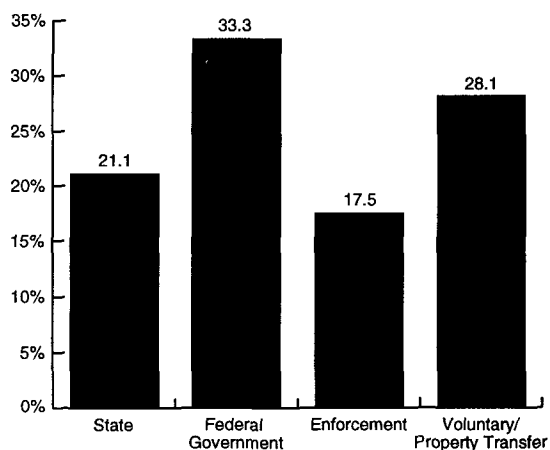
**Remedial
50 Sites**



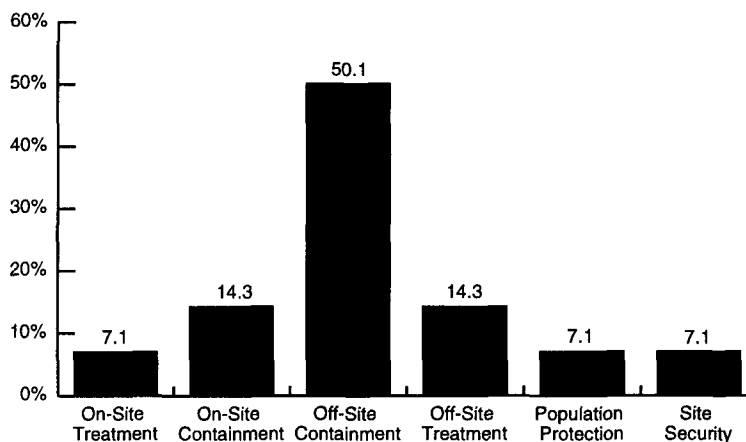
**Removal and Remedial
58 Sites**



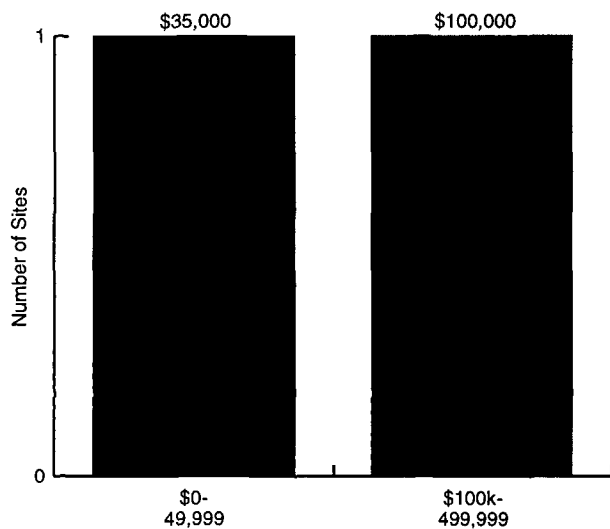
**Primary Funding
57 Sites**



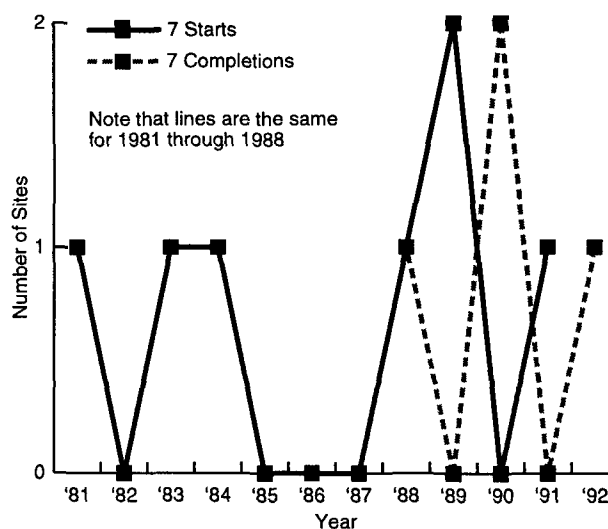
**Predominant Remedies
14 Occurrences**



**State Costs
2 Sites**



Start and Completion Dates



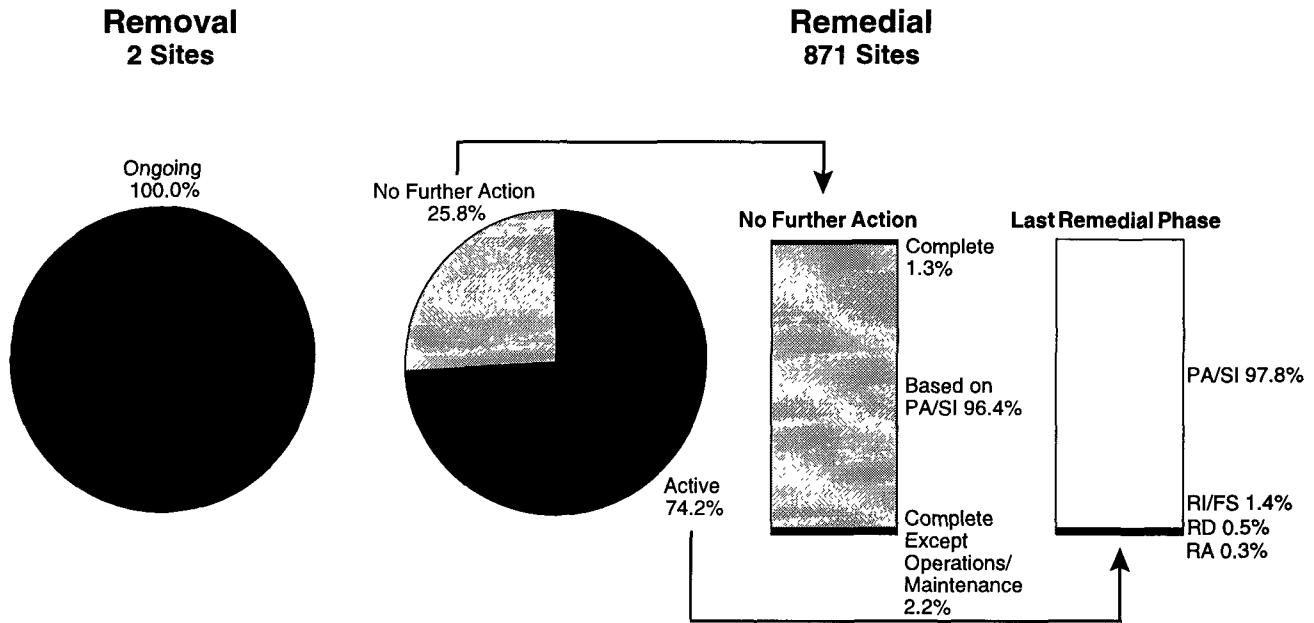
State/Territory—North Carolina

North Carolina reported 873 sites. Two of these sites had only **Removal** actions, and the remaining 871 had only **Remedial** actions. The 2 sites with only **Removal** actions were **Ongoing**. Six hundred forty-six of the **Remedial** actions were **Active**, 217 required **No Further Action Based on PA/SI or RI**, and 8 were construction completions.

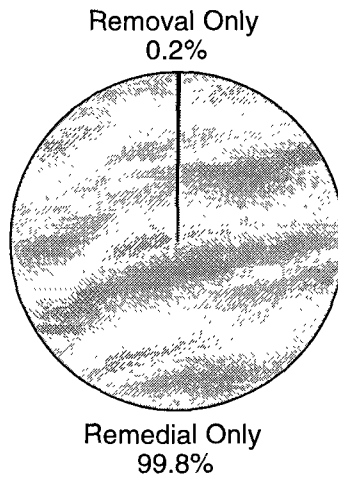
For the sites with **Remedial** actions that were **Active**, 635 reported a **Last Remedial Phase** of **PA/SI**.

Data Display (Total Sites = 873)		
Removal	2	100.00%
Ongoing	2	100.00%
Complete	0	0.00%
Remedial	871	100.00%
Active	646	74.17%
No Further Action	225	25.83%
No Remedial Action Based on PA/SI or RI	217	96.45%
All Remedial Action Complete Except Operations/Maint.	5	2.22%
All Remedial Action Complete	3	1.33%
Last Remedial Phase	649	100.00%
PA/SI	635	97.84%
RI/FS	9	1.39%
RD	3	0.46%
RA	2	0.31%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	0	100.00%
State	0	0.00%
Federal Government	0	0.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—North Carolina



Removal and Remedial



State/Territory—Ohio

Ohio reported 86 sites, of which 15 sites had both **Removal** and **Remedial** actions, 22 had only **Removal** actions, and 47 had only **Remedial** actions. One of the sites with both **Removal** and **Remedial** actions was designated construction completion (i.e., the **Removal** actions were **Complete** and **All Remedial Action Complete Except Operations/Maintenance**).

The 60 sites with **Active Remedial** actions that were **Active** had a **Last Remedial Phase** of **RI/FS** with 31 sites, **PA/SI** with 25 sites, **RD** with 3, and **RA** with 1.

The **Predominant Remedy** was **Off-Site Treatment** with 6 occurrences.

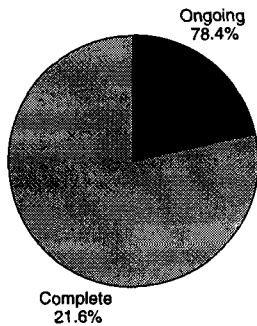
Enforcement was reported as the **Primary Funding** source for 82 of the 85 sites that reported a **Primary Funding** source.

Data Display (Total Sites = 86)

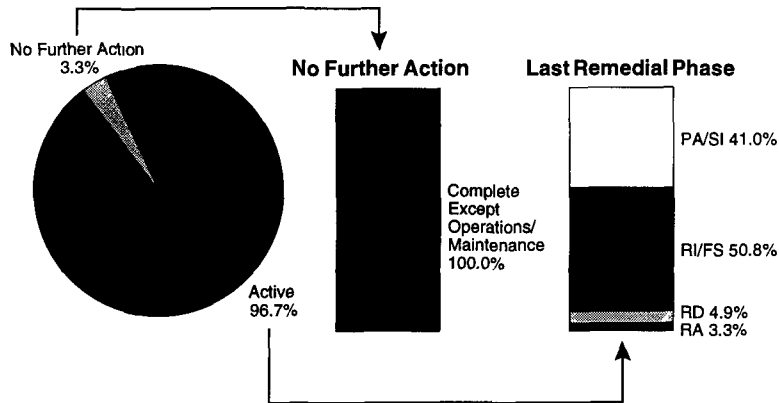
Removal	37	100.00%
Ongoing	29	78.38%
Complete	8	21.62%
Remedial	62	100.00%
Active	60	96.77%
No Further Action	2	3.23%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	2	100.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	61	100.00%
PA/SI	25	40.98%
RI/FS	31	50.82%
RD	3	4.92%
RA	2	3.28%
Predominant Remedies	15	100.00%
On-Site Treatment	6	40.00%
On-Site Containment	3	20.00%
Off-Site Containment	1	6.67%
Off-Site Treatment	4	26.66%
Population Protection	0	0.00%
Site Security	1	6.67%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	85	100.00%
State	2	2.35%
Federal Government	1	1.18%
Enforcement	82	96.47%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Ohio

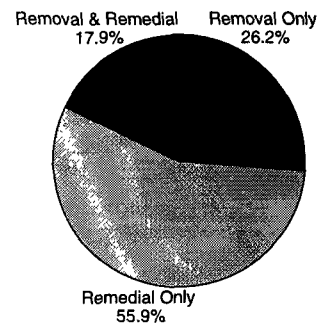
**Removal
37 Sites**



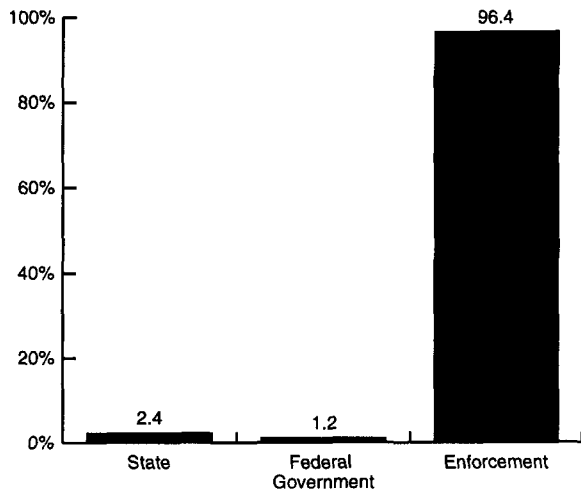
**Remedial
62 Sites**



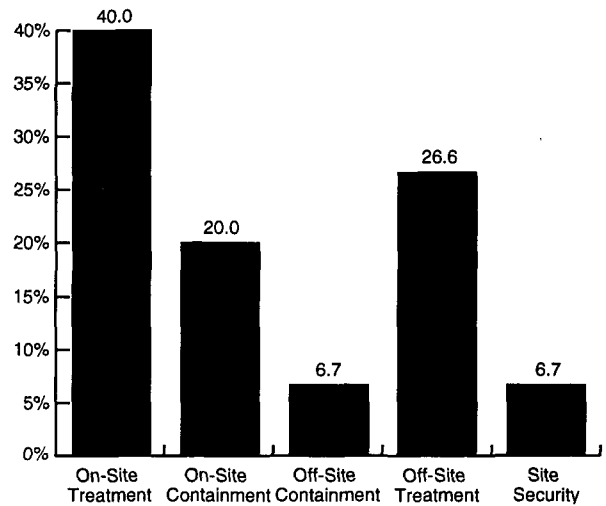
**Removal and Remedial
84 Sites**



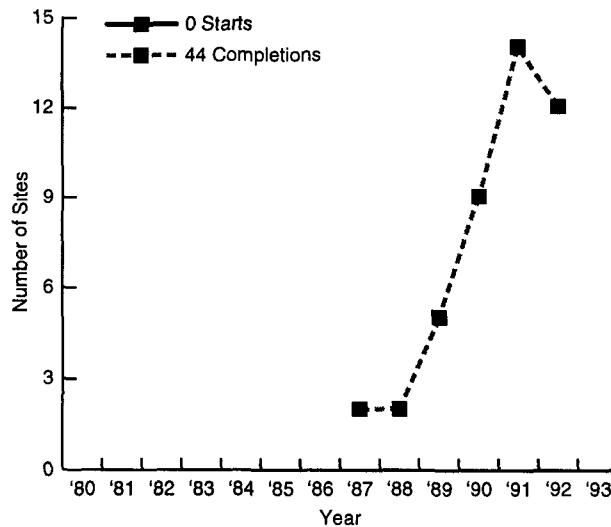
**Primary Funding
85 Sites**



**Predominant Remedies
15 Occurrences**



Start and Completion Dates



State/Territory—Oklahoma

Oklahoma reported 40 sites. All 40 sites had only **Removal** or **Remedial** actions. No sites had both **Removal** and **Remedial** actions. Of the 32 sites with only **Removal** actions, all were designated **Complete**. Four of the 8 sites with only **Remedial** actions were designated construction completion.

The most prevalent **Predominant Remedy** was **Off-Site Containment** with 31 occurrences.

The **Total Cost** of \$85,590 was reported for 29 of the sites with only **Removal** actions. All reported cost was **State** cost. No **PRP** cost was known.

The **State** and **Voluntary/Property Transfer** were the reported **Primary Funding** sources with 29 sites and 11 sites, respectively.

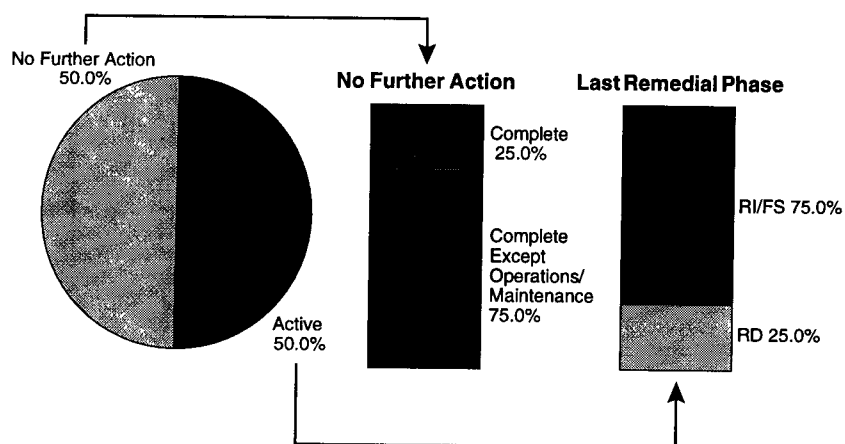
The first site was started prior to 1980. Thirty-four sites reported start dates after 1986. The average **Duration of Response Actions** was 21 months and 13 days.

Data Display (Total Sites = 40)

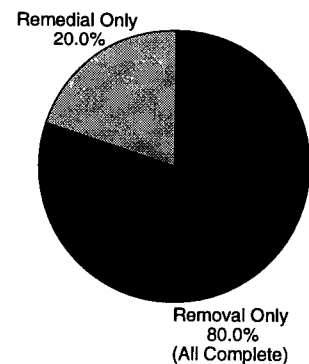
Removal	32	100.00%
Ongoing	0	0.00%
Complete	32	100.00%
Remedial	8	100.00%
Active	4	50.00%
No Further Action	4	50.00%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	3	75.00%
All Remedial Action Complete	1	25.00%
Last Remedial Phase	4	100.00%
PA/SI	0	0.00%
RI/FS	3	75.00%
RD	1	25.00%
RA	0	0.00%
Predominant Remedies	35	100.00%
On-Site Treatment	2	5.71%
On-Site Containment	2	5.71%
Off-Site Containment	31	88.58%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$85,590.00
State		\$85,590.00
Sites: 29	State Average: \$2,951.38	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	40	100.00%
State	29	72.50%
Federal Government	0	0.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	11	27.50%
Duration of Response Actions	7	100.00%
Less Than 12 Months	5	71.42%
12–23 Months	1	14.29%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	1	14.29%

State/Territory—Oklahoma

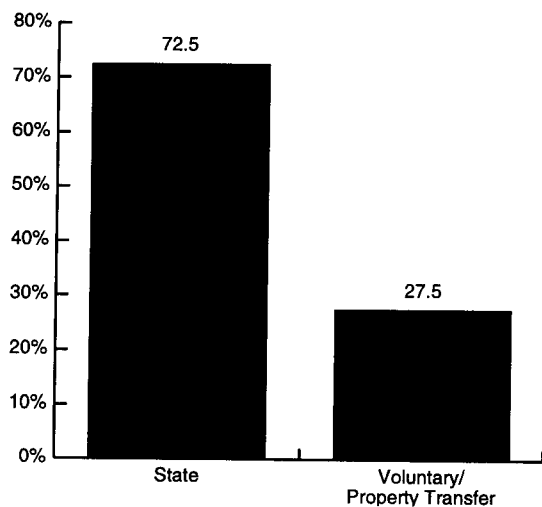
**Remedial
8 Sites**



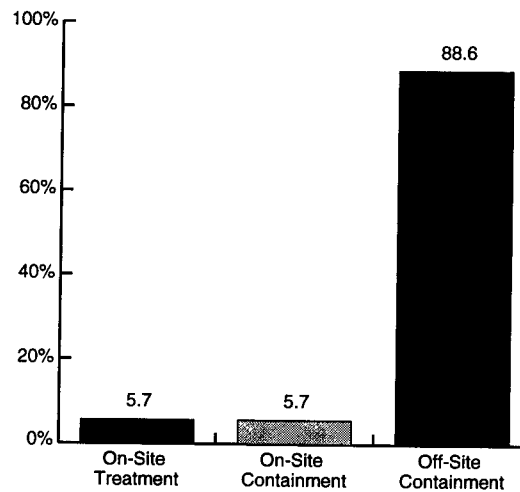
**Removal and Remedial
40 Sites**



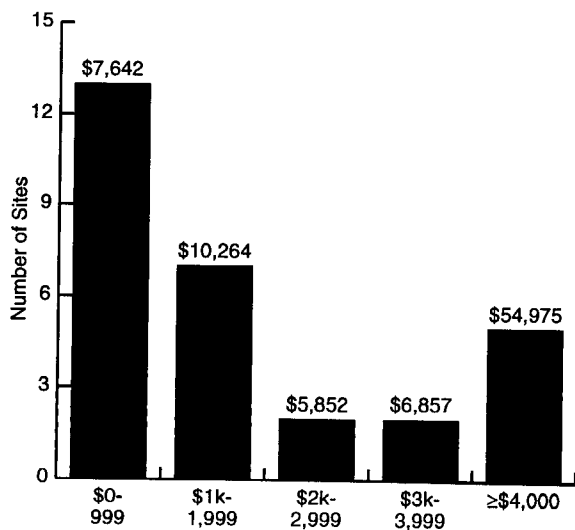
**Primary Funding
40 Sites**



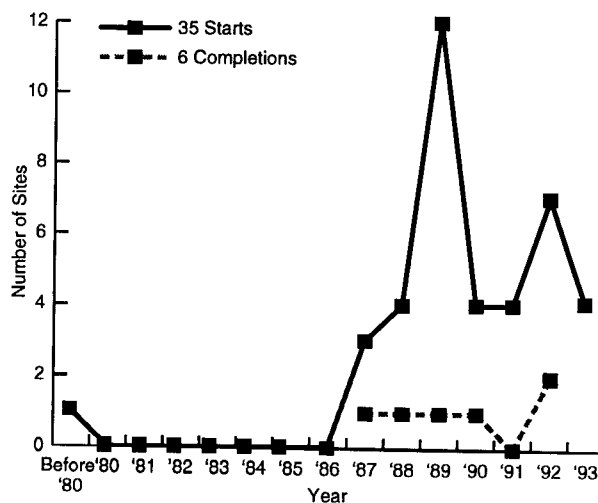
**Predominant Remedies
35 Occurrences**



**State Costs
29 Sites**



Start and Completion Dates



State/Territory—Oregon

Oregon reported 307 sites. Five of the sites were sites with only **Removal** actions, 234 with only **Remedial** actions, 20 with both **Removal** and **Remedial** actions, and 48 with neither a **Removal** nor a **Remedial** action. Of the total 25 sites with **Removal** actions, 9 of the sites designated the actions as **Ongoing**, and 16 designated the actions as **Complete**. Of the total 254 sites with **Remedial** actions, 205 of the sites designated the actions as **Active**, and 49 designated the actions as requiring **No Further Action**, of which 8 were designated construction completions.

A **Last Remedial Phase** was reported for 180 sites with **Remedial** actions that were **Active**; 165 were **PA/SI**, 13 were **RI/FS**, and one site each was **RD** and **RA**.

A **Primary Funding** source was reported for 236 sites; 117 had the **State**, 23 had the **Federal Government**, and 96 had **Enforcement**. Oregon does not track **Enforcement** activities separately for **Voluntary**. The State estimates that half the sites reported as **Enforcement** were **Voluntary**.

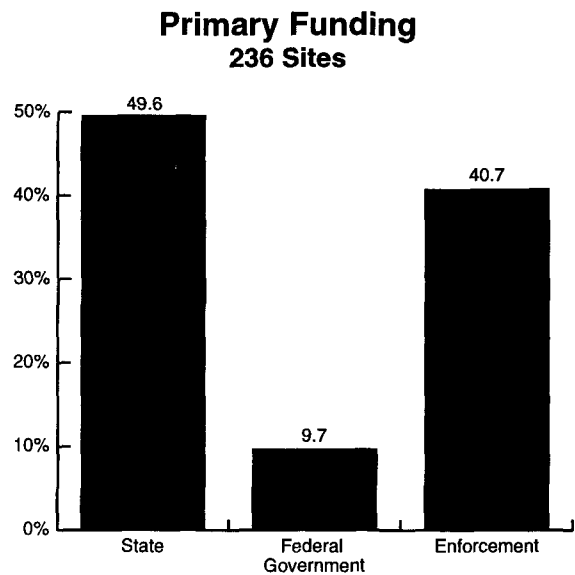
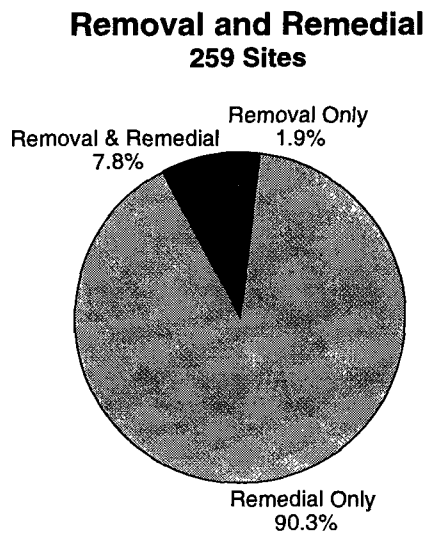
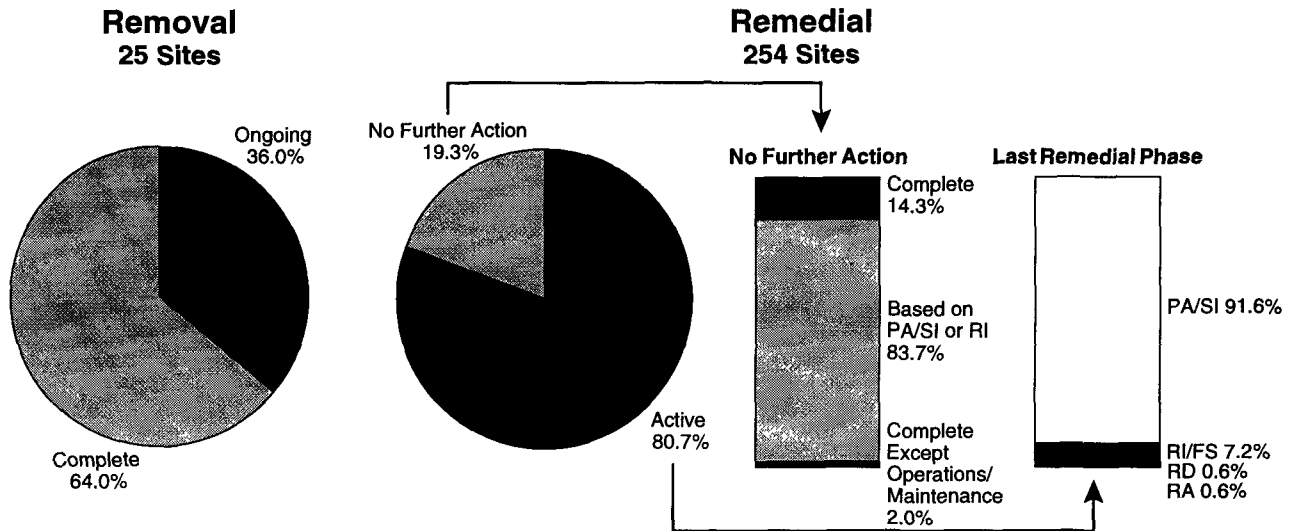
Duration of Response Actions was reported for 21 sites. Twelve of these sites had **Duration of Response Actions** of **Less Than 12 Months**. The average **Duration of Response Actions** for all 21 sites was 15 months and 18 days.

Oregon prepares an annual report on its cleanup efforts that depicts its plans and accomplishments over the year. Oregon also prepared an Environmental Cleanup Manual in 1992. The purpose of this Manual is to "provide a general description of the government cleanup programs and explain more specifically the cleanup process offered" by the State.

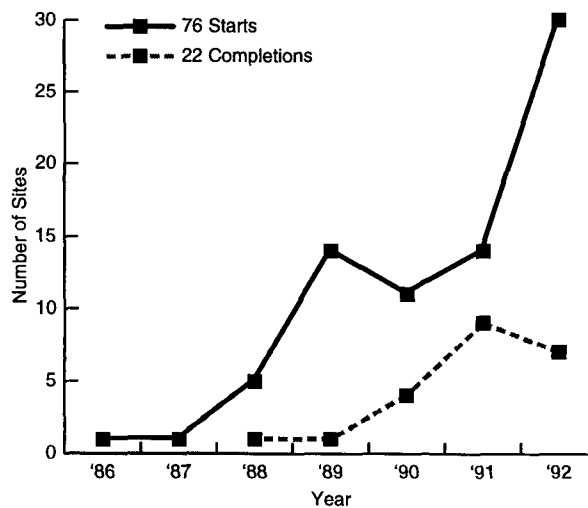
Data Display (Total Sites = 307)

Removal	25	100.00%
Ongoing	9	36.00%
Complete	16	64.00%
Remedial	254	100.00%
Active	205	80.71%
No Further Action	49	19.29%
No Remedial Action Based on PA/SI or RI	41	83.67%
All Remedial Action Complete Except Operations/Maint.	1	2.04%
All Remedial Action Complete	7	14.29%
Last Remedial Phase	180	100.00%
PA/SI	165	91.66%
RI/FS	13	7.22%
RD	1	0.56%
RA	1	0.56%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	236	100.00%
State	117	49.58%
Federal Government	23	9.74%
Enforcement	96	40.68%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	21	100.00%
Less Than 12 Months	12	57.15%
12–23 Months	4	19.05%
24–35 Months	2	9.52%
36–47 Months	2	9.52%
48–59 Months	1	4.76%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Oregon



Start and Completion Dates



State/Territory—Pennsylvania

Pennsylvania reported 41 sites. Five of the sites had both **Removal** and **Remedial** actions, 32 had only **Removal** actions, and 4 had only **Remedial** actions. For all 5 of the sites with both **Removal** and **Remedial** actions, the **Remedial** actions were **Active**. For all 4 of the sites with only **Remedial** actions, all of the actions were **Active**. For the sites with only **Removal** actions, 11 were designated **Ongoing** and 21 were **Complete**.

The **Predominant Remedy** was **Off-Site Treatment** with 20 occurrences.

The one **PRP** cost reported was for a site that had only **Removal** actions that were **Active**; the reported cost was \$200,000. Twenty-one of the other sites with only **Removal** actions that were **Complete** had only **State** cost; the average cost per site was \$277,143. **State** cost of \$200,000 was also reported for one site with only **Active Remedial** actions. For the 5 sites with both **Removal** and **Remedial** actions, the **State** cost reported was \$2,100,000.

The **Primary Funding** source was the **State** at 34 of the 37 sites that reported **Primary Funding**.

All site completions have taken less than 2 years. The average **Duration of Response Actions** is 8 months and 15 days based on 25 sites that reported start and completion dates.

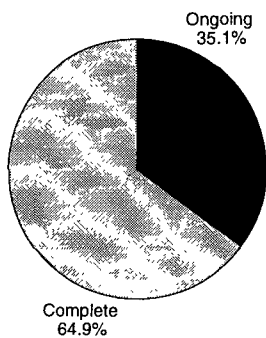
Pennsylvania prepares an annual report on its Hazardous Waste Cleanup Act. The last report was prepared on October 1, 1993, and covered the period from July 1, 1992, to June 30, 1993.

Data Display (Total Sites = 41)

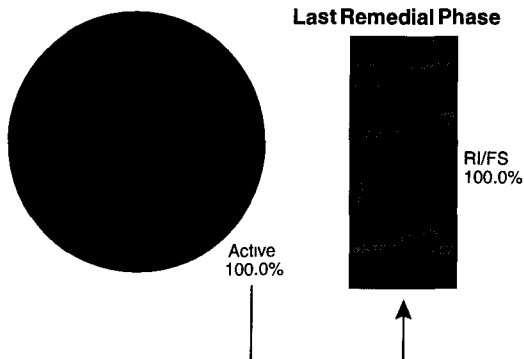
Removal	37	100.00%
Ongoing	13	35.14%
Complete	24	64.86%
Remedial	9	100.00%
Active	9	100.00%
No Further Action	0	0.00%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	9	100.00%
PA/SI	0	0.00%
RI/FS	9	100.00%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	28	100.00%
On-Site Treatment	1	3.58%
On-Site Containment	3	10.71%
Off-Site Containment	0	0.00%
Off-Site Treatment	20	71.43%
Population Protection	2	7.14%
Site Security	2	7.14%
Innovative Technology	0	0.00%
Total Cost	\$8,120,000.00	
State	\$7,920,000.00	
Sites: 26	State Average: \$304,615.38	
PRP	\$200,000.00	
Sites: 1	PRP Average: \$200,000.00	
Primary Funding	37	100.00%
State	34	91.89%
Federal Government	0	0.00%
Enforcement	3	8.11%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	25	100.00%
Less Than 12 Months	16	64.00%
12–23 Months	9	36.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Pennsylvania

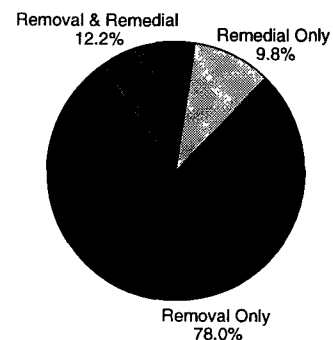
**Removal
37 Sites**



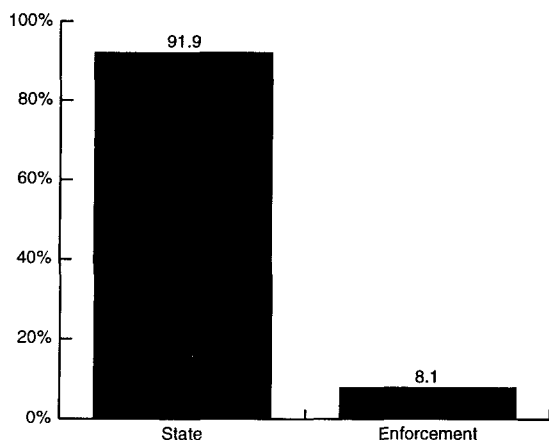
**Remedial
9 Sites**



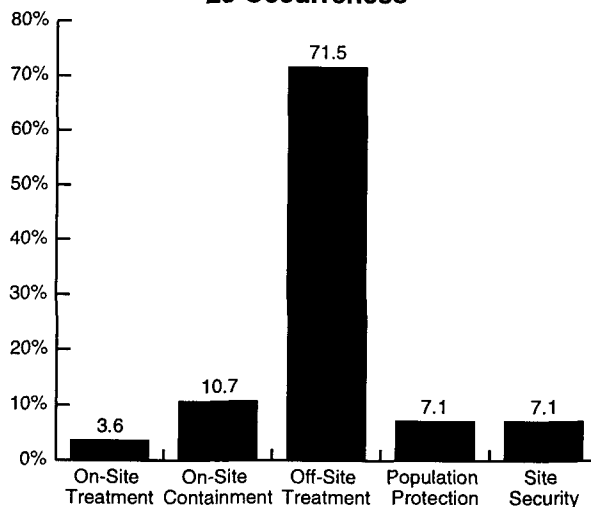
**Removal and Remedial
41 Sites**



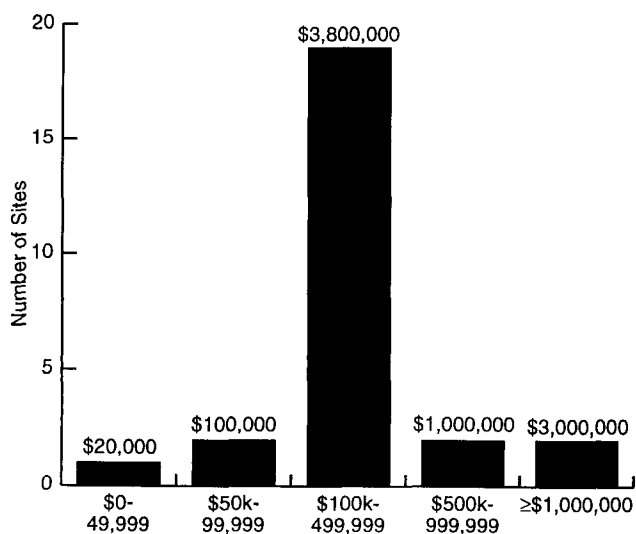
**Primary Funding
38 Sites**



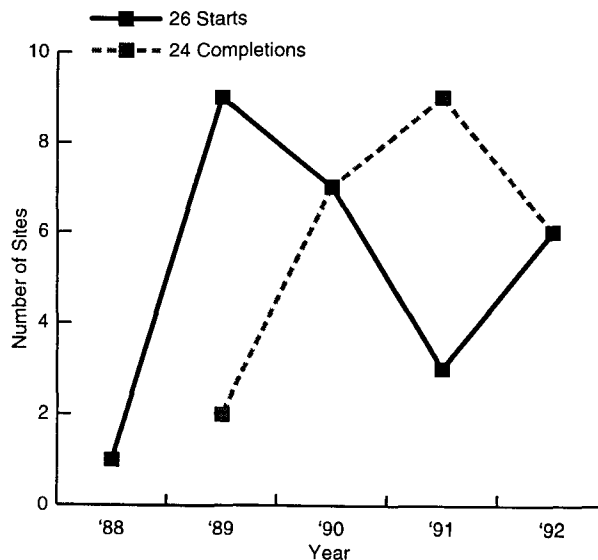
**Predominant Remedies
28 Occurrences**



**State Costs
26 Sites**



Start and Completion Dates



State/Territory—Rhode Island

Rhode Island reported 97 sites. Eighty-three sites had only **Removal** actions, and 14 sites had only **Remedial** actions. No sites had both **Removal** and **Remedial** actions. Eighty-two of the 83 sites with only **Removal** actions were designated as **Complete**. Thirteen of the 14 sites with only **Remedial** actions were designated as **Active**. The remaining site with only **Remedial** actions was designated as a construction completion.

The **Predominant Remedy** was **Off-Site Containment** with 86 occurrences.

Enforcement was the prevalent **Primary Funding** source with 61 sites.

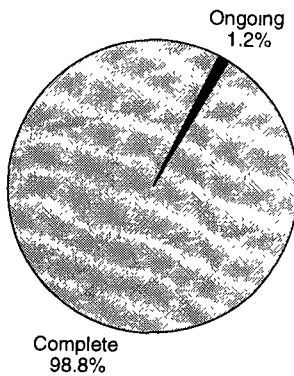
The average **Duration of Response Actions** was 13 months and 27 days based on 10 sites reporting both start and completion dates.

Data Display (Total Sites = 97)

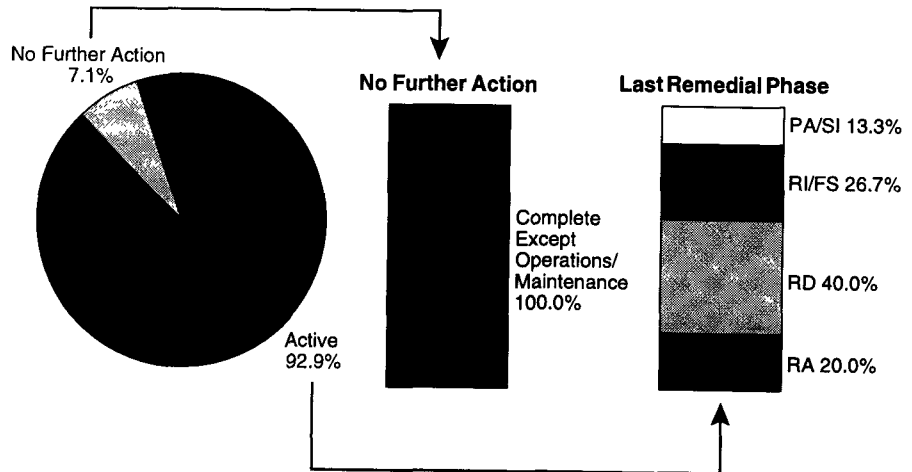
Removal	83	100.00%
Ongoing	1	1.20%
Complete	82	98.80%
Remedial	14	100.00%
Active	13	92.86%
No Further Action	1	7.14%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	1	100.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	15	100.00%
PA/SI	2	13.33%
RI/FS	4	26.67%
RD	6	40.00%
RA	3	20.00%
Predominant Remedies	91	100.00%
On-Site Treatment	5	5.49%
On-Site Containment	0	0.00%
Off-Site Containment	86	94.51%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	92	100.00%
State	14	15.22%
Federal Government	3	3.26%
Enforcement	61	66.30%
Voluntary/Property Transfer	14	15.22%
Duration of Response Actions	10	100.00%
Less Than 12 Months	7	70.00%
12–23 Months	0	0.00%
24–35 Months	2	20.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	1	10.00%
More Than 71 Months	0	0.00%

State/Territory—Rhode Island

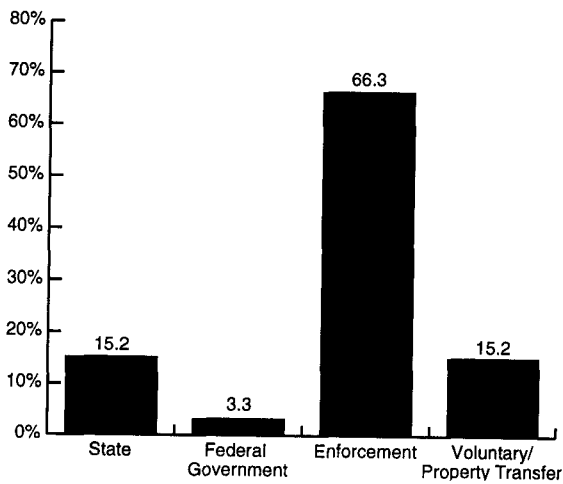
Removal 83 Sites



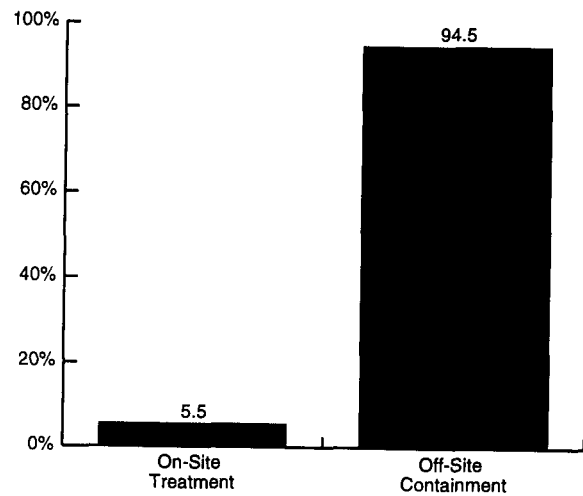
Remedial 14 Sites



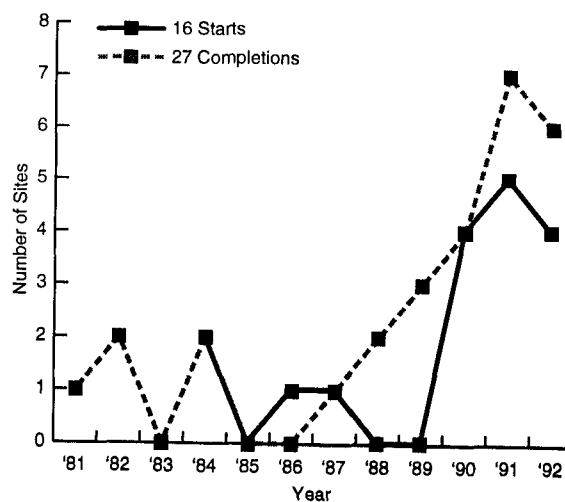
Primary Funding 92 Sites



Predominant Remedies 91 Occurrences



Site Starts and Completions



State/Territory—South Carolina

South Carolina reported 42 sites. Two of the sites had both **Removal** and **Remedial** actions, 17 had only **Removal** actions, and 22 had only **Remedial** actions. The 2 sites with both **Removal** and **Remedial** actions had **Removal** actions that were **Complete** and **Remedial** actions that were **Active** with **PA/SI** as the **Last Remedial Phase**. Fourteen of the sites with only **Removal** actions were **Complete**, and 5 of the sites with only **Remedial** actions required **No Further Action**.

The most prevalent **Predominant Remedies** were **Off-Site Containment** with 19 occurrences and **Off-Site Treatment** with 14 occurrences.

All reported cost was **State** cost. The **Total Cost** for 35 sites was \$7,036,201. The total for 5 sites with only **Remedial** actions designated as requiring **No Further Action** was \$651,431. For the 102 sites with only **Removal** actions that were **Complete** the cost was reported as \$1,675,051.

The **Primary Funding** source was the **State** with 22 sites, followed by **Enforcement** with 16 sites.

Seven sites were started prior to 1986, and 2 were complete. Fifteen sites had a **Duration of Response Actions** of **Less Than 12 Months**. The average **Duration of Response Actions** for 18 sites that reported start and completion dates was 5 months and 17 days.

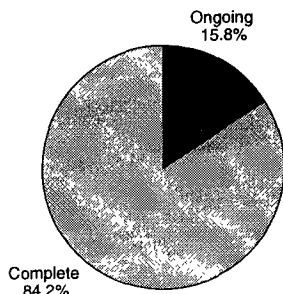
South Carolina has a Hazardous Waste Management Act, which was initiated in 1980.

Data Display (Total Sites = 42)

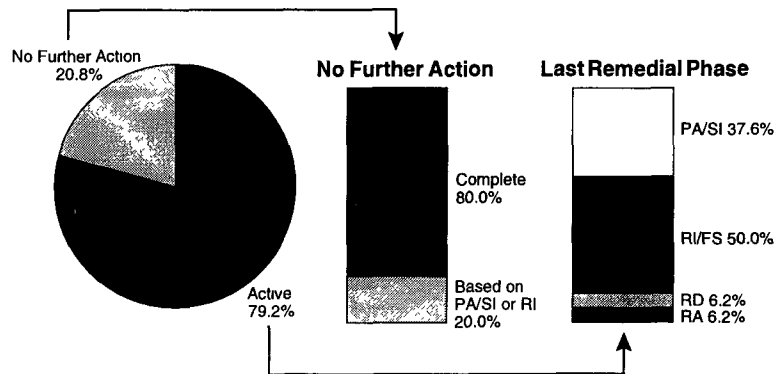
Removal			19	100.00%
Ongoing			3	15.79%
Complete			16	84.21%
Remedial			24	100.00%
Active			19	79.17%
No Further Action			5	20.83%
No Remedial Action Based on PA/SI or RI			1	20.00%
All Remedial Action Complete Except Operations/Maint.			0	0.00%
All Remedial Action Complete			4	80.00%
Last Remedial Phase			16	100.00%
PA/SI			6	37.50%
RI/FS			8	50.00%
RD			1	6.25%
RA			1	6.25%
Predominant Remedies			49	100.00%
On-Site Treatment			4	8.16%
On-Site Containment			0	0.00%
Off-Site Containment			19	38.78%
Off-Site Treatment			14	28.57%
Population Protection			0	0.00%
Site Security			11	22.45%
Innovative Technology			1	2.04%
Total Cost			\$7,036,201.00	
State			\$7,036,201.00	
Sites: 35			State Average: \$201,034.31	
PRP			\$0.00	
Sites: 0			PRP Average: \$0.00	
Primary Funding			39	100.00%
State			22	56.41%
Federal Government			1	2.56%
Enforcement			16	41.03%
Voluntary/Property Transfer			0	0.00%
Duration of Response Actions			18	100.00%
Less Than 12 Months			15	83.33%
12–23 Months			3	16.67%
24–35 Months			0	0.00%
36–47 Months			0	0.00%
48–59 Months			0	0.00%
60–71 Months			0	0.00%
More Than 71 Months			0	0.00%

State/Territory—South Carolina

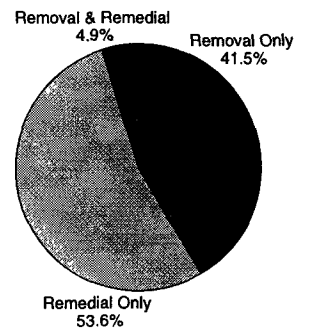
**Removal
19 Sites**



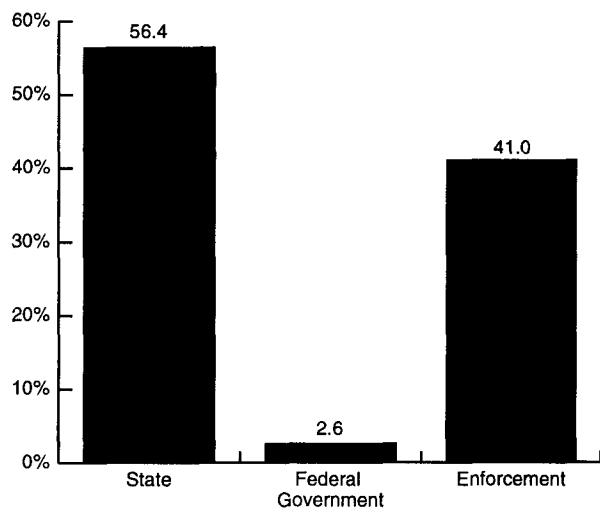
**Remedial
24 Sites**



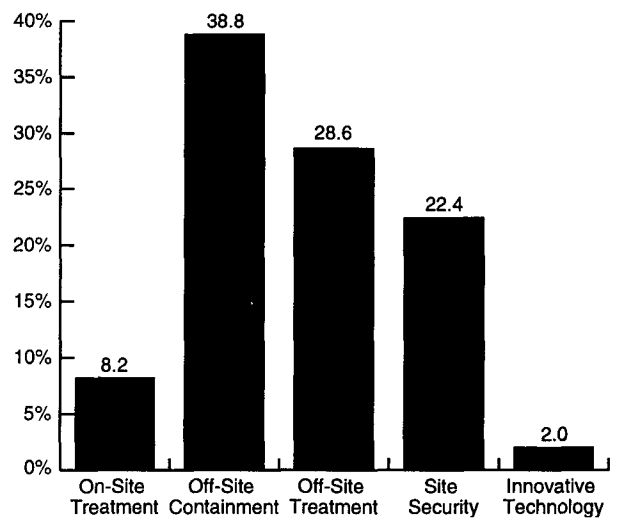
**Removal and Remedial
41 Sites**



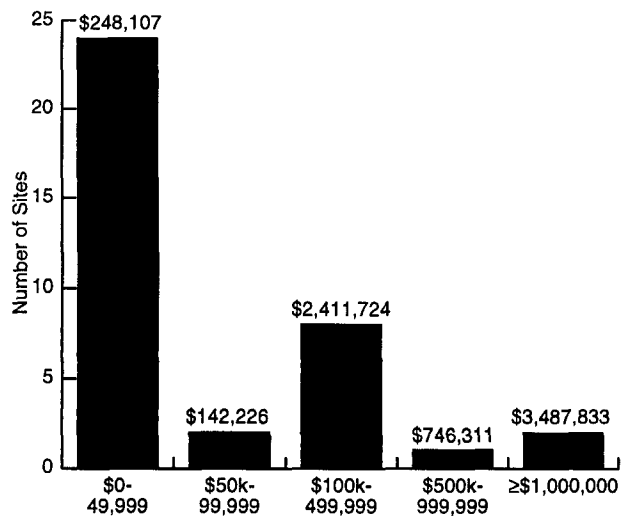
**Primary Funding
39 Sites**



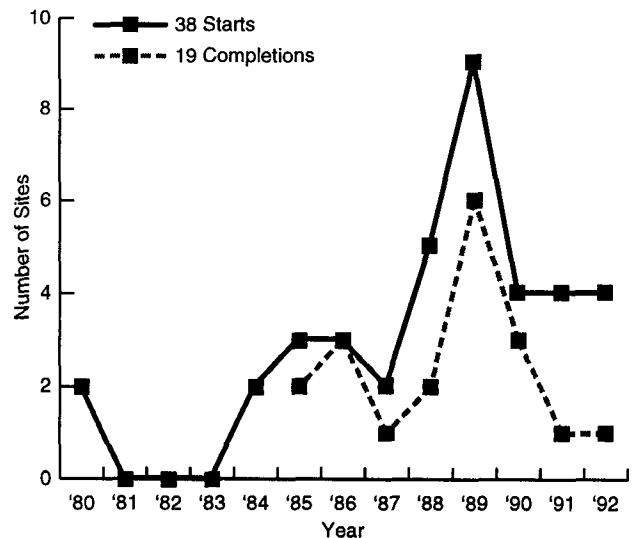
**Predominant Remedies
49 Occurrences**



**State Costs
35 Sites**



Start and Completion Dates



State/Territory—South Dakota

South Dakota reported 674 sites. Sixty sites had only **Remedial** actions, and 614 sites had only **Removal** actions. No sites had both **Removal** and **Remedial** actions.

Nineteen of the 60 sites with only **Remedial** actions were designated as construction completions. The remaining 41 of the 60 sites with only **Remedial** actions were designated **Active**. Three hundred seventy-two of the 614 sites with only **Removal** actions were **Complete**, and the remaining 242 were **Ongoing**.

For the sites with **Remedial** actions that were **Active**, the most prevalent **Last Remedial Phase** was **RI/FS**.

The **Predominant Remedy** used for all 391 reported **Predominant Remedy** occurrences was **Off-Site Containment**.

The **Primary Funding** source was **Enforcement** at 653 sites, followed by the **Federal Government** at 21.

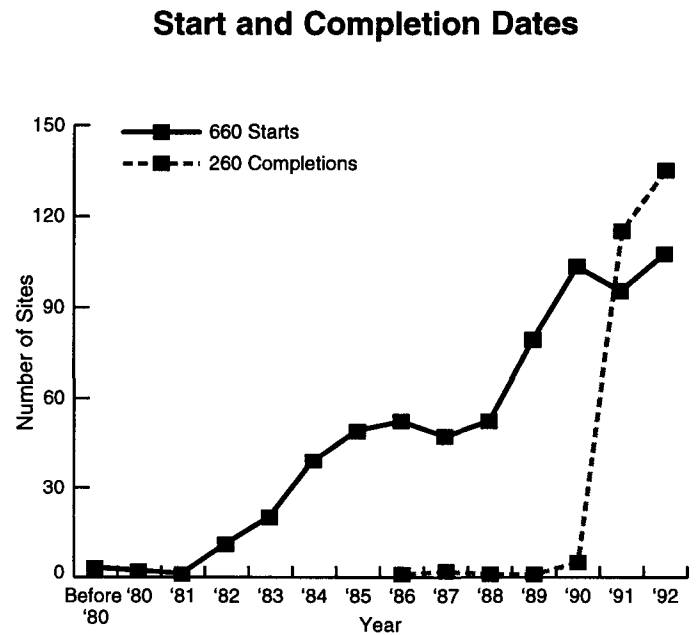
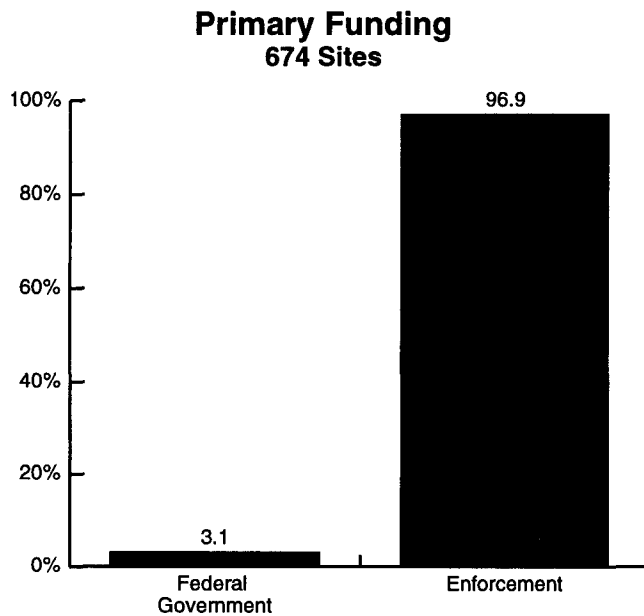
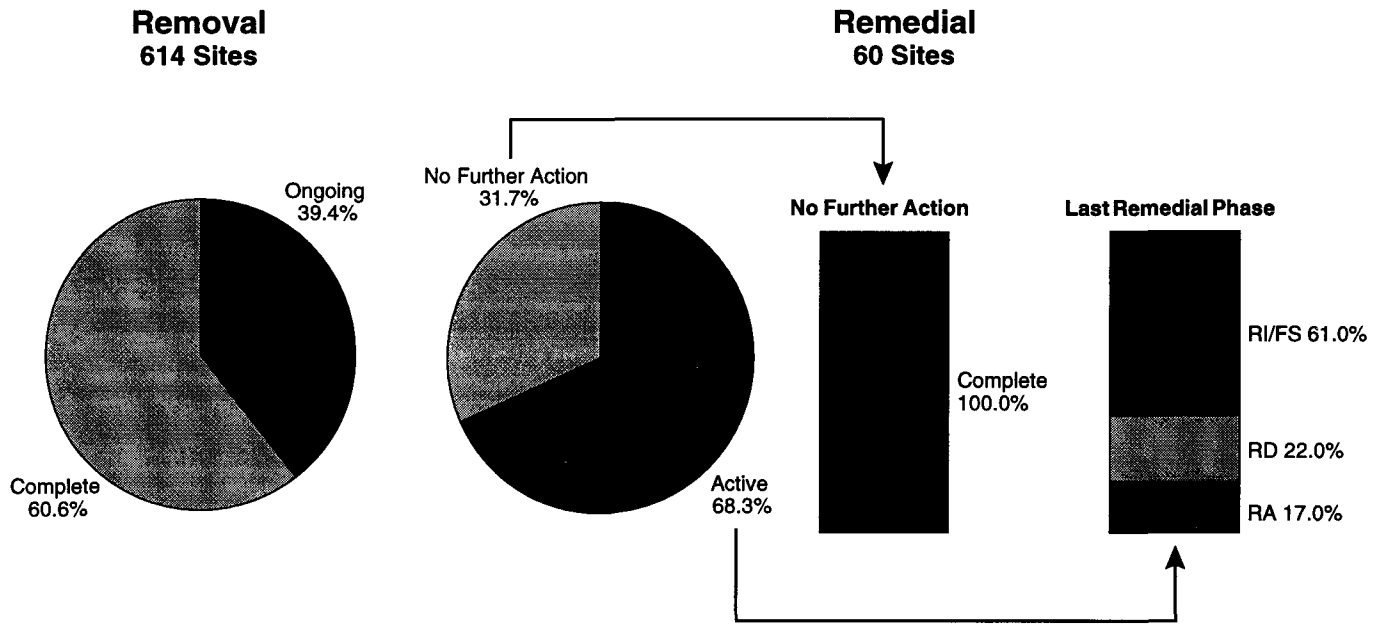
No cost was reported due to the fact that the South Dakota Department of Environment and Natural Resources does not keep record of this type of information; therefore, it is unavailable for review.

In 1988, South Dakota passed legislation requiring the reporting of the activity and events at hazardous waste sites. As a result, South Dakota established a tracking system for corrective action details on sites used in this presentation.

Data Display (Total Sites = 674)

Removal	614	100.00%
Ongoing	242	39.41%
Complete	372	60.59%
Remedial	60	100.00%
Active	41	68.33%
No Further Action	19	31.67%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	19	100.00%
Last Remedial Phase	41	100.00%
PA/SI	0	0.00%
RI/FS	25	60.98%
RD	9	21.95%
RA	7	17.07%
Predominant Remedies	391	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	391	100.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost		\$0.00
State		\$0.00
Sites: 0	State Average: \$0.00	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	674	100.00%
State	0	0.00%
Federal Government	21	3.12%
Enforcement	653	96.88%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	212	100.00%
Less Than 12 Months	100	47.17%
12–23 Months	38	17.92%
24–35 Months	19	8.96%
36–47 Months	23	10.85%
48–59 Months	7	3.31%
60–71 Months	6	2.83%
More Than 71 Months	19	8.96%

State/Territory—South Dakota



State/Territory—Tennessee

Tennessee reported 244 sites. Four of the sites had both **Removal** and **Remedial** actions, 36 had only **Removal** actions, and 201 had only **Remedial** actions. All of the **Removal** actions were **Complete**. Four of the sites with both **Removal** and **Remedial** actions had the **Removal** actions **Complete** and the **Remedial** action requiring **No Further Action**. Of the 201 sites with only **Remedial** actions, 4 were classified as construction completions. **PA/SI** was the prevalent **Last Remedial Phase** for 153 of the 198 sites with **Remedial** actions that were **Active** that reported a **Last Remedial Phase**.

Off-Site Containment was the prevalent **Predominant Remedy** with 38 occurrences.

Total Cost was reported for 45 sites; 27 sites had both **State** and **PRP** cost, 2 sites had **State** cost only, and 16 sites had **PRP** cost only. The **Total Cost** for all sites was \$6,719,579.

Enforcement and the **State** were reported as the **Primary Funding** sources at 33 sites and 11 sites, respectively.

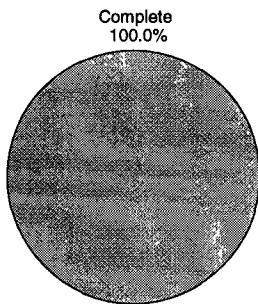
One site was started prior to 1980, and 13 sites were started from 1981 through 1985. Twelve sites were completed by the end of 1985.

Data Display (Total Sites = 244)

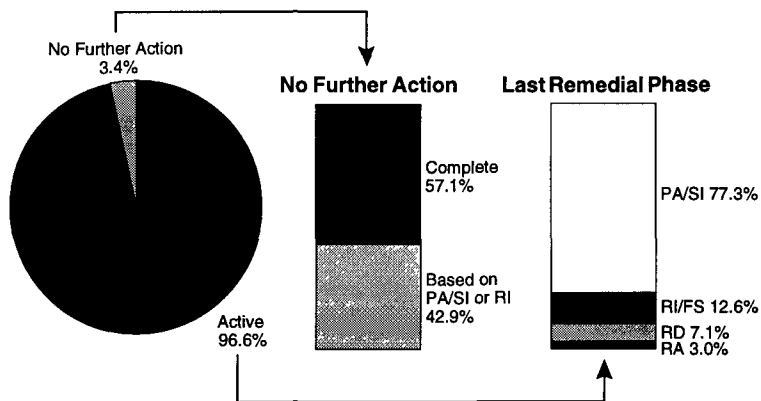
Removal	40	100.00%
Ongoing	0	0.00%
Complete	40	100.00%
Remedial	205	100.00%
Active	198	96.59%
No Further Action	7	3.41%
No Remedial Action Based on PA/SI or RI	3	42.86%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	4	57.14%
Last Remedial Phase	198	100.00%
PA/SI	153	77.27%
RI/FS	25	12.63%
RD	14	7.07%
RA	6	3.03%
Predominant Remedies	56	100.00%
On-Site Treatment	7	12.50%
On-Site Containment	8	14.29%
Off-Site Containment	38	67.86%
Off-Site Treatment	1	1.79%
Population Protection	0	0.00%
Site Security	2	3.56%
Innovative Technology	0	0.00%
Total Cost		\$6,719,579.00
State		\$2,200,526.00
Sites: 43	State Average: \$51,175.02	
PRP		\$4,519,053.00
Sites: 29	PRP Average: \$155,829.41	
Primary Funding	44	100.00%
State	11	25.00%
Federal Government	0	0.00%
Enforcement	33	75.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	43	100.00%
Less Than 12 Months	30	69.77%
12–23 Months	8	18.60%
24–35 Months	1	2.33%
36–47 Months	4	9.30%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Tennessee

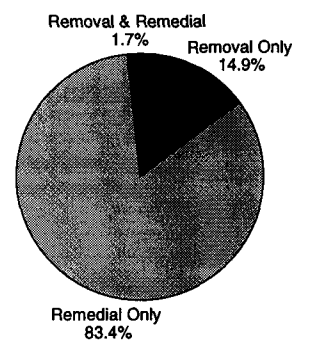
**Removal
40 Sites**



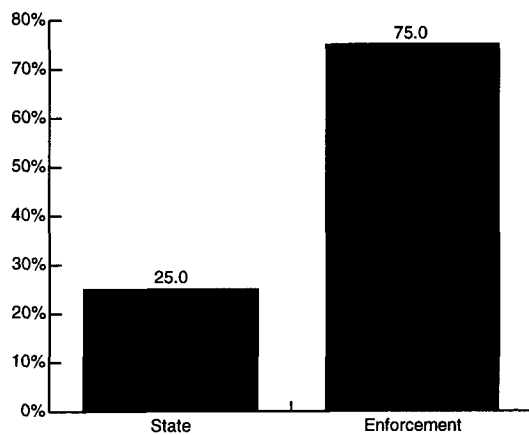
**Remedial
205 Sites**



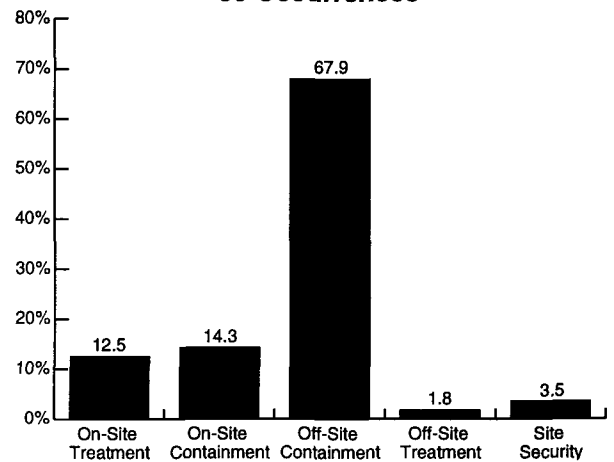
**Removal and Remedial
241 Sites**



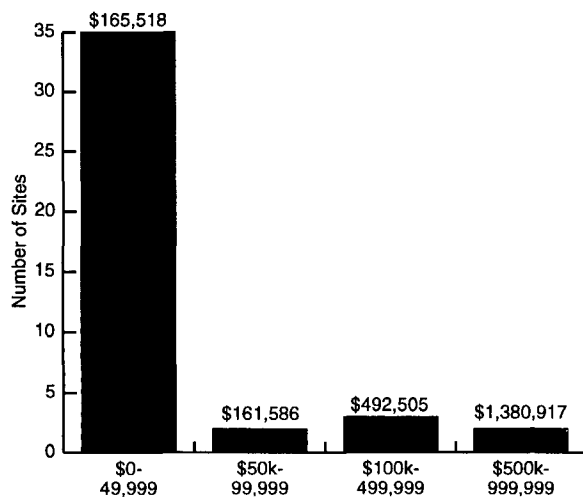
**Primary Funding
44 Sites**



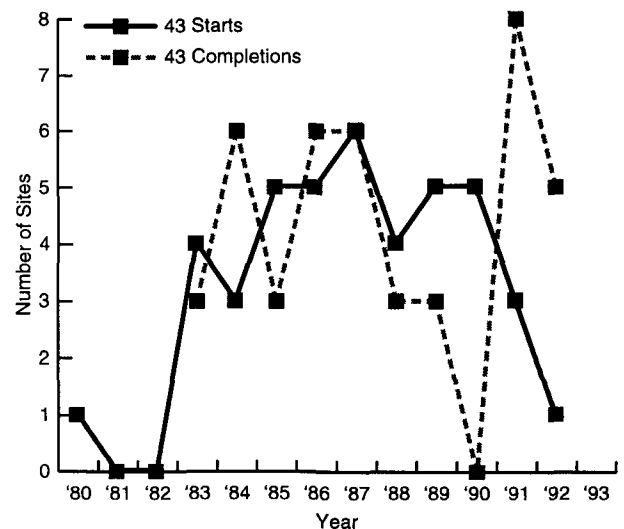
**Predominant Remedies
56 Occurrences**



**State Costs
43 Sites**



Start and Completion Dates



State/Territory—Texas

Texas reported 200 sites; 36 had both **Removal** and **Remedial** actions, 18 had only **Removal** actions, and 125 had only **Remedial** actions. Five of the sites with both **Removal** and **Remedial** actions had the **Removal** actions designated as **Complete** and the **Remedial** actions designated as requiring **No Further Action**. Additionally, one site with only **Removal** actions was designated **Complete**, and 5 of the sites with only **Remedial** actions were construction completions.

The most prevalent **Predominant Remedies** were **Site Security** with 40 occurrences and **On-Site Treatment** with 23 occurrences.

RI/FS was the most prevalent **Last Remedial Phase** for sites with **Remedial** actions that were **Active**. It was reported for 89 sites and **PA/SI** was reported for 56 sites.

Sixteen sites reported cost for a total of \$17,464,000. Thirteen sites had only **State** cost totaling \$9,114,000, and 3 sites had **PRP** cost totaling \$8,350,000. The **Primary Funding** source was **Enforcement** with 67 of the 95 sites that reported a **Primary Funding** source. The **State** as the **Primary Funding** source was reported at 15 sites.

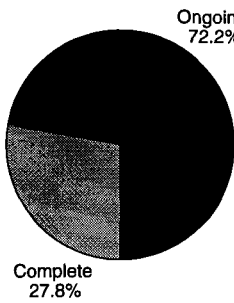
Approximately 1,900 additional sites had been referred to the State by the Federal Government, and these sites were currently under eligibility review. Also, another 20 abandoned industrial disposal sites and 88 State-funded emergency **Removal** actions were **Complete**. None of these approximately 2,008 sites are in the database and subsequent displays.

Data Display (Total Sites = 200)

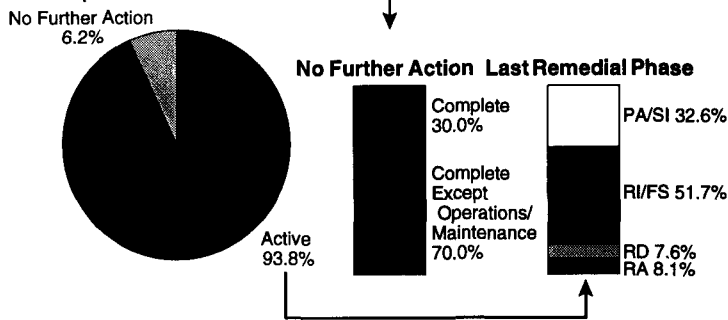
Removal	54	100.00%
Ongoing	39	72.22%
Complete	15	27.78%
Remedial	161	100.00%
Active	151	93.79%
No Further Action	10	6.21%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	7	70.00%
All Remedial Action Complete	3	30.00%
Last Remedial Phase	172	100.00%
PA/SI	56	32.56%
RI/FS	89	51.74%
RD	13	7.56%
RA	14	8.14%
Predominant Remedies	86	100.00%
On-Site Treatment	23	26.74%
On-Site Containment	9	10.47%
Off-Site Containment	12	13.95%
Off-Site Treatment	0	0.00%
Population Protection	2	2.33%
Site Security	40	46.51%
Innovative Technology	0	0.00%
Total Cost	\$17,464,000.00	
State	\$9,114,000.00	
Sites: 13	State Average: \$701,076.92	
PRP	\$8,350,000.00	
Sites: 3	PRP Average: \$2,783,333.33	
Primary Funding	95	100.00%
State	15	15.79%
Federal Government	4	4.21%
Enforcement	67	70.53%
Voluntary/Property Transfer	9	9.47%
Duration of Response Actions	2	100.00%
Less Than 12 Months	2	100.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Texas

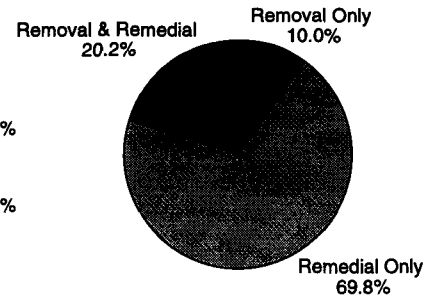
**Removal
54 Sites**



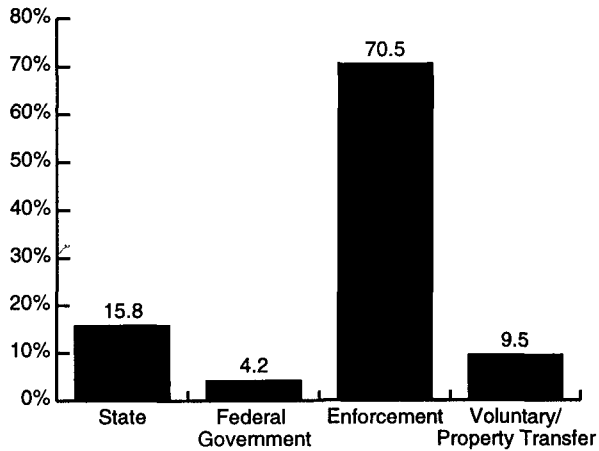
**Remedial
161 Sites**



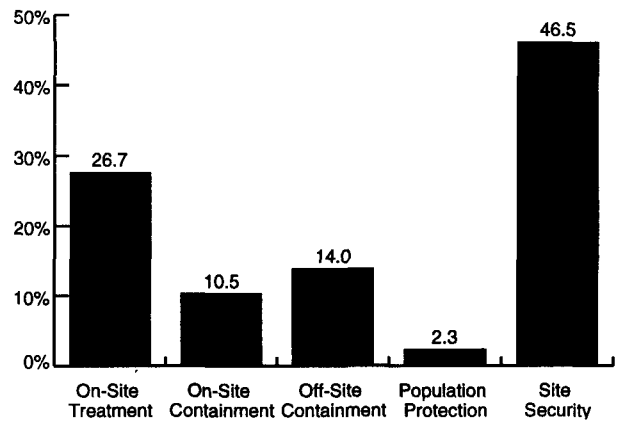
**Removal and Remedial
179 Sites**



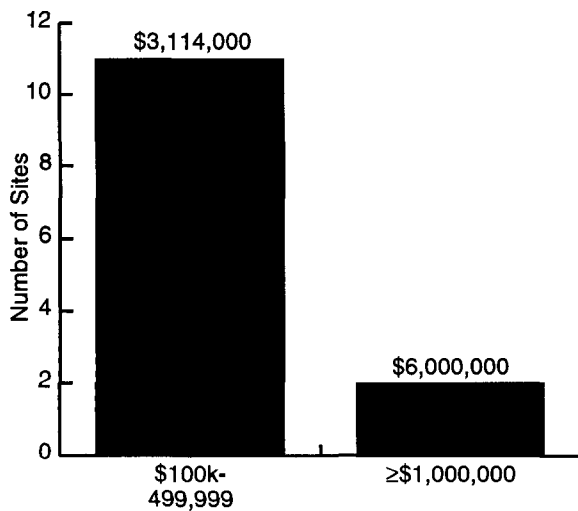
**Primary Funding
95 Sites**



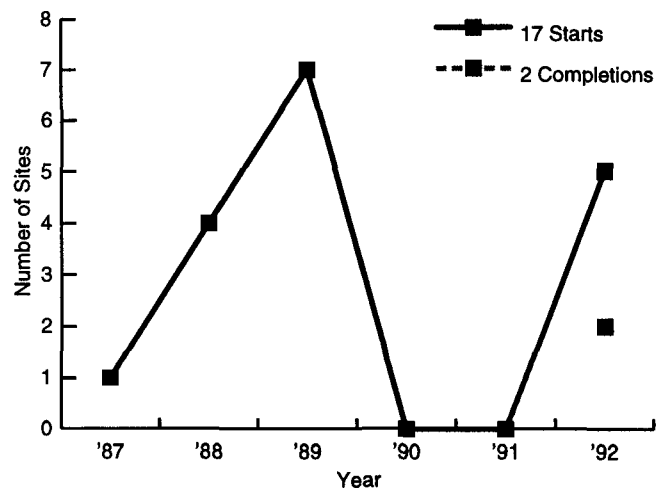
**Predominant Remedies
86 Occurrences**



**State Costs
13 Sites**



Start and Completion Dates



State/Territory—Utah

Utah reported 31 sites. One site had both a **Removal** and **Remedial** actions. Six sites had only **Removal** actions, and 24 had only **Remedial** actions. The 1 site with both **Removal** and **Remedial** actions had the **Removal** actions reported as **Complete** and the **Remedial** action reported as **Active**, with the **Last Remedial Phase** being **PA/SI**. For 5 of the sites with only **Removal** actions, all the actions were designated **Complete**. For 1 site with only **Remedial** actions, the designation was **No Remedial Action Based on PA/SI or RI**.

The most prevalent **Predominant Remedies** were **On-Site Containment** and **Off-Site Containment** with 9 and 6 occurrences, respectively.

The **Total Cost** reported was \$14,130,389, segmented by **State** at \$130,389 and **PRP** at \$14,000,000. The total number of sites with reported cost was 5. One site with only **Removal** actions that were **Complete** had a **PRP** cost of \$12,000,000. One site with both **Removal** and **Remedial** actions had a **State** cost of \$75,845. Three sites with only **Remedial** actions that were **Active** had reported cost as follows: **State** \$7,000 and **PRP** \$2,000,000; **State** \$27,398; and **State** \$20,146.

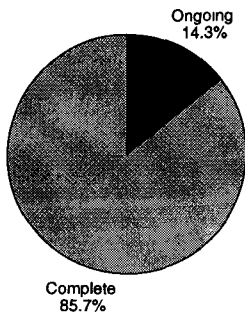
One site was started prior to 1986. The average **Duration of Response Actions** for 10 sites with reported time frames was 13 months and 12 days.

Data Display (Total Sites = 31)

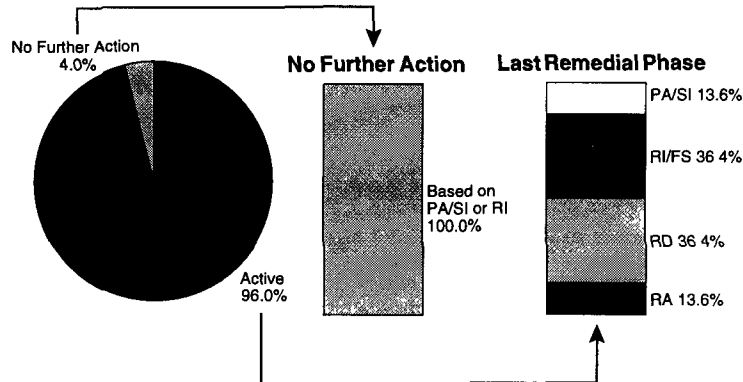
Removal	7	100.00%
Ongoing	1	14.29%
Complete	6	85.71%
Remedial	25	100.00%
Active	24	96.00%
No Further Action	1	4.00%
No Remedial Action Based on PA/SI or RI	1	100.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	0	0.00%
Last Remedial Phase	22	100.00%
PA/SI	3	13.64%
RI/FS	8	36.36%
RD	8	36.36%
RA	3	13.64%
Predominant Remedies	20	100.00%
On-Site Treatment	2	10.00%
On-Site Containment	9	45.00%
Off-Site Containment	6	30.00%
Off-Site Treatment	1	5.00%
Population Protection	0	0.00%
Site Security	2	10.00%
Innovative Technology	0	0.00%
Total Cost	\$14,130,389.00	
State	\$130,389.00	
Sites: 4	State Average: \$32,597.25.00	
PRP	\$14,000,000.00	
Sites: 2	PRP Average: \$7,000,000.00	
Primary Funding	11	100.00%
State	1	9.09%
Federal Government	1	9.09%
Enforcement	3	27.27%
Voluntary/Property Transfer	6	54.55%
Duration of Response Actions	10	100.00%
Less Than 12 Months	5	50.00%
12-23 Months	3	30.00%
24-35 Months	2	20.00%
36-47 Months	0	0.00%
48-59 Months	0	0.00%
60-71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Utah

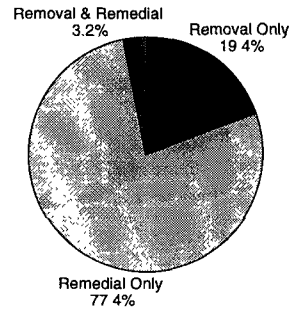
**Removal
7 Sites**



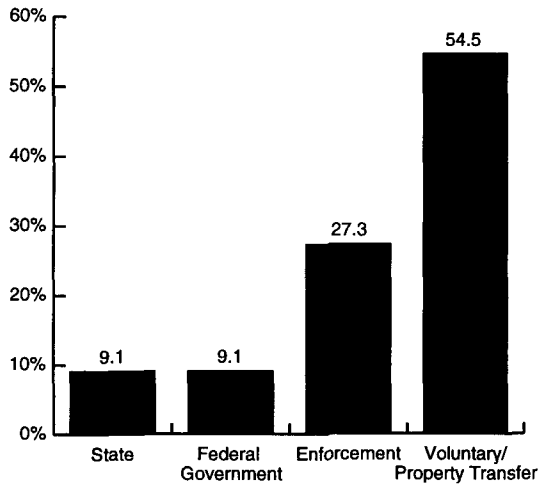
**Remedial
25 Sites**



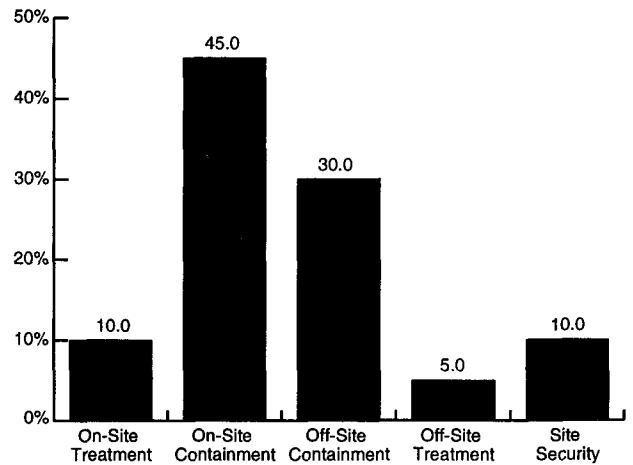
**Removal and Remedial
31 Sites**



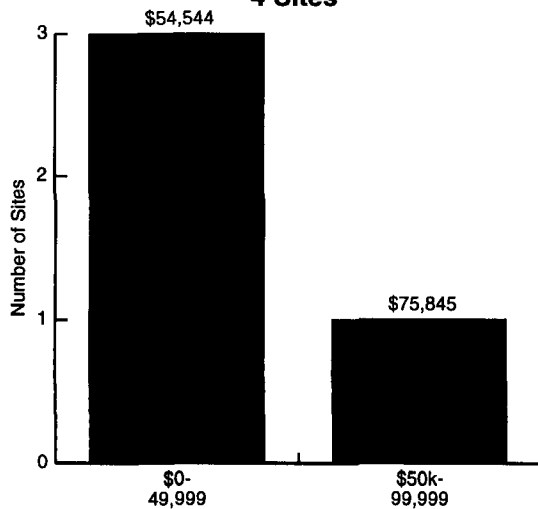
**Primary Funding
11 Sites**



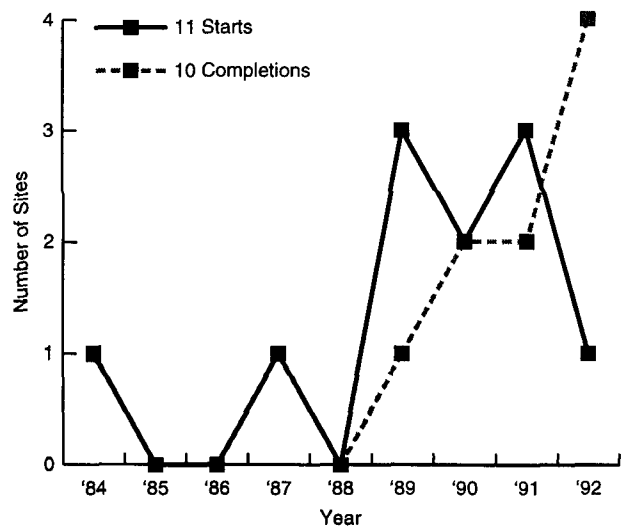
**Predominant Remedies
20 Occurrences**



**State Costs
4 Sites**



Start and Completion Dates



State/Territory—Virginia

Virginia reported 21 sites. Twenty of the sites had only **Ongoing Removal** actions, and 1 site had only **Remedial** actions, which was designated a construction completion.

The site with only **Remedial** actions had **State** cost of \$500,000. One site with only **Removal** actions had **State** cost of \$2,000,000.

All 21 sites were started from 1987 through the end of 1992. The 1 construction completion site was completed within that time window.

Virginia also had sites with **Removal** actions that were **Complete**. However, the data for these sites as well as the detailed data on **Predominant Remedies**, **Primary Funding**, and **Duration of Response Actions** was not available due to the stringent time constraints imposed by the study. Thus, the zero notations represent unavailable data rather than no data.

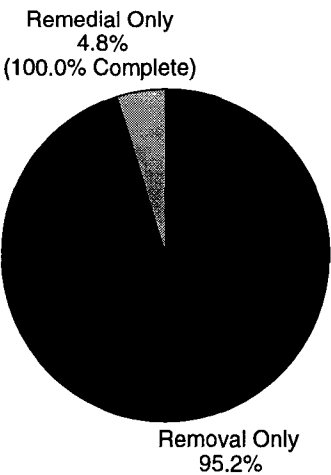
Virginia has a Waste Management Act that was amended in 1993. The act provides regulations for the safe control and management of hazardous waste substances and for the enforcement of noncompliance with the regulations.

Data Display (Total Sites = 21)

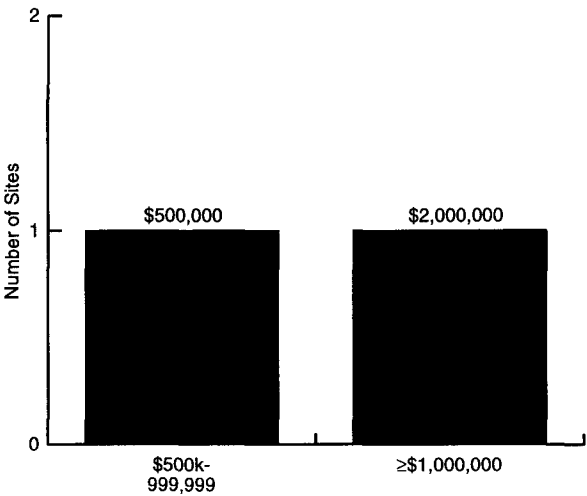
Removal	20	100.00%
Ongoing	20	100.00%
Complete	0	0.00%
Remedial	1	100.00%
Active	0	0.00%
No Further Action	1	100.00%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	1	100.00%
Last Remedial Phase	0	100.00%
PA/SI	0	0.00%
RI/FS	0	0.00%
RD	0	0.00%
RA	0	0.00%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost	\$2,500,000.00	
State	\$2,500,000.00	
Sites: 2	State Average: \$1,250,000.00	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	0	100.00%
State	0	0.00%
Federal Government	0	0.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	0	100.00%
Less Than 12 Months	0	0.00%
12–23 Months	0	0.00%
24–35 Months	0	0.00%
36–47 Months	0	0.00%
48–59 Months	0	0.00%
60–71 Months	0	0.00%
More Than 71 Months	0	0.00%

State/Territory—Virginia

Removal and Remedial 21 Sites



State Costs 2 Sites



State/Territory—Washington

Washington reported 1,220 sites. Forty-one had both **Removal** and **Remedial** actions, 5 had only **Removal** actions, and 340 had only **Remedial** actions. The remaining 834 were defined as “independent” sites undergoing cleanup without State oversight or involvement.

The total number of sites with **Removal** actions was reported as 46, where 19 of these sites had **Removal** actions that were **Complete**. The sites with **Remedial** actions totaled 381, with 210 of these sites having designated the **Remedial** actions as requiring **No Further Action**. Of the 210 **No Further Action** sites, 134 were further designated as construction completions.

The prevalent **Last Remedial Phase** for sites with **Remedial** actions that were **Active** was PA/SI with 291 sites.

The **Predominant Remedy** was **On-Site Containment** with 24 occurrences.

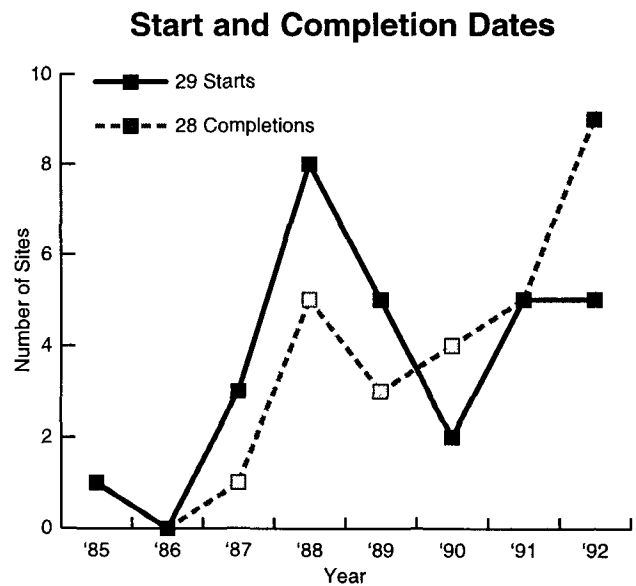
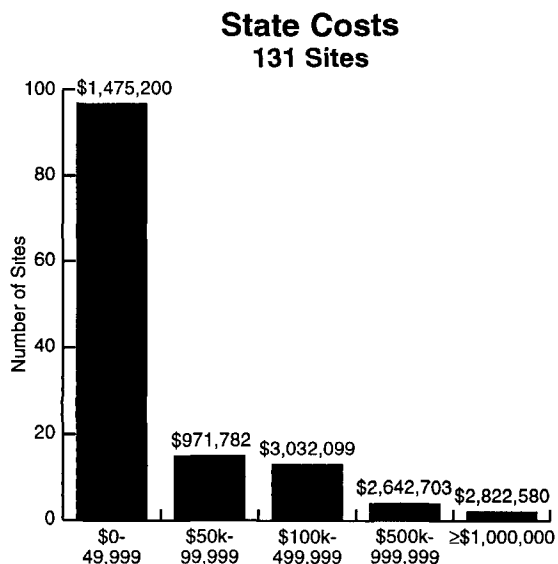
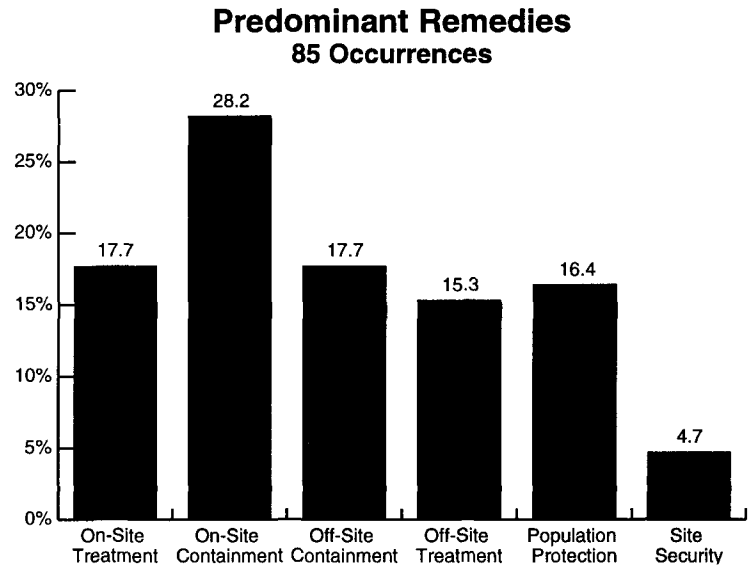
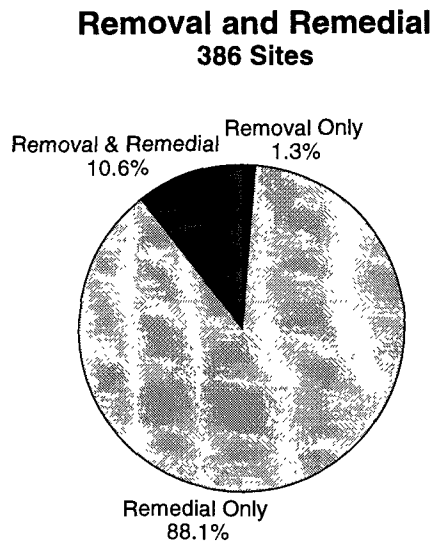
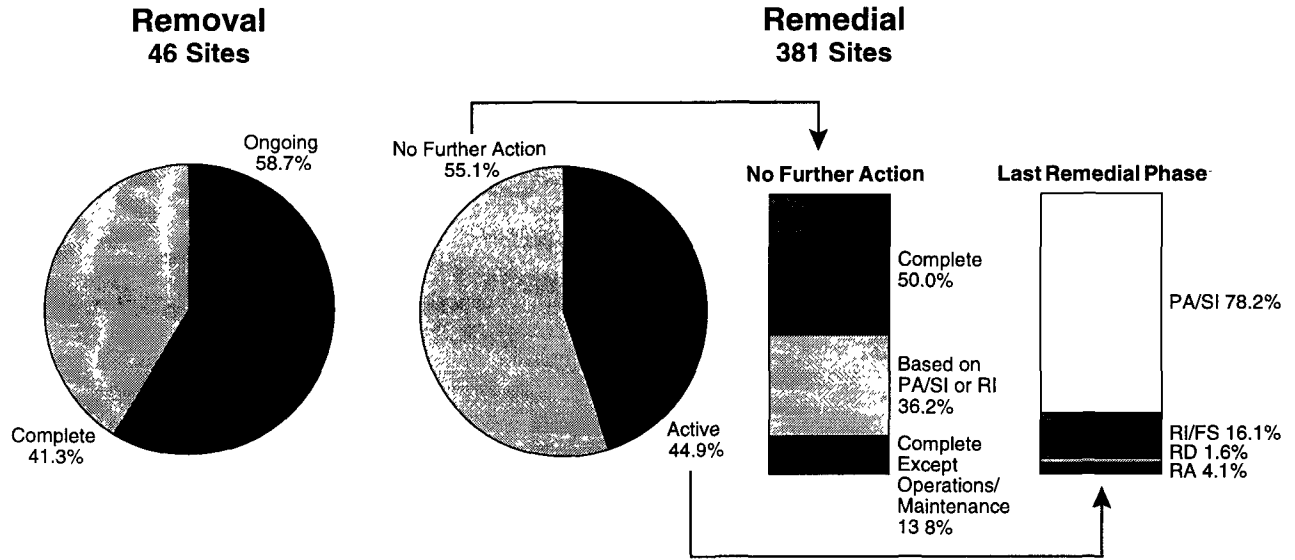
State cost was \$10,944,364 for 131 sites. Ninety-eight of these sites had individual cost of less than \$50,000. The total for the 98 sites was \$1,475,200.

Twenty-eight sites reported start and completion dates. The average **Duration of Response Actions** for these sites was 12 months and 25 days.

Data Display (Total Sites = 1,220)

Removal	46	100.00%
Ongoing	27	58.70%
Complete	19	41.30%
Remedial	381	100.00%
Active	171	44.88%
No Further Action	210	55.12%
No Remedial Action Based on PA/SI or RI	76	36.19%
All Remedial Action Complete Except Operations/Maint.	29	13.81%
All Remedial Action Complete	105	50.00%
Last Remedial Phase	372	100.00%
PA/SI	291	78.23%
RI/FS	60	16.13%
RD	6	1.61%
RA	15	4.03%
Predominant Remedies	85	100.00%
On-Site Treatment	15	17.65%
On-Site Containment	24	28.24%
Off-Site Containment	15	17.65%
Off-Site Treatment	13	15.28%
Population Protection	14	16.47%
Site Security	4	4.71%
Innovative Technology	0	0.00%
Total Cost	\$10,944,364.00	
State	\$10,944,364.00	
Sites: 131	State Average: \$83,544.76	
PRP		\$0.00
Sites: 0	PRP Average: \$0.00	
Primary Funding	0	100.00%
State	0	0.00%
Federal Government	0	0.00%
Enforcement	0	0.00%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	28	100.00%
Less Than 12 Months	18	64.29%
12–23 Months	6	21.43%
24–35 Months	1	3.57%
36–47 Months	1	3.57%
48–59 Months	1	3.57%
60–71 Months	1	3.57%
More Than 71 Months	0	0.00%

State/Territory—Washington



State/Territory—Wisconsin

Wisconsin reported 1,849 sites. Two hundred twenty-two of these sites had only **Removal** actions, and 1,627 had only **Remedial** actions. None of the sites had both **Removal** and **Remedial** actions.

All of the **Removal** actions were **Complete**, and 275 of the sites with only **Remedial** actions were designated construction completions. Of the 1,352 sites with **Remedial** actions that were **Active**, **RI/FS** was the most prevalent **Last Remedial Phase**.

Enforcement was the **Primary Funding** source with 406 sites. However, Wisconsin combines the reporting of **Enforcement** with **Voluntary/Property Transfer** and has stated that the total for this combined group is 1,907. Wisconsin has also stated that the total sites with the **State** as the **Primary Funding** is 42. Detailed site data on these stated figures is not available at this time. Wisconsin is developing a more comprehensive tracking system and provided this information based on an interim tracking system that is unable to provide the detailed data required for this study.

State costs of \$939,021 were reported for 183 sites. One hundred seventy-nine of these sites had a per site cost of less than \$50,000 for a total of \$635,757.

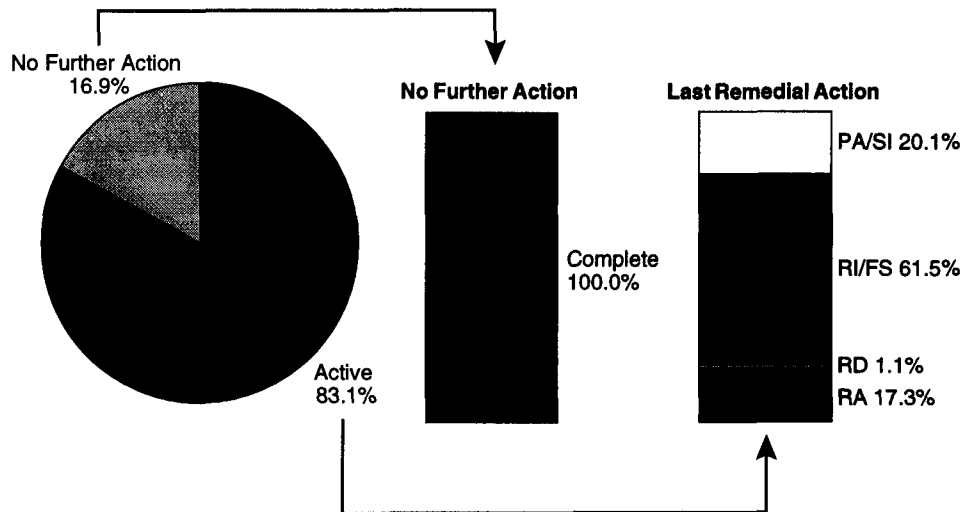
Two sites were started prior to 1980, and 17 sites were started in the years 1980 through 1985. Eleven sites were completed prior to 1986. Eighty sites have a **Duration of Response Actions** of **Less Than 12 Months**. The **Duration of Response Actions** was 15 months and 19 days based on 126 sites reporting start and completion dates.

Data Display (Total Sites = 1,849)

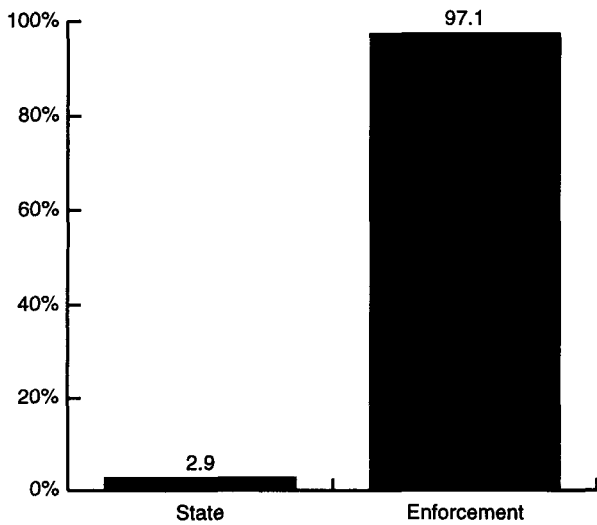
Removal	222	100.00%
Ongoing	0	0.00%
Complete	222	100.00%
Remedial	1,627	100.00%
Active	1,352	83.10%
No Further Action	275	16.90%
No Remedial Action Based on PA/SI or RI	0	0.00%
All Remedial Action Complete Except Operations/Maint.	0	0.00%
All Remedial Action Complete	275	100.00%
Last Remedial Phase	179	100.00%
PA/SI	36	20.11%
RI/FS	110	61.45%
RD	2	1.12%
RA	31	17.32%
Predominant Remedies	0	100.00%
On-Site Treatment	0	0.00%
On-Site Containment	0	0.00%
Off-Site Containment	0	0.00%
Off-Site Treatment	0	0.00%
Population Protection	0	0.00%
Site Security	0	0.00%
Innovative Technology	0	0.00%
Total Cost	\$939,021.00	
State	\$939,021.00	
Sites: 183	State Average: \$5,131.26	
PRP	\$0.00	
Sites: 0	PRP Average: \$0.00	
Primary Funding	418	100.00%
State	12	2.87%
Federal Government	0	0.00%
Enforcement	406	97.13%
Voluntary/Property Transfer	0	0.00%
Duration of Response Actions	126	100.00%
Less Than 12 Months	80	63.49%
12–23 Months	22	17.46%
24–35 Months	12	9.52%
36–47 Months	2	1.59%
48–59 Months	4	3.17%
60–71 Months	0	0.00%
More Than 71 Months	6	4.76%

State/Territory—Wisconsin

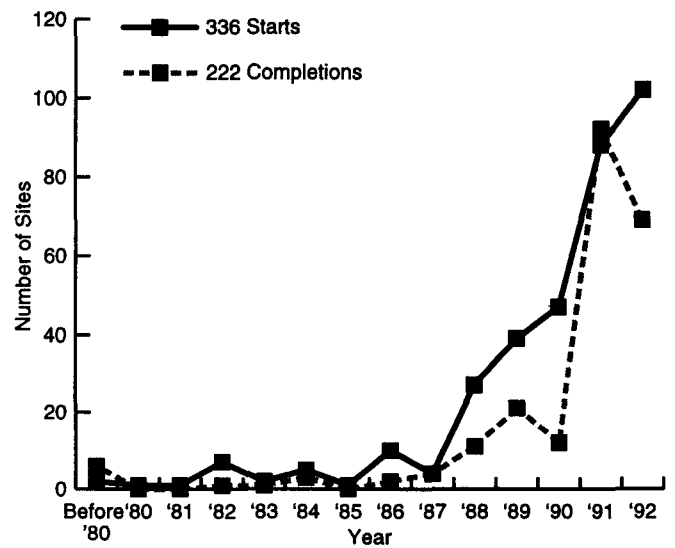
Remedial 1,627 Sites



Primary Funding 418 Sites



Start and Completion Dates



State/Territory

The States and Territories reported a total of 21,905 sites, with 1,017 having neither a **Removal** nor a **Remedial** status. These 1,017 sites represent sites such as those on Indian reservations, which are known but are not under the direct jurisdiction of a State or Territory. Of the remaining 20,888 sites, 8,421 were **Removal** and **Remedial** sites, 1,371 were sites with only **Removal** actions, and 11,096 sites were sites with only **Remedial** actions.

The total number of **Removal** sites was 9,792, with 3,527 completed as of December 31, 1992. The total number of **Remedial** sites was 19,517 with 2,689 construction completion—i.e., the total of **All Remedial Action Complete Except Operations and Maintenance** (260) and **All Remedial Actions Complete** (2,429).

The most prevalent **Last Remedial Phase** was Remedial Investigation or Feasibility Study (**RI/FS**), with 4,834 of the 9,662 **Active Remedial** sites reporting a **Last Remedial Phase**.

The three key **Predominant Remedies** were **Off-Site Containment** with 2,438, **On-Site Containment** with 599, and **On-Site Treatment** with 455.

Total Cost of \$1,205,531,234 was reported for 3,395 sites, with the cost represented by **State** cost of \$650,000,770 for 2,167 of the sites and **PRP** cost of \$555,530,464 for 1,385 of the sites.

A **Primary Funding** source was reported for 11,778 sites, with **Voluntary/Property Transfer** representing 6,448 of them. **Enforcement** was the **Primary Funding** source on a national level with 3,692 sites.

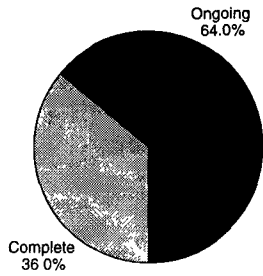
Duration of Response Actions reported for 6,052 sites had an average of 13 months and 15 days.

National Data Summary (Total Sites = 21,905)

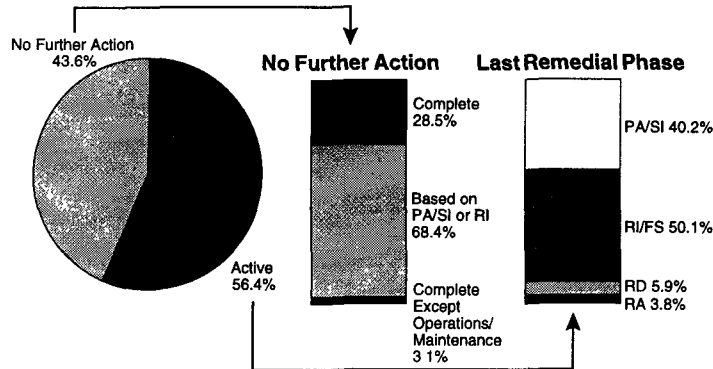
Removal	9,792	100.00%
Ongoing	6,265	63.98%
Complete	3,527	36.02%
Remedial	19,517	100.00%
Active	11,000	56.36%
No Further Action	8,517	43.64%
No Remedial Action Based on PA/SI or RI	5,828	68.43%
All Remedial Action Complete Except Operations/Maint.	260	3.05%
All Remedial Action Complete	2,429	28.52%
Last Remedial Phase	9,662	100.00%
PA/SI	3,887	40.23%
RI/FS	4,834	50.03%
RD	571	5.91%
RA	370	3.83%
Predominant Remedies	4,005	100.00%
On-Site Treatment	455	11.36%
On-Site Containment	599	14.96%
Off-Site Containment	2,438	60.87%
Off-Site Treatment	238	5.94%
Population Protection	67	1.67%
Site Security	197	4.92%
Innovative Technology	11	0.28%
Total Cost	\$1,205,531,234.00	
State	\$650,000,770.00	
Sites: 2,167		
PRP	\$555,530,464.00	
Sites: 1,385		
State Average: \$299,954.21		
State Average: \$401,105.03		
Primary Funding	11,778	100.00%
State	1,273	10.81%
Federal Government	365	3.10%
Enforcement	3,692	31.35%
Voluntary/Property Transfer	6,448	54.74%
Duration of Response Actions	6,052	100.00%
Less Than 12 Months	4,261	70.40%
12-23 Months	858	14.18%
24-35 Months	356	5.88%
36-47 Months	246	4.06%
48-59 Months	125	2.07%
60-71 Months	73	1.21%
More Than 71 Months	133	2.20%

State/Territory

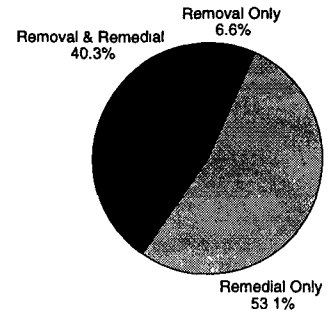
Removal 9,792 Sites



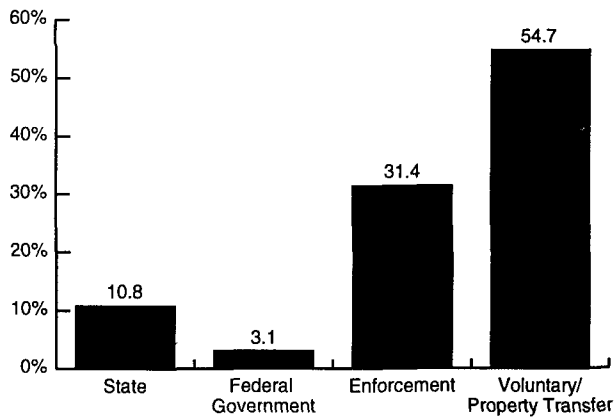
Remedial 19,517 Sites



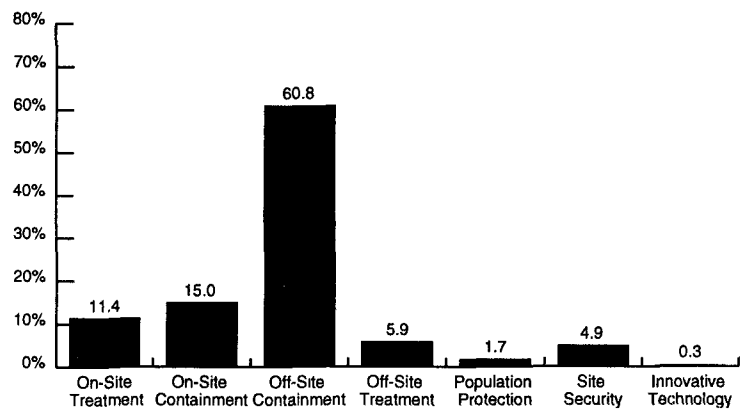
Removal and Remedial 20,888 Sites



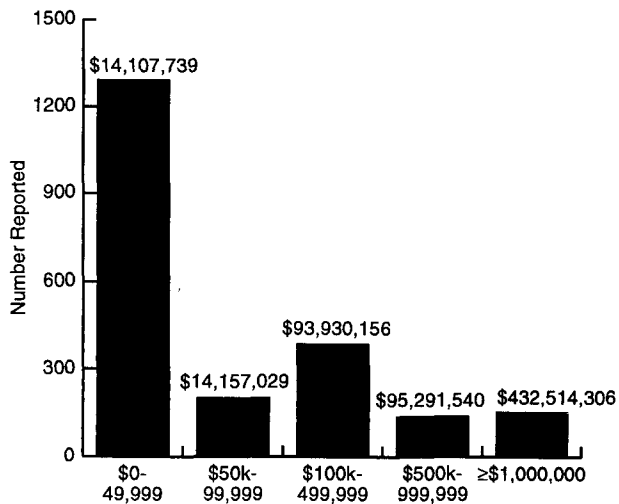
Primary Funding 11,778 Sites



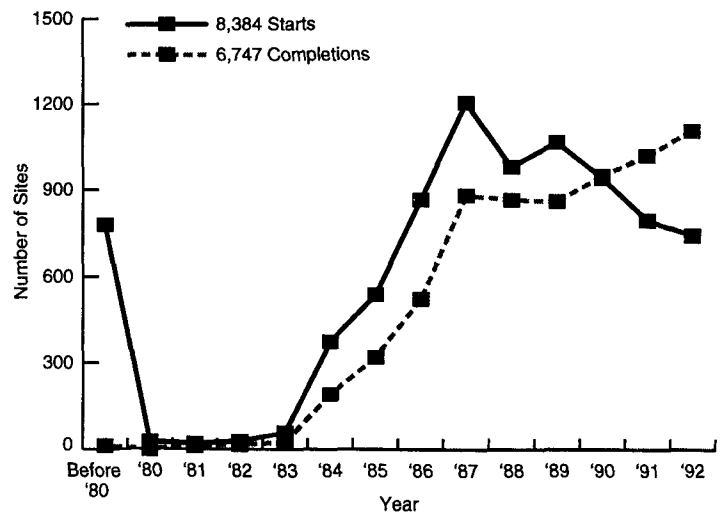
Predominant Remedies 4,005 Reported



State Costs 2,167 Sites



Start and Completion Dates



APPENDIX B

ASTSWMO Data Matrix Form

July 8, 1993

Dear State Superfund Managers:

Attached please find the matrix for the Non-NPL accomplishments study being conducted by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). Per my May 27, 1993 letter, ASTSWMO is conducting this study to more adequately determine the actual scope of State involvement in the cleanup of non-NPL sites. In addition to the useful comparative information for State program use, the results of this study can be used to justify the position that the state role in Superfund should be enhanced. As you may know, there currently are no figures on the actual number of cleanups being performed under State auspices and State capabilities have increased dramatically in the last thirteen years. We think this information will be especially useful during the current CERCLA reauthorization debate.

Therefore, we are asking you to compile information on completed State non-NPL cleanups cumulative from FY 80 (or earliest year your State had a program) through December 31, 1992 along with the status of the State's current non-NPL cleanup workload. The study will include hazardous waste cleanups performed by States directly, under State enforcement authority and under State Voluntary and Property Transfer programs. RCRA Corrective Actions, underground and above ground storage tanks and petroleum spills will be excluded. Directions for completing the matrix have been included.

Timeframe. We are requesting that you complete the matrix and submit it to the ASTSWMO office (attention Kris Hoellen) by Tuesday, August 31, 1993. This is a rather crucial date as we wish to have a completed report by October 1, 1993. We understand that Congress plans to begin hearings on the State role in Superfund early this Fall. EPA plans to submit legislative recommendations to Congress in September/October of this year. Consequently, in order to gain the most benefit and impact from this study, a report will have to be produced by early Fall. The more completed matrixes we receive prior to August 31, the more likelihood we have of seeing a positive Superfund reauthorization.

Contractor assistance. U.S. EPA is procuring a contractor who will be available to assist States in completing the matrix. If your State will require contractor assistance, please notify the ASTSWMO office A.S.A.P. (202)624-5828, as the contractor resources are limited. Requests for assistance will be provided on a first come first served basis. The contractor will begin work on the project in late July/early August. Hence, for those states requiring

assistance, the more work which can be accomplished ahead of time, the greater the chances will be for meeting the August 31, 1993 deadline. The contractor's primary responsibility on this project, however, will be to create a database and to prepare a summary report of the results. NOTE: ASTSWMO does have approval authority of the final report prior to its release.

Data transmittal. In order to have the most accurate data, we strongly recommend that you submit your information via one of the following mechanisms: 1) if your data is already entered into a database, please contact the ASTSWMO office about downloading the data into a format we can read; 2) if you wish to complete your matrix electronically, contact the ASTSWMO office to receive a database program format; or 3) please complete the form by hand as neatly and clearly as possible.

Finally, we appreciate your efforts in ensuring the success of this project. Kris Hoellen of ASTSWMO and I will be available throughout the duration of the project to answer specific questions on the completion of the matrix. This project is probably unprecedented in the amount of teamwork required, as the results will only be beneficial if all the states participate. We thank you for your support. If you have any questions concerning the purpose of the project, please do not hesitate to contact me at 609/292-1250.

Sincerely,

Lance R. Miller

Lance R. Miller, NJ
ASTSWMO Board of Director - Region II

ASTSWMO Survey of the State's Non-NPL Removal and Remedial Accomplishments

I. Site Listings and Status

In an effort to quantify state and territorial clean-up accomplishments, the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is conducting a study to determine the total number of non-NPL sites remediated by states. Additionally, information is being collected on the sites that are in the process of being remediated. We are targeting those state sites completed from 1980, or the earliest year your state had a program, through Calendar Year 1992. The matrix on Page 3 should be used to identify and provide data about each non-NPL site (removal and remedial). Computer data files are strongly encouraged, if available (Please contact us for database structure information). Coding guidance for each of the matrix categories is included to assist you in completing the form. NOTE: the study does not include RCRA, UST and Petroleum contaminated sites. If you have questions about categorizing a particular site, please contact Kris Hoellen at ASTSWMO (202) 624-5828 or Lance Miller at NJDEPE (609) 292-1250 for assistance in completing the matrix.

II. Matrix Coding Guidance

Please use the following guidance to categorize your response to each question:

1. **Sequential site number:** Number your sites sequentially. This will be used in the event that we need to call and clarify information about a specific site.
2. **Site Name/Location/Unique state identifier:** List the name of the site and provide location. An example of location might read street address, city, county, zip code. Include state data base number, if available.
3. **Site status:** Please identify each non-NPL site, using the following categories within the Removal and Remedial columns:

Removal (Choose no more than one)
 - a. Removal is ongoing
 - b. Removal has been completed (Complete columns 5-8)*Remedial* (Choose no more than one)
 - c. Active Sites: Those sites that are in any stage of remediation (Complete column 4)
 - d. No Further Action Sites—no remedial action was needed based on PA/SI or RI (Complete columns 5-8)
 - e. No Further Action Sites—all remedial action has been completed, except Ongoing Operations and Maintenance (Complete columns 5-8)
 - f. No Further Action Sites—all remedial action has been completed (Complete columns 5-8)
4. **Last remedial phase, if ongoing:** If the site is an active remedial site (Item 3c above), circle the appropriate letter that corresponds to the current phase of remediation as follows (Choose no more than one):
 - a. PA/SI: The site assessment phase to characterize the site to determine whether remedial action is needed. PA/SI is complete, but RI has not begun.
 - b. RI/FS: The phase to determine nature and extent of contamination, obtain information needed to evaluate alternatives, and develop options for remedial action. The Remedial Investigation or Feasibility Study is complete, but Remedial Design has not yet started.
 - c. RD: The phases in which the selected remedy is designed. Remedial Design is complete, but Remedial Action has not yet started.
 - d. RA: Remedial Action is completed, but site activities, other than Operations and Maintenance, are ongoing.

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5. **Predominant Remedies, if complete:** Use the list below to identify the major types of remediation used at the site. The eight primary categories are listed, with additional treatments that fall into each category. Please be as specific as possible (i.e., use a1, c5). List only those most significant to the site (Choose no more than six).

- | | | |
|---|--|--|
| <p>a. <i>On-Site Treatment includes:</i></p> <p>Source</p> <p>a1. Soil aeration technologies</p> <p>a2. Biodegradation</p> <p>a3. Detonation</p> <p>a4. Incineration with on-site disposal of residual</p> <p>a5. Incineration with off-site disposal of residual</p> <p>a6. pH neutralization</p> <p>a7. Component separation</p> <p>a8. Thermal treatment with on-site placement of residual</p> <p>a9. Thermal treatment with off-site disposal</p> <p>a10. Removal to off-site locations after on-site treatment</p> <p>Groundwater</p> <p>a11. Air stripping technologies</p> <p>a12. Leachate treatment</p> <p>a13. Pump and treat, on-site disposal</p> <p>a14. Pump and treatment, off-site discharge</p> | <p>b. <i>On-Site Containment includes:</i></p> <p>b1. Surface capping</p> <p>b2. Surface capping with slurry wall</p> <p>b3. Soil cover</p> <p>b4. Excavation and on-site containment</p> <p>b5. Encapsulation or overpacking with final on-site disposal</p> <p>b6. Surface drainage control</p> <p>b7. Solidification and stabilization</p> <p>b8. Slurry wall</p> <p>c. <i>Off-Site Containment includes:</i></p> <p>c1. Excavation and final removal to off-site landfill</p> <p>c2. Encapsulation or overpacking with final off-site disposal</p> <p>c3. Final removal to off-site landfill</p> | <p>d. <i>Off-Site Treatment includes:</i></p> <p>d1. Incineration and Disposal</p> <p>d2. Pump and treat at POTW with discharge</p> <p>d3. pH neutralization - off-site</p> <p>d4. Removal for off-site treatment</p> <p>d5. Thermal treatment with disposal of residuals</p> <p>e. <i>Population Protection includes:</i></p> <p>e1. Alternate Water Supplied (permanent or temporary water provided or water supply reinstated)</p> <p>e2. Population Relocated (permanent or temporary relocation or population returned)</p> <p>f. <i>Site Security includes:</i></p> <p>f1. Fence</p> <p>f2. Guards</p> <p>f3. Deed restrictions</p> <p>g. <i>Innovative technology</i></p> |
|---|--|--|

6. **Total costs (non-federal):** Provide total expended dollars to clean up the site. Include study, construction and O&M costs. Provide only known state or PRP costs; do not include federal funds. Specify "Not Known" if funds were spent but amounts are not known.

7. **Primary Funding source:** Circle the letter corresponding to the appropriate primary funding source, defined as follows (Choose only one):

- a. Financed by State funds
- b. Financed by Federal Government (e.g., removals)
- c. Enforcement: Funding provided by a PRP or other private source under an enforceable document and not part of a voluntary cleanup program
- d. Voluntary: Classify as defined by your state
- e. Property Transfer: Those cases in which the parties involved in selling and buying property agree to finance the cleanup, prior to transferring the property

8. **Dates and Duration:** If a Remedial Action was completed at the site, provide the date (mm/dd/yy) in which you started the RI, the date on which the construction was completed, and the resulting total duration of the project in months. If only a Removal action was completed, provide the start and completion dates for the removal. If both a Remedial Action and Removal Action were completed at the site, provide only the Remedial Action dates. If you do not know the exact start and complete dates, estimate the time it took to complete the removal or remediation.

Note: Please send a copy of your state's most recent annual report and environmental laws, if available.

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III. Site Listing and Status Matrix

Please write your response to each question in the space provided. For questions three, four and seven, circle the appropriate letter.

1. Sequential site number	2. Site name/Location/Unique state identifier	3. Site status		4. Last Remedial phase, if ongoing	5. Predominant remedies, if complete	6. Total costs (non-Fed'l.) State	7. Primary Funding source	8. Dates (mm/dd/yy) & Duration (in months)	
		Removal	Remedial					Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete
		a b	c d e f	a b c d			a b c d e	Start	Complete

Form completed by _____

Phone _____