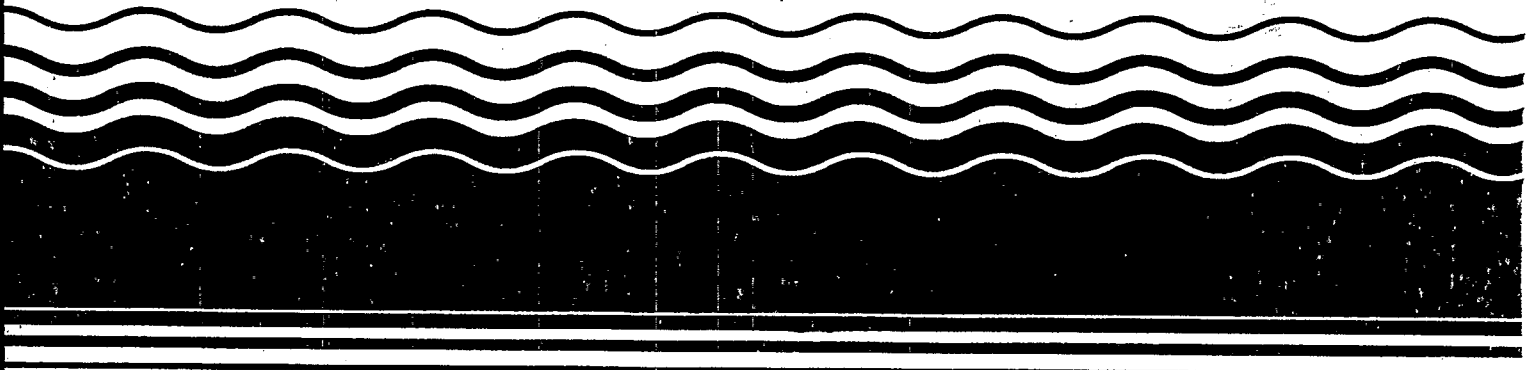

Superfund

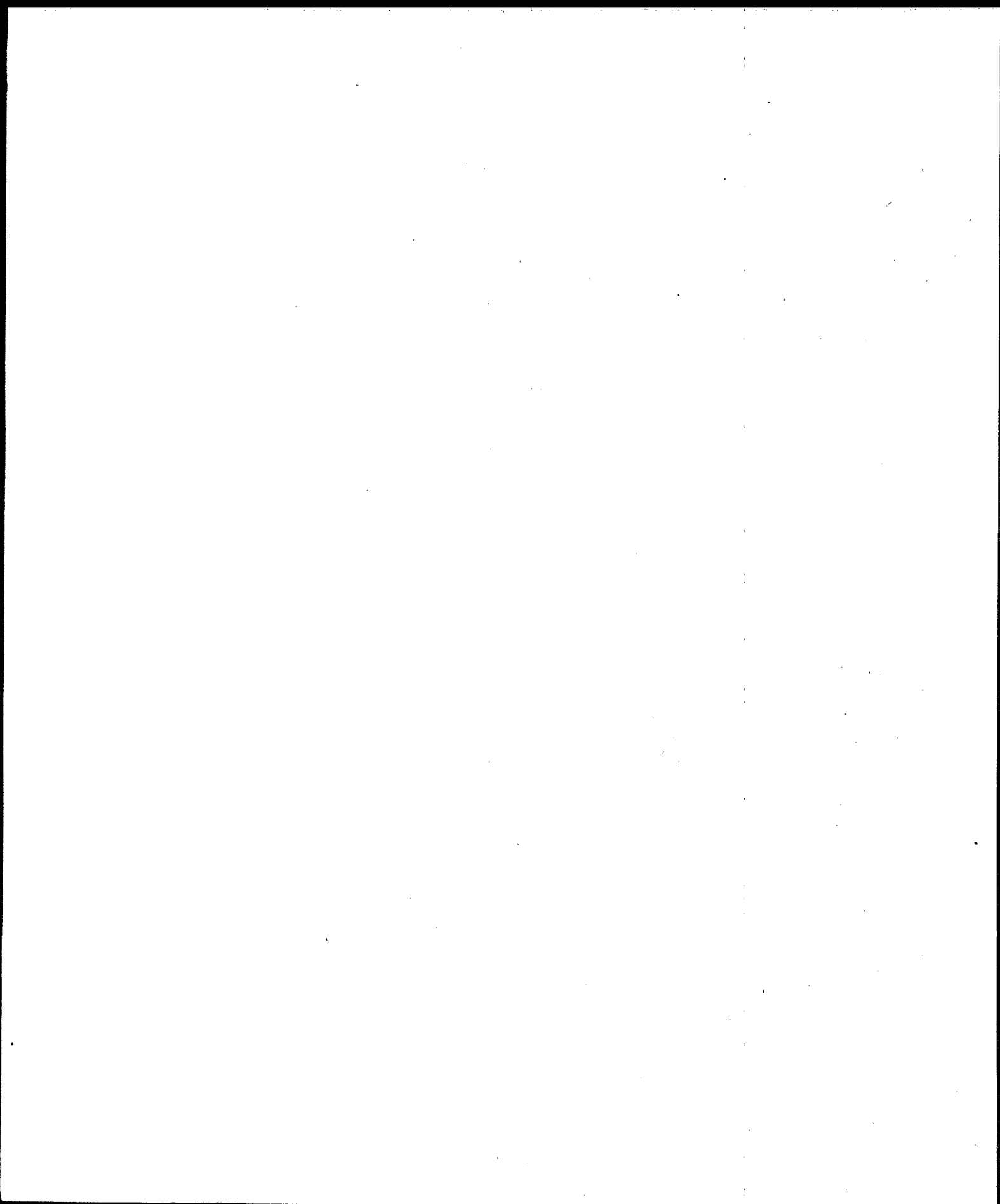


Progress Toward Implementing Superfund

Fiscal Year 1996

Report to Congress





Progress Toward Implementing **SUPERFUND**

Fiscal Year 1996

REPORT TO CONGRESS

Required by
Section 301(h) of the
Comprehensive Environmental Response,
Compensation and Liability Act (CERCLA) of 1980,
as amended by the Superfund Amendments and
Reauthorization Act (SARA) of 1986

OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY

Notice

This Report to Congress has been subjected to the U.S. Environmental Protection Agency's (EPA's) review process and approved for publication as an EPA document. For further information about this Report, contact the Office of Planning Analysis and Resource Management, Office of Emergency and Remedial Response at (703) 603-8770. Individual copies of the Report can be obtained from the U.S. Department of Commerce, National Technical Information Service (NTIS) by writing to NTIS, 5285 Port Royal Road, Springfield, VA 22161, or calling (703) 605-6000.

Foreword

The U.S. Environmental Protection Agency (EPA) continued its progress in protecting public health, welfare, and the environment through the Superfund program in fiscal year 1996 (FY96). As the Superfund program completed its sixteenth year, the Agency had begun work at over 97 percent of the 1,387 sites on the National Priorities List (NPL), and completed construction on 410 of them. EPA is pleased to submit this Report documenting the fiscal year's achievements. Through administrative improvements implemented during the year, the Agency continued its efforts to accelerate the pace of cleanup, enhance the fairness of the Superfund program, reduce transaction costs, and expand public involvement. In addition, during FY96, the Office of Emergency and Remedial Response (OERR) reorganized from a hierarchical, four division structure to a flatter organization of 14 centers. The purpose of the reorganization was to accelerate site cleanup, promote teamwork, empower states, and provide better customer service.

Section 301(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), as amended by the Superfund Amendments and Reauthorization Act of 1986, requires the Agency to report annually on response activities and accomplishments and to compare remedial and enforcement activities with those undertaken in previous fiscal years. During the fiscal year, the Agency or potentially responsible parties (PRPs) started approximately 36 remedial investigation/feasibility studies, 74 remedial designs (RDs), and 116 remedial actions (RAs). PRPs began 73 percent of the RDs and 71 percent of the RAs. Continuing its successful efforts to compel PRPs to undertake cleanup, EPA entered into enforcement agreements worth almost \$1.0 billion in settlements and response work. The Agency and PRPs have also now undertaken more than 4,238 removal actions, including approximately 267 during FY96. Federal facility accomplishments have shown dramatic increases. EPA also continued to encourage public involvement in the Superfund process, to enhance partnerships with states and Indian tribes, and to encourage the use and development of treatment technologies. These three aspects of the program were highlighted in the Agency's administrative improvement initiative.

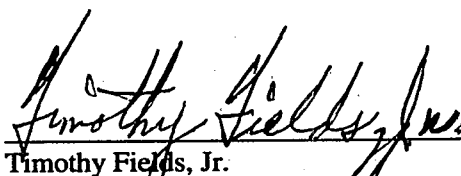
In addition to providing an overall perspective on progress in the past fiscal year, this Report contains the information Congress specifically requested in Section 301(h) of CERCLA, including a report on the status of remedial actions and enforcement activity in progress at the end of the fiscal year and an evaluation of newly developed feasible and achievable treatment technologies. The Report also includes a description of current minority firm participation in Superfund contracts and EPA's efforts to encourage increased participation, as required by Section 105(f). The Report fulfills the requirement of Section 301(h)(1)(E) by providing an update on progress being made at sites subject to review under Section 121(c). This Report also satisfies certain reporting requirements of CERCLA Section 120(e)(5), the *EPA Annual Report to Congress: Progress Toward*

Foreword (continued)

Implementing CERCLA at EPA Facilities as Required by CERCLA Section 120(e)(5). The EPA Inspector General's report on the reasonableness and accuracy of the information in this Report, as required by CERCLA Section 301(h)(2), is included as Appendix D.



Carol M. Browner
Administrator



Timothy Fields, Jr.
Acting Assistant Administrator for
Solid Waste and Emergency Response

Acknowledgments

The U.S. Environmental Protection Agency appreciates the contributions made by staff members throughout the Agency's management and program offices, as well as other federal agencies and departments. Within the Office of Solid Waste and Emergency Response, which manages the Superfund program, contributors included: Sharon Hallinan (project manager), Karl Alvarez, Erin Conley, Roger Hoogerheide, David Reynolds, Robin Richardson, Stuart Walker and Ed Ziomkoski from the Office of Planning Analysis and Resource Management; Jackie Tenusak from OSWER; Elaine Davies and John Smith from the OERR Immediate Office; Carol Bass and Art Johnson from the Region 1/9 Center; Carolyn Kenmore from the Region 4/10 Center; Lois Gartner from the Community Involvement and Outreach Center; Randy Hippen of the State Tribal and Site Identification Center; Joseph Laforanara and Bruce Potoka from the Environmental Response Center; and Lisa Tychsen and Renee Wynn from the Federal Facilities Restoration and Reuse Office.

Additional key contributions from other Environmental Protection Agency offices were provided by: Lance Elson from the Office of Enforcement and Compliance Assurance's (OECA's) Federal Facilities Enforcement Office; Scott Blair from OECA's Office of Site Remediation; Linda Fiedler, from the Technology Innovation Office; and Becky Neer, from the Office of Small and Disadvantaged Business Utilization.

This page intentionally left blank

Contents

Notice	ii
Foreword	iii
Acknowledgments	v
Acronyms	xi
Executive Summary	xv
Chapter 1: Site Evaluation Progress	1
1.1 Site Evaluation Process	1
1.2 Fiscal Year 1996 Progress	2
1.2.1 CERCLIS Site Additions: Discoveries and Removals	2
1.2.2 Preliminary Assessments Completed	2
1.2.3 Site Inspections Completed	3
1.2.4 Site Inspection Prioritization	3
1.3 National Priorities List	3
1.3.1 National Priorities List Update	4
1.3.2 Relationship Between CERCLIS and NPL Update	4
1.4 Site Evaluation Support Activities	5
1.4.1 Brownfields Initiative	5
1.4.2 Lead Program Process	6
1.4.3 Radiation Program Progress	7
1.4.4 Site Evaluation Regulations and Guidance	9
Chapter 2: Emergency Response Progress	11
2.1 Removal Action Process	11
2.2 Fiscal Year 1996 Progress	13
2.2.1 Status Report on Removal Progress	13
2.3 Environmental Response Team Activities	14
2.4 Emergency Response Regulations and Guidance	14
2.4.1 Reportable Quantity Regulations	14
2.4.2 Reportable Quantity Exemptions	14
2.4.3 Removal Guidance	15
Chapter 3: Remedial Progress	17
3.1 Remedial Process	17
3.2 Fiscal Year 1996 Remedial Progress	18
3.2.1 Construction Completions	18
3.2.2 New Remedial Activities	18
3.2.3 Status of Remedial and Enforcement Activities in Progress	19
3.2.4 Remedy Selection	20
3.3 Remedy Improvement Programs	21
3.3.1 Superfund Innovative Technology Evaluation (SITE) Program	21

Contents (continued)

3.3.2	Superfund Technical Assistance Programs	21
3.3.3	Technology Transfer and Interagency Coordination Programs	22
3.4.	Report on Facilities Subject to Review Under CERCLA Section 121(c)	25
Chapter 4: Enforcement Progress		29
4.1	The Enforcement Process	29
4.2	Fiscal Year 1996 Superfund Enforcement Progress	30
4.2.1	Settlements for Response Activities	31
4.2.2	PRP Participation in Cleanup Activities	31
4.2.3	Cost Recovery Achievements	31
4.3	Enforcement Initiatives	32
4.3.1	Continued Use of Alternative Dispute Resolution	33
4.3.2	Revised "De Micromis" Guidance	34
4.3.3	Equitable Issuance of Unilateral Administrative Orders	35
4.3.4	Orphan Share Compensation	35
4.3.5	Prospective Purchaser Agreements	36
4.3.6	Reducing Federal Oversight at Sites with Cooperative and Capable Parties	37
4.3.7	Site Specific Special Accounts	37
Chapter 5: Federal Facility Cleanups		43
5.1	The Federal Facilities Program	43
5.1.1	Federal Facility Responsibilities Under CERCLA	43
5.1.2	EPA's Oversight Role	43
5.1.3	The Roles of States and Indian Tribes	44
5.2	Fiscal Year 1996 Progress	44
5.2.1	Status of Facilities on the Federal Agency Hazardous Waste Compliance Docket	44
5.2.2	Status of Federal Facilities on the NPL	45
5.2.3	Interagency Agreements Under CERCLA Section 120	45
5.3	Federal Facility Initiatives	45
5.3.1	Military Base Closure	46
5.3.2	National Risk-Based Priority Setting	46
5.3.3	Interagency Forums	46
5.4	CERCLA Implementation at EPA Facilities	47
5.4.1	Requirements of CERCLA Section 120(e)(5)	47
5.4.2	Progress in Cleaning Up EPA Facilities Subject to Section 120 of CERCLA	48
Chapter 6: Resource Estimates		53
6.1	Source and Application of Resources	54
6.1.1	Estimating the Scope of Cleanup	54

Contents (continued)

6.1.2	PRP Contributions to the Cleanup Effort	54
6.2	Resource Model Assumptions	55
6.2.1	Active NPL Sites	56
6.2.2	Sites Yet to Begin the Remedial Process	56
6.2.3	Non-Site Costs	56
6.3	Estimate Resources to Complete Cleanup	57
6.4	Estimated Resources for Other Executive Branch Departments and Agencies	57
Chapter 7: Superfund Program Support Activities		59
7.1	Overview of Program Support Activities	59
7.1.1	Community Involvement	59
7.1.2	Public Information	61
7.1.3	EPA's Partnership with States and Indian Tribes	63
7.2	Minority Firm Contracting	66
7.2.1	Minority Firm Contracting During Fiscal Year 1996	66
7.2.2	Efforts to Identify Qualified Minority Firms	66
7.2.3	Efforts to Encourage Other Federal Agencies and Departments to Use Minority Firms	67
Appendices		
Appendix A:	Status of Remedial Investigations, Feasibility Studies, and Remedial Actions at Sites on the National Priorities List in Progress on September 30, 1996	A-1
Appendix B:	Remedial Designs in Progress on September 30, 1996	B-1
Appendix C:	List of Records of Decision	C-1
Appendix D:	Report of the Inspector General	D-1
Appendix E:	Summary of the Superfund Program [1995-1997]	E-1
Exhibits		
Exhibit ES-1	Summary of Fiscal Year 1996 Superfund Activities	xvi
Exhibit ES-2	Summary of Program Activity by Fiscal Year	xvii
Exhibit ES-3	Statutory Requirements for the Report	xx
Exhibit ES-4	Fiscal Year 1996 Superfund Program Initiatives	xxiii
Exhibit 1.3-1	Final NPL Sites for Fiscal Year 1987 Through Fiscal Year 1996	4
Exhibit 2.2-1	Cumulative Removal Action Starts	12
Exhibit 2.2-2	Cumulative Removal Action Completions	13
Exhibit 3.2-1	Work Has Occurred at Over 97 Percent of the National Priorities List Sites	18

Contents (continued)

Exhibit 3.2-2	Remedial Accomplishments Under the Superfund Program for Fiscal Year 1980 Through Fiscal Year 1996	19
Exhibit 3.2-3	Project in Progress at National Priorities List Sites by Lead for Fiscal Year 1995 and Fiscal Year 1995	20
Exhibit 3.3-1	FY96 Site Program Accomplishments	21
Exhibit 3.4-1	Sites at Which Five-Year Reviews, Required Under CERCLA Section 121(c), Were Conducted During Fiscal Year 1996	27
Exhibit 4.2-1	Cumulative Value of Response Settlements Reached with Potentially Responsible Parties	30
Exhibit 4.2-2	Percentage of Remedial Designs and Remedial Actions Started by PRPs	31
Exhibit 4.2-3	Cumulative Value of Cost Recovery Dollars Collected and Settlements	32
Exhibit 4.3-1	Highlights of Successful Enforcement Accomplishments	38
Exhibit 5.4-1	Status of EPA Facilities on the Federal Agency Hazardous Waste Compliance Docket	49
Exhibit 6.1-1	EPA Superfund Obligations	55
Exhibit 6.3-1	Estimate of Total Trust Liability to Complete Cleanup at Sites on the National Priorities List	57
Exhibit 6.4-1	List of Departments and Agencies Receiving Trust Fund Monies	58
Exhibit 7.1-1	Number of Technical Assistance Grants Awarded from Fiscal Year 1988 Through Fiscal Year 1996	62
Exhibit 7.2-1	Minority Contract Utilization During Fiscal Year 1996	66
Exhibit 7.2-2	Services Provided by Minority Contractors	67

Acronyms

ABA	American Bar Association
ADR	Alternative Dispute Resolution
AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
BCT	BRAC Cleanup Team
BAC	Bioremediation Action Committee
BRAC	Base Realignment And Closure Act
CA	Cooperative Agreement
CAG	Community Advisory Group
CD	Consent Decree
CERCLA	Comprehensive Environmental Response Cleanup and Liability Act
CERCLIS	CERCLA Information System
CLU-IN	Cleanup Information
CPCA	Core Program Cooperative Agreement
CPR	Center for Public Resources
CSCT	Consortium for Site Characterization Technologies
DERTF	Defense Environmental Restoration Task Force
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ERT	Environmental Response Team
FFA	Federal Facilities Agreement
FFEO	Federal Facilities Enforcement Office
FFERDC	Federal Facilities Environmental Restoration Dialogue Committee
FFRRO	Federal Facilities Restoration and Reuse Office
FUDS	Formerly Use Defense Sites
GET	Genesis Environmental Team
GWRTAC	Ground-Water Remediation Technologies Analysis Center
HEAST	Health Effects Assessment Summary Tables
HRS	Hazard Ranking System
HSRC	Hazardous Substance Research Center
IAG	Interagency Agreement
INSS	Information Network for Superfund Settlements
ISCORS	Interagency Steering Committee on Radiation Standards
LSW	Lead Sites Workgroup
MARLAP	Multi-Agency Radiation Laboratory Protocols Manual
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MBE	Minority Business Enterprise
MCL	Maximum Containment Level
MOU	Memorandum of Understanding

Acronyms (continued)

NAMC	National Association of Minority Contractors
NAREL	National Air and Radiation Environmental Laboratory
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFRAP	No Further Remedial Action Planned
NIEHS	National Institute of Environmental Health Services
NOAA	National Atmospheric Administration
NOID	Notice of Intent to Delete
NORM	Naturally Occurring Radioactive Materials
NPL	National Priorities List
NPR	National Performance Review
NRC	National Response Center
NRMRL	National Risk Management Research Laboratory
NTCR	Non-Time-Critical Removal Action
NTIS	National Technical Information Service
OECA	Office of Enforcement and Compliance Assurance
OERR	Office of Emergency and Remedial Response
OLM	Outyear Liability Model
O&M	Operation and Maintenance
OMB	Office of Management and Budget
ORD	Office of Research and Development
ORIA	Office of Radiation and Indoor Air
OSC	On-Scene Coordinator
OSDBU	Office of Small and Disadvantaged Business Utilization
OSRE	Office of Site Remediation Enforcement
OSWER	Office of Solid Waste and Emergency Response
PA	Preliminary Assessment
PPA	Prospective Purchaser Agreement
PRP	Potentially Responsible Party
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RERAM	Radiation Exposure and Risk Assessment Manual
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RQ	Reportable Quantity
RTDF	Remedial Technologies Development Forum
SACA	Support Agency Cooperative Agreement
SACM	Superfund Accelerated Cleanup Model
SARA	1986 Superfund Amendments and Reauthorization Act
SEDSS	Sandia Environmental Decision Support System

Acronyms (continued)

SI	Site Inspection
SIP	Site Inspection Prioritization
SITE	Superfund Innovative Technology Evaluation
SPIDR	Society of Professionals in Dispute Resolution
SRP	Superfund Removal Procedures
SSC	Superfund State Contract
START	Superfund Technical Assistance Response Team
TAG	Technical Assistance Grant
TIO	Technology Innovation Office
TOSC	Technical Outreach Services for Communities
TSC	Technical Support Center
UAO	Unilateral Administrative Order
VISITT	Vendor Information System for Innovative Treatment Technologies

This page intentionally left blank

Executive Summary

As the Superfund program entered its sixteenth year in December 1995, the U.S. Environmental Protection Agency (EPA or "the Agency") continued to fulfill the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) for protecting public health, welfare, and the environment. CERCLA requires that EPA update Congress each year on progress in the Superfund program. This Report fulfills the requirement.

EPA is committed to accelerating the pace of hazardous waste site cleanup. As part of this commitment, the Agency completed construction activities to place 64 National Priorities List (NPL) sites in the construction completion category during fiscal year 1996 (FY96). By the end of the fiscal year, work had occurred at more than 97 percent of the 1,387 sites proposed to, listed on, or deleted from the NPL, including a total of 410 sites that have achieved construction completion. Reflecting the Agency's increasing emphasis on completing site cleanups, nearly 50 percent of the construction completions have been achieved in the past three years.

The Agency also continued its successful efforts to encourage potentially responsible parties (PRPs) to undertake and finance cleanup efforts at Superfund sites. PRPs were leading more than 73 percent of remedial designs (RDs) and 71 percent of remedial actions (RAs) started during the fiscal year. Since the inception of the Superfund program, EPA has reached agreements worth almost \$12.0 billion for PRP response work at Superfund sites, including almost \$1.0 billion achieved this year.

This Report summarizes Superfund FY96 progress, highlighting accomplishments and initiatives to improve the program. Exhibit ES-1 presents a summary of FY96 accomplishments. Exhibit ES-2 provides a comparison of FY96 accomplishments with those of previous years and presents cumulative program accomplishments. FY96 accomplishments reflect the Agency's commitment to, and focus of resources on, activities required to complete site cleanups.

Site Evaluation Progress

EPA continued its progress in identifying and assessing newly discovered sites. At the end of FY96, there were 39,600 sites identified in the CERCLA Information System, the Superfund inventory of potentially hazardous waste sites. EPA had evaluated more than 95 percent of these sites for potential threats. The assessment activities included 37,694 preliminary assessments and 17,943 site inspections. Based on these evaluations, EPA has determined that 1,387 of the sites should be proposed to, listed on, or deleted from the NPL. This leaves a total of 1,211 remaining on the NPL for FY96. These sites include 27 proposed to, 18 listed on, and 34 deleted from the NPL during FY96. To date, a total of 118 sites have been deleted from the NPL.

To enhance site evaluation efforts, the Agency proceeded with ongoing efforts to address technical complexities associated with lead and radionuclide contamination, which could pose special hazards and problems.

Exhibit ES-1
Summary of Fiscal Year 1996 Superfund Activities

Remedial Activities		
Percentage of National Priorities List Sites Where Work Has Begun		97%
Sites Classified as Construction Completions as of September 30, 1996		410
Sites with Remedial Activities in Progress on September 30, 1996		845
Records of Decision Signed ¹		156
Remedial Investigation/Feasibility Study Starts ²		36
<i>Fund-Financed</i>		72%
<i>Potentially Responsible Party-Financed</i>		28%
Remedial Investigation/Feasibility Studies in Progress on September 30, 1996		802
Remedial Design Starts ²		74
<i>Fund-Financed</i>		27%
<i>Potentially Responsible Party-Financed</i>		73%
Remedial Designs in Progress on September 30, 1996		370
Remedial Action Starts ²		116
<i>Fund-Financed</i>		29%
<i>Potentially Responsible Party-Financed</i>		71%
Remedial Actions in Progress on September 30, 1996		594
Removal Activities		
Removal Action Starts ²		267
<i>Fund-Financed</i>		79%
<i>Potentially Responsible Party-Financed</i>		21%
Removal Action Completions ²		276
<i>Fund-Financed</i>		76%
<i>Potentially-Responsible Party-Financed</i>		24%
Site Assessment Activities		
CERCLIS Sites Added ²		600
Preliminary Assessments Conducted ²		781
Site Inspections Conducted ²		359
National Priorities List Sites to Date		1,387
<i>Sites Proposed for Listing During Fiscal Year 1996</i>		27
<i>Final Sites Listed During Fiscal Year 1996</i>		18
<i>Sites Proposed for Deletion During Fiscal Year 1996</i>		37
<i>Sites Deleted During Fiscal Year 1996</i>		34
Enforcement Activities		
Settlements for All Potentially Responsible Party Response Activities	154	(\$888 million) ³
Remedial Design/Remedial Action Settlements ⁴	68	(\$700 million)
Unilateral Administrative Orders Issued (All Actions)	70	N/A
Cost Recovery Dollars Collected	N/A	(\$252 million)
Accomplishments at Federal Facility Sites		
Records of Decision Signed		76
Remedial Investigation/Feasibility Study Starts ²		57
Remedial Design Starts ²		58
Remedial Action Starts ²		70
¹ Records of decision signed for Fund-financed and potentially responsible party-financed sites. ² Numerical values for accomplishments based on information from CERCLIS have been rounded. ³ Estimated value of work potentially responsible parties have agreed to undertake. ⁴ Remedial design/remedial action settlements include remedial design/remedial action consent decrees and unilateral administrative orders with potentially responsible parties have stated their intention to comply.		

Sources: CERCLIS; Office of Waste Programs Enforcement; Office of Emergency and Remedial Response; *Federal Register* notices through September 30, 1996.

Exhibit ES-2
Summary of Program Activity by Fiscal Year

	FY80-86 Total	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	Total
Removal Completions ^{1,2}	810	230	320	260	290	270	340	290	240	298	276	3,624
CERCLIS Sites ¹	25,200	27,600	30,000	31,900	33,600	34,200	36,400	37,500	38,300	39,000	600	39,600
PA Completions ¹	20,200	4,000	2,900	2,200	1,600	1,300	1,900	1,100	900	813	781	37,694
SI Completions ¹	6,400	1,300	1,200	1,700	1,900	1,900	1,300	700	600	584	359	17,943
National Priorities List Sites ³	901	964	1,194	1,254	1,236	1,245	1,275	1,320	1,355	1,374	1,387	1,387
Remedial Investigation/ Feasibility Study Starts ^{1,2}	660	210	170	170	170	70	90	60	70	30	36	1,736
Records of Decision Signed ²	199	77	152	136	149	175	126	134	159	187	156	1,650
Remedial Design Starts ^{1,2}	120	110	120	180	130	160	170	130	110	84	74	1,388
Remedial Action Starts ^{1,2}	70	70	70	110	80	100	110	120	120	110	116	1,076
Construction Completions ⁴	—	—	—	—	—	61	88	68	61	68	64	410
National Priorities List Deletions	13	0	4	11	1	9	2	11	13	25	34	118 ⁵

¹ Numerical values for accomplishments based on information from CERCLIS have been rounded.
² Includes Fund-financed and potentially responsible party-financed activities; excludes federal facility activities and state-lead activities where no Fund monies were spent.
³ The figures reported in this now represent the cumulative total of proposed, final, and deleted National Priorities List sites as of the end of each fiscal year.
⁴ Adopted as measure of program progress by 1991 30-Day Study Task Force. FY91 value represents FY80 through FY91.
⁵ Total NPL deletions do not include sites that have since met CERCLA cleanup objectives or been deferred to other authorities.

Sources: CERCLIS; Office of Emergency and Remedial Response; *Federal Register* notices through September 30, 1996.

Emergency Response Progress

To protect human health and the environment from immediate or near-term threats, the Agency and PRPs started nearly 267 removal actions and completed 276 during FY96. More than 4,238 removal actions have been started and 3,624 have been completed since the inception of the Superfund program.

During FY96, EPA granted 14 exemptions for removal actions to exceed the \$2 million limitation. In addition, EPA granted 15 exemptions allowing removal actions to continue for more than one year.

The Environmental Response Team (ERT) continued to provide expert support for Superfund response actions. During the fiscal year, ERT conducted 143 Superfund responses, responded to 10

oil spills and 4 international incidents, and conducted 233 training courses nationwide. Response to international incidents are not paid for using Superfund dollars.

The Agency continued to work on regulations to establish administrative reporting exemptions for naturally occurring radionuclide releases. EPA proposed a rule on August 4, 1995 (60 FR 40042) to expand these exemptions.

In other efforts, the Agency issued guidance entitled *Questions and Answers on Release Notifications and Requirements and Reportable Quantity Adjustments*.

Remedial Progress

Remedial progress during the fiscal year reflects the Agency's continuing efforts to accelerate the pace of cleanup activities and complete cleanups at Superfund sites. At the end of FY96, work had occurred at over 97 percent of the 1,387 sites proposed to, listed on, or deleted from the NPL, and construction activities had been completed to place 410 NPL sites in the construction completion category. During the year, the Agency and PRPs started nearly 36 remedial investigation/feasibility studies (RI/FSs), 74 RDs, and 116 RAs. EPA also signed 156 records of decision (RODs) for Fund-financed and PRP-financed sites. At the end of the year, 802 RI/FSs, 370 RDs, and 594 RAs were in progress at 845 sites.

In efforts to encourage the development and use of innovative treatment technologies to cleanup Superfund sites, the Agency took measures to demonstrate the technologies and provide information about them to potential users. To this end, EPA continued the Superfund Innovative Technology Evaluation Program, sponsored seven technical support centers and the Superfund Technical Assistance Response Team, and provided access to information and training. Working together with other federal agencies, academics, and the private sector, EPA conducted technology transfer efforts that included conferences and forums, demonstration and evaluation of innovative technologies, preparation of reference materials, and

development of training and continuing education opportunities.

Enforcement Progress

Enforcement progress for FY96 reflects the Agency's continued commitment to maximize PRP involvement in financing and conducting cleanup, and to recover Superfund monies expended for response actions. During FY96, EPA reached agreements with PRPs worth more than \$888 million in PRP response work. Through its FY96 cost recovery efforts, EPA achieved \$451 million in settlements and collected more than \$252 million for reimbursement of Superfund expenditures. Examples of significant enforcement actions are provided in Chapter 4 of this Report.

While continuing to promote "enforcement first" to secure PRP involvement in financing and conducting cleanups, the Agency also worked to ensure equity in the enforcement process and to seek ways to reduce transaction costs. To support these goals during FY96, the Agency focused on increasing the use of allocation tools such as alternative dispute resolution, encouraging early settlements with *de minimis* and "de micromis" parties, fostering greater fairness for owners and prospective purchasers of Superfund sites, and evaluating the increased use of mixed funding. The Agency also took steps to increase the effectiveness of compliance monitoring, improve cost recovery efforts, and expedite enforcement activities to support accelerated cleanups under SACM.

Federal Facility Cleanups

Federal departments and agencies are largely responsible for implementing CERCLA at federal facility sites. To ensure federal facility compliance with CERCLA requirements, EPA provides advice and assistance, oversees activities, and takes enforcement action where appropriate. At sites on the NPL, EPA must concur in remedy selection.

At the end of FY96, there were 2,070 federal facility sites identified on the Federal Agency Hazardous Waste Compliance Docket. Of the sites on the docket, 158 were proposed to or listed on the NPL, including 151 final and 7 proposed sites.

During FY96, 10 sites were proposed to and 24 were listed on the NPL.

Activity during the fiscal year at federal facility sites listed on the NPL, included starting approximately 57 RI/FSs, 58 RDs, 41 removals, and 70 RAs; signing 76 RODs; and achieving construction completion at 9 sites.

In FY96, the Agency, in conjunction with the Department of Defense (DoD), states, and local citizens, continued to implement the Fast Track Cleanup Program to expedite cleanup and reuse of bases scheduled for closure under the Base Realignment and Closure (BRAC) Act. BRAC was enacted to promote economic recovery of communities near closing bases. EPA, DoD, and the states established BRAC cleanup teams (BCTs) at 110 bases in FY96.

In FY 1996, EPA and DoD worked together to determine what BRAC '95 installations should be included on the "Fast Track Cleanup" list and then develop an appropriate workload assessment of what would be necessary to achieve installation cleanup and reuse. Under the revised Memorandum of Agreement, EPA participated on BRAC Cleanup Teams (BCTs) at 110 BRAC 1, 2, 3, and 4 installations. Of these installations, 32 were NPL sites, and 78 were non-NPL.

CERCLA Section 120(e)(5) requires an annual report to Congress from each federal department or agency on its progress in implementing Superfund at its facilities. EPA's progress at its sites is provided in Section 5.4 of this Report. Of the sites on the Federal Agency Hazardous Waste Compliance Docket at the end of FY96, 25 were EPA-owned.

Resource Estimate for Superfund Implementation

Under section 301(h)(1)(c) of CERCLA, EPA is required to estimate the resources needed to implement Superfund, and CERCLA requires that EPA provide the estimates in this Report. Since the enactment of CERCLA in 1980, Congress has provided Superfund with \$16.3 billion in budget authority (FY81 through FY94). This includes \$1.8 billion for the pre-SARA period (FY81 through

FY86) and \$14.5 billion for the post-SARA period, FY87 through FY96.

Estimates of the long-term resources required to implement Superfund are based on the Outyear Liability Model (OLM). The OLM estimate of the cost of completing cleanup of current NPL sites is \$14.9 billion for FY97 and beyond, bringing the total estimated cost for the program to \$31.2 billion.

Superfund Program Support Activities

EPA took measures in FY96 to enhance community involvement, public access to Superfund information, and EPA's partnership with states and Indian tribes. As required by CERCLA Section 105(f), the Agency also engaged in efforts to encourage minority firm participation in Superfund contracting.

In its community involvement efforts, EPA continued measures to tailor activities to the specific needs of individual communities and to identify ways to enhance community involvement efforts. The Agency emphasized the importance of effective community involvement in its administrative improvements and reauthorization efforts. The Agency also continued to provide technical outreach to communities, hold national conferences on community involvement, offer training and workshops, and facilitate community access to technical assistance grants (TAGs). To aid communities in obtaining technical assistance, EPA awarded 11 TAGs during the fiscal year, bringing the total number of TAGs awarded since FY88 to 189, for a total worth of more than \$9.5 million.

To support state and tribal involvement in the Superfund response activities, EPA has awarded nearly \$1.8 billion in cooperative agreements (CAs).

To promote small and disadvantaged business participation in Superfund contracting in FY96, EPA, through direct and indirect procurement, awarded contracts and subcontracts valued at more than \$59.7 million to minority contractors to perform Superfund work. Direct procurement involves any procurement activity in which EPA is a direct party to a contractual arrangement for supplies, services or construction. Under financial assistance programs

(indirect procurement), EPA awards grants and/or cooperative agreements to States, local municipalities, universities, colleges, non-profit or profit-making institutions or firms, hospitals and individuals or otherwise known as recipients. This amount represents more than 8.2 percent of the total dollars obligated to finance Superfund work during the year. To help minority contractors become more successful in winning Superfund contracts and encourage them to participate in the Superfund program, EPA conducted training sessions, conferences, and seminars throughout the year.

Organization of this Report

Information prepared for this Report is assembled in response to Congressional requirements specified in CERCLA. Exhibit ES-3 is a guide to the information required under CERCLA and its location in the Report.

Exhibit ES-3
Statutory Requirements for the Report

CERCLA Section	CERCLA Requirement	Report Section	Report Content
301(h)(1)	Annual Report to Congress on the progress achieved in implementing Superfund during the preceding fiscal year	Executive Summary	Initiatives to improve the Superfund program
		Chapter 1	Site evaluation progress
		Chapter 2	Emergency response progress
		Chapter 3	Remedial progress
		Chapter 4	Enforcement progress
		Chapter 5	Federal facility cleanups
301(h)(1)(A)	Detailed description of each feasibility study (FS) at a facility	Chapter 7	Community relations, state and Indian tribe, and public outreach activities
		Section 3.2.4	Overview discussion of RODs signed during the fiscal year, including the number of treatment and containment remedies selected
301(h)(1)(B)	Status and estimated date of completion of each FS	Appendix C	List of RODs signed in the fiscal year
		Appendix A	Status and estimated completion date of each ongoing FS in progress at the end of the fiscal year
301(h)(1)(C)	Notice of each FS which will not meet a previously published schedule for completion and the new estimated date for completion	Appendix A	Scheduled completion date published for the last fiscal year, the scheduled completion date recorded in CERCLIS as of end of the current fiscal year, and identification of schedule changes
301(h)(1)(D)	An evaluation of newly developed feasible and achievable permanent treatment technologies	Section 3.3	Evaluation of newly developed technologies through the Superfund Innovative Treatment Evaluation Program

CERCLA Section	CERCLA Requirement	Report Section	Report Content
301(h)(1)(E) 121(c)	Progress made in reducing the number of facilities subject to review under CERCLA Section 121(c), which requires the report to Congress to contain a list of facilities for which a five-year review is required, the results of all such reviews, and any actions taken as a result of such reviews	Section 3.4	Annual update on progress being made on sites subject to review under CERCLA Section 121(c)
301(h)(1)(F)	Report on the status of all remedial and enforcement actions undertaken during the fiscal year, including a comparison to remedial and enforcement actions undertaken in prior fiscal years	Section 3.2.2	Information on fiscal year remedial activity starts (including PRP involvement) with a comparison of fiscal year activities to those of previous years
		Section 4.2	Information on fiscal year enforcement activities with a comparison of fiscal year activities to those of previous years
		Appendix A	Information on the status of each RI/FS and RA in progress at the end of the fiscal year
		Appendix B	Information on the status of RDs in progress at the end of the fiscal year
301(h)(1)(G)	Estimates of the amount of resources, including the number of work years or personnel, which would be necessary for each department, agency, or instrumentality which is carrying out any activities to complete the implementation of all duties vested in the department, agency, or instrumentality	Sections 6.1 and 6.3	EPA resource estimates for completion of CERCLA implementation
		Section 6.4	Other federal agency's and department's estimates for completion of CERCLA implementation
301(h)(2)	Review by the Inspector General and submission of any report related to EPA's activities for reasonableness and accuracy	Appendix D	Review of the Inspector General on this Report
105(f)	Brief description of the contracts which have been awarded to minority firms under Superfund and the efforts made to encourage the participation of such firms in the Superfund program	Section 7.2	Information on minority contracting awards by EPA, states, Indian tribes, and other federal agencies using Superfund monies. EPA efforts to encourage increased minority contractor participation in the Superfund program
120(e)(5)	Annual report to the Congress concerning EPA progress in implementing remedial activities at its facilities	Section 5.4	Report on EPA progress in CERCLA implementation at EPA-owned facilities, including a state-by-state report

Fiscal Year 1996 Initiatives

In FY96, OERR reorganized from a hierarchical four division structure to a flatter organization of 14 centers. The purpose of the reorganization was to accelerate site cleanup, promote teamwork, empower staff, and provide better customer service. In addition, the Agency introduced a third round of initiatives under the Administrative Improvements effort in FY96 to further increase enforcement fairness and reduce transaction costs, improve the effectiveness and consistency of cleanups, enhance meaningful public involvement, and expand the role of state and Indian tribes.

Exhibit ES-4 provides highlights of these and other initiatives undertaken by the Agency during FY96.

Exhibit ES-4
Fiscal Year 1996 Superfund Program Initiatives

Superfund Initiative	Accomplishments
Accelerating the Pace of Cleanups: The new and continuing initiatives set forth by EPA in FY96 to accelerate cleanups have saved EPA and stakeholders time and money.	
Expedited Settlements	<ul style="list-style-type: none"> • In efforts to remove small waste contributors from the enforcement process, EPA negotiated several pre-ROD <i>de minimis</i> settlements that will result in the protection of 264 small waste contributors when the public comment period ends. • Streamlining of evaluation of claims from PRPs with limited ability to pay has led to a number of ability-to-pay settlements at Superfund sites.
Improving the PRP Search Process	<ul style="list-style-type: none"> • Based on the information gained from PRP search pilots initiated prior to FY96, EPA was able to begin updating and expanding the PRP Search Manual.
Revised "De Micromis" Guidance	<ul style="list-style-type: none"> • EPA revised the guidance and issued additional guidance to reaffirm the Agency's policy not to pursue de micromis contributors and improve EPA's ability to resolve their liability concerns quickly and fairly • The new and revised guidance also streamlines and simplifies the settlement process.
Promoting Economic Redevelopment: EPA is promoting economic redevelopment through its Brownfield Economic Redevelopment Initiative, directed toward empowering States, communities, and others to work together to assess, safely cleanup, and sustainably reuse brownfields. EPA is accomplishing these efforts through the Brownfields Action Agenda.	
Brownfields Initiative	<ul style="list-style-type: none"> • EPA is continuing the two-year Brownfield Assessment Pilots begun in FY95. • By the end of FY96, EPA exceeded its commitment to fund 50 pilots by funding 76 pilots at up to \$200,000 each. • EPA signed memoranda of understanding with the Department of Housing and Urban Development, the Economic Development Administration, and the Departments of Labor and Interior to coordinate issues related to Brownfields redevelopment and to leverage additional opportunities. • Two meetings conducted in regards to brownfields in FY96; a Brownfields Pilot National Workshop and a Brownfields National Conference.
Removing Sites from CERCLIS	<ul style="list-style-type: none"> • EPA continued to remove sites from CERCLIS with the NFRAP status, bringing the total number of sites archived to over 27,000. • Guidance issued on how to research those sites remaining in the CERCLIS inventory and make archive decisions as appropriate.
Partial NPL Deletions	<ul style="list-style-type: none"> • By the end of FY96, EPA had initiated partial deletions at nine sites. • EPA issued guidance establishing SSLs which serve as a basis for partial deletions of NPL listing and guidance aimed at mapping and tracking partial deletions in order to better portray the Agency's success.
Environmental Justice: EPA continues to ensure that risks to low-income and minority populations are adequately addressed by following the goals outlined in Executive Order 12898 issued in the previous fiscal year.	

Superfund Initiative	Accomplishments
Medical Assistance Plan (MAP)	<ul style="list-style-type: none"> The MAP continues to improve the delivery of existing medical services to communities with potential exposures to hazardous substances and build environmental health expertise in communities through physicians training and placement. The EPA continued the pilot site, Del Amo/Montrose in Torrence, California, by obligating an additional \$400,000.
Job Training and Development	<ul style="list-style-type: none"> EPA continued to work with the HIEHs minority worker training program and plans to develop additional pilots in Brownfield areas. Work continued with the Hazardous materials Training and Research Institute to expand environmental training curriculum developed at community colleges located near Brownfield sites. EPA hosted its second workshop designed to assist community colleges in development of environmental curricula in FY96.
Enhancing Community Involvement: During FY96, EPA continued to work to increase community involvement in Superfund cleanups by supporting the creation of CAGS and TAGS.	
Community Advisory Groups	<ul style="list-style-type: none"> EPA issued an OSWER directive entitled "Guidance for Community Advisory Groups." EPA took the 16 site CAG program begun in FY95 out of the pilot stage and brought the total number to 23 successfully implemented CAGs by the end of FY96.
Technical Assistance Grants	<ul style="list-style-type: none"> EPA continued revisions to the TAG regulations in FY96 in an effort to simplify the TAG application and administrative process.
Community Involvement and Enforcement	<ul style="list-style-type: none"> EPA began evaluating the impacts that enhanced involvement had on both the settlement negotiation process and studies and cleanups themselves from the pilot projects begun in FY95.
Improving Cleanup Effectiveness and Consistency and Reducing Costs	
National Consistency in Remedy Selection Directive	<ul style="list-style-type: none"> Directive issued on "National Consistency in Superfund Remedy Selection" that identifies a range of efforts that support national consistency in remedy selection and encourages informed discussion of cross-cutting issues.
Soil Screening Guidance	<ul style="list-style-type: none"> EPA released the final Soil Screening Guidance in FY96 providing soil screening levels (SSLs) for 100 contaminants in soil, or contaminant levels below which there is no concern and above which further site-specific evaluation is warranted.
National Remedy Review Board	<ul style="list-style-type: none"> EPA established the NRRB in FY96 to review proposed cleanup actions at sites meeting specific criteria. The NRRB reviewed 12 proposed decisions during FY96 and provided recommendations on nine of the decisions. The Board's preliminary analysis indicates potential reductions in the range of \$15-30 million in total estimated cleanup costs from review conducted during FY96. EPA expects to realize cost reductions of approximately \$8 million from 6 of the decisions which have progressed since the Board's recommendations.
Updating Remedy Decisions at Selected Sites	<ul style="list-style-type: none"> EPA issued guidance on updating remedies specifying three types of changes aimed at streamlining and cost efficiency.

Superfund Initiative	Accomplishments
Establishing New Remedy Selection Management Flags	<ul style="list-style-type: none"> Developed two fact sheets in an effort to help implement the newly created remedy selection management flags, otherwise known as "Rules-of-Thumb."
Clarifying the Role of Cost in Remedy Selection Process	<ul style="list-style-type: none"> EPA issued a fact sheet entitled "The Role of Costs in the Superfund Remedy Selection Process," that summarizes the current role of cost in the Superfund program as established by CERCLA, the NCP, and other guidance.
Presumptive Remedies	<ul style="list-style-type: none"> Throughout FY96, EPA continued its effort to evaluate historical patterns of selecting and implementing remedies to identify and utilize "presumptive" remedies for specific types of sites. EPA estimates time savings from use of these remedies in the range of 36 to 56 percent and future cost reduction of up to 60 percent at municipal landfill pilots.
Expanding the Role of States and Indian Tribes: EPA continued its efforts to expand the roles of states and tribes in the Superfund program by providing funding and technical assistance.	
Voluntary Cleanup Program	<ul style="list-style-type: none"> EPA has been developing a memorandum setting out an interim approach for its relations with state voluntary cleanup programs with an expected completion date in early FY97 Final guidance is expected to be issued at the end of FY97, after EPA assesses how the process is working and receiving public comment. Ten million dollars earmarked in the FY97 appropriations in its continuing efforts to advocate the development or enhancement of state programs that encourage private parties to voluntarily undertake protective cleanups of less seriously contaminated sites.
Federal, State, and Tribal Site Management Program	<ul style="list-style-type: none"> EPA continued to implement the site deferral program.
State and Tribal Superfund Block Funding	<ul style="list-style-type: none"> Initiated the concept of block funding to improve timeliness and effectiveness of the CA process. EPA is developing a report that will provide recommendations on improving the award and utilization of Superfund monies to states and tribes.
Reducing Costs in Enforcement: EPA adopted the use of Site-Specific Special Accounts and Private Party Allocations in efforts to save time and money in enforcement.	
Site-Specific Special Accounts	<ul style="list-style-type: none"> In a May 1996 memorandum, EPA encouraged and advised Regional use of Special Accounts for settlement funds. A June 1996 agreement between EPA, the Office of Management and budget (OMB) and the Department of Treasury allows EPA to retain and apply interest earned on Special Accounts to settlement funds for cleanup of specific sites.
Adopting Private Party Allocations	<ul style="list-style-type: none"> EPA established a national workgroup to determine the parameters and identify opportunities to implement the Private Party Allocation initiative.

Superfund Initiative	Accomplishments
Reduced Oversight for Capable and Cooperative PRPs	<ul style="list-style-type: none"> • Reduction of oversight results in decreased transaction costs for EPA as well as the cooperating parties and increases incentives for settlement. • In July 1996, EPA issued a directive entitled "Reduced Federal Oversight at Superfund Sites with Cooperative and Capable Parties", providing the Regions with guidance for determining whether a PRP is cooperative and capable and encouraging Regions to discuss oversight with stakeholders, acknowledge parties that have already received reduced oversight, and discuss future oversight plans.
Ensuring Fairness in Enforcement: EPA initiated a number of pilot projects and published guidance and policies designed to promote enforcement fairness	
Orphan Share Compensation	<ul style="list-style-type: none"> • In an effort to enhance fairness and encourage PRPs to enter into settlement agreements, EPA announced that it would compensate performing parties for a limited portion of orphan shares in future cleanup settlements. • EPA issued interim guidance entitled "Interim Guidance on Orphan Share Compensation for Settlers of Remedial Design/Remedial Action and Non-Time-Critical Removals." • Established a team of EPA and DOJ staff to resolve issues on a site-by-site basis and to ensure consistent results.
Equitable Issuance of UAOs	<ul style="list-style-type: none"> • EPA issued a memorandum entitled "Documentation of Reason(s) for Not Issuing CERCLA 106 UAOs to All Identified PRPs" which reaffirms EPA's policy to issue UAOs to the largest manageable number of PRPs and establishes the formal procedures required for Regional staff to document their reasons for not issuing UAOs to certain PRPs, or late-identified PRPs.
Use of Allocation Pilots	<ul style="list-style-type: none"> • Continued to utilize its new approach to the allocation of Superfund costs to PRPs, in which, a neutral allocator selected by the PRPs and EPA conducts a non-binding, out-of-court allocation process and assigns shares of responsibility to the PRPs based on a number of equitable factors.

Chapter 1

Site Evaluation Progress

By the end of FY96, 39,600 potential hazardous waste sites had been identified and added to the Superfund inventory. EPA and states continued to evaluate these sites and had begun evaluation of more than 97 percent of these sites for potential threats to human health and the environment by the end of the year. To enhance site evaluation, EPA continued implementing the Superfund Accelerated Cleanup Model (SACM). With the implementation of SACM, EPA's Regions have been encouraged to further reduce repetitive tasks and costs by implementing a streamlined, single-assessment process that can combine site assessment and removal evaluation activities when warranted by site conditions. EPA has also proceeded with ongoing efforts to address technical complexities and improved site evaluation guidance.

1.1 Site Evaluation Process

The site evaluation process begins when states, federally recognized Indian tribes, citizens, other federal agencies, or other sources notify the EPA Superfund program of a potential or confirmed hazardous waste site or incident. EPA confirms information and places those sites requiring further Federal Superfund attention in the Agency's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database. In the case of federal facilities, sites are placed on the Federal Facility Hazardous Waste Docket for assessment.

EPA manages site assessment activities, including necessary laboratory and technical support, by directing a network of contractors, or by providing funding for these activities to states and tribes through site assessment cooperative agreements. At

sites that pose an immediate threat to human health, welfare, or the environment, EPA conducts a removal action to address the threat. At other sites, a two-stage assessment is conducted; the assessment consists of (1) a preliminary assessment (PA) to determine whether a potential threat exists, and (2) a site inspection (SI) to determine the relative threat posed and to evaluate the site for possible listing on the National Priorities List (NPL). The NPL is the list of sites designated for long-term remedial evaluation and response. Approximately 10 percent of the sites assessed by Superfund lead to federal removal or remedial cleanup actions to reduce or eliminate risks to human health and the environment.

At any point in the evaluation process, EPA may determine that the Superfund evaluation of the site is complete and that no further steps to list the site on the NPL will be taken. Federal Superfund site assessment activities are suspended when the appropriate Regional official signs a letter, form, or memo approving the site assessment report and makes a determination that no further action is planned. Sites not considered appropriate for the NPL might be addressed under the Resource Conservation and Recovery Act (RCRA), state laws, or other authorities such as the Nuclear Regulatory Commission (NRC). This decision does not necessarily mean that there is no hazard associated with the site; it merely means that, based on available information, the site does not meet the criteria for placement on the NPL.

No further remedial action planned (NFRAP) decisions should not be confused with CERCLIS archiving. NFRAP decisions are made from a site assessment perspective only; they simply denote that further Superfund remedial assessment work is not

required based on currently available information. In contrast, the archival of CERCLIS sites is made only when no further Superfund interest exists at a site. This means that sites are not archived if there are planned or ongoing removal or enforcement activities, or if other Superfund interest still exists. This may include sites that have had NFRAP decisions made at them during site assessment activities.

EPA added more than 600 sites to CERCLIS during FY96, bringing the total number of sites under Superfund to 39,600. Although the number of new sites brought to the Agency's attention has declined recently, EPA must address a large backlog of sites that still needing assessment to identify priority NPL candidates or to archive sites from CERCLIS. Final assessment decisions (NPL listing or archival) are needed at over 12,650 sites currently in the CERCLIS inventory, including federally owned or managed properties. Under the SACM initiative, EPA continues to integrate remedial and removal assessment activities, where possible, to reduce costs and durations in an effort to utilize resources most efficiently and effectively. Results have been encouraging with combined preliminary assessment and site inspection durations declining 20 percent at SACM sites.

Listing property on the NPL may affect the value of that property and the surrounding area - whether or not all of the property or adjacent property is contaminated. In order to facilitate the transfer, development or redevelopment of property or portions of property determined to be uncontaminated, EPA developed a program that provides its Regions with the flexibility to clarify the areas of sites determined to be contaminated or uncontaminated. EPA published the partial deletions rule in the *Federal Register*. The rulemaking allows EPA to delete releases at portions of an NPL site, provided that deletion criteria are met. Previously, EPA policy deleted releases only after evaluation of the entire site. Partial deletions allow potential investors and developers to undertake economic activity at a cleaned up portion of real property that is part of a site listed on the NPL.

During FY96, EPA also issued the *Soil Screening Guidance* to identify portions of sites that

do not warrant federal attention. In addition, EPA is considering, on a pilot basis, deletion of remediated parcels of a closing military base that is listed on the NPL so that the parcel may be returned to productive use. EPA has also continued to implement the Brownfields Initiative and initiated a joint EPA/State/Tribal effort to define roles in promoting the development and operation of State/Tribal voluntary cleanup programs that are designed to speed the cleanup of non-NPL sites.

1.2 Fiscal Year 1996 Progress

During FY96, EPA continued its progress in identifying and assessing potential hazardous waste sites while streamlining the process through administrative reforms efforts.

1.2.1 CERCLIS Site Additions: Discoveries and Removals

EPA is notified of potential hazardous waste sites in a variety of ways. Information may be provided by states, handlers of hazardous materials, or concerned citizens. Local law enforcement officials may submit a formal report to EPA or facility managers may notify EPA of a release as required by CERCLA Section 103. Section 103 specifies that a person, such as a manager in charge of a vessel or facility, immediately report to the National Response Center any release of a hazardous substance of an amount that is equal to or greater than the reportable quantity for that substance. The National Response Center operates a 24-hour hotline for immediate notification. Penalties are imposed for failure to comply with this reporting requirement. When the Agency is notified of a site that may pose a threat, EPA records basic information about the site in CERCLIS.

1.2.2 Preliminary Assessments Completed

When notified of a potential hazardous waste site, EPA or the state will conduct a PA to assess the threat posed by the site. A PA is the first phase of the site assessment that determines whether a site should be recommended for further action under Superfund. Federal, state, and local government files, geological and hydrological data, and data

concerning site practices are reviewed to complete the PA report. An on- or off-site reconnaissance also may be conducted, although it is not required. EPA or the state will also review other existing site-specific information for such items as past state permitting activities, local population statistics, and any other information concerning the site's potential effect upon the environment. PA activities enable the Agency or state to determine whether further study of the site or removal assessment/action is necessary.

EPA and states completed 781 PAs in FY96. Since the inception of Superfund, EPA and states have completed PAs at 37,694 sites. The Agency has classified approximately 70 percent of sites where a PA has been conducted as no further action. A total of approximately 16,300 PAs have been archived.

1.2.3 Site Inspections Completed

If the PA indicates that a potential threat to human health or the environment is posed by the site, EPA will perform an SI to determine whether the site should be proposed for listing on the NPL. The purpose of the SI is to continue the site evaluation to determine whether a site is appropriate for listing on the NPL. The SI usually includes collecting and analyzing environmental and waste samples to identify:

- the hazardous substances present at the site;
- the concentrations of these substances;
- whether the substances are being released or there is potential for their release; and
- whether the identified hazardous substances are attributable to the site.

During the SI, data are gathered through increasingly focused collection efforts. For sites judged to be prospective candidates for the NPL, the data will be used to calculate a score using the Hazard Ranking System (HRS). The HRS serves as a screening device to evaluate and measure the relative threat a site poses to human health, welfare, or the environment and to determine whether the site

is eligible for placement on the NPL. The HRS evaluates four pathways through which contaminants from a site may threaten human health or the environment: ground water, surface water, soil, and air.

The Agency completed 359 SIs during FY96 for a total of 17,943 SIs conducted since the inception of the Superfund program. About 50 percent of these SIs resulted in no further action decisions under Superfund. The remainder have undergone additional assessment, or are awaiting further EPA action such as proposal to the NPL.

1.2.4 Site Inspection Prioritization

When the revised HRS was promulgated in March 1991 in response to a mandate in SARA, EPA could no longer use the original HRS for making NPL determinations. At that time, several thousand sites were eligible for NPL listing based on SIs conducted under the original HRS. EPA developed the SI prioritization (SIP) process to update preliminary HRS scores at those sites based on the revised HRS model.

The SIP process may assist in identifying candidates for early actions under SACM. SIPs were limited to 6,600 sites where an SI was conducted prior to August 1, 1992; but may also assist in identifying candidates for early actions under SACM. EPA completed approximately 400 SIPs in FY96. Most SIPs completed have resulted in no further action decisions.

1.3 National Priorities List

The NPL is the list of sites for long-term remedial evaluation and response. EPA evaluates the potential hazard of sites using the HRS. If a site scores 28.50 or higher, the Agency may propose the site for listing on the NPL, solicits public comments for consideration, and then either announces the final listing of the site on the NPL or removes the site from consideration for listing (classified as "no further remedial action planned"). A site remains on the NPL until no further CERCLA response action is appropriate. When this condition is met, EPA deletes the site from the NPL.

1.3.1 National Priorities List Update

At the end of FY96, there were 1,387 sites proposed to, listed on, or deleted from the NPL: 1,211 currently listed sites, 52 proposed sites, and 118 deleted sites where all CERCLA cleanup goals have been achieved and six sites that have been deferred to another authority. Exhibit 1.3-1 illustrates the historical cumulative number of final sites on the NPL for each fiscal year since SARA was enacted in 1986. Sites deleted from the NPL reflect an activity required to be reported. At the end of FY96, the 1,387 sites proposed to, listed on, or deleted from the NPL consisted of 1,223 non-federal sites and 164 federal sites.

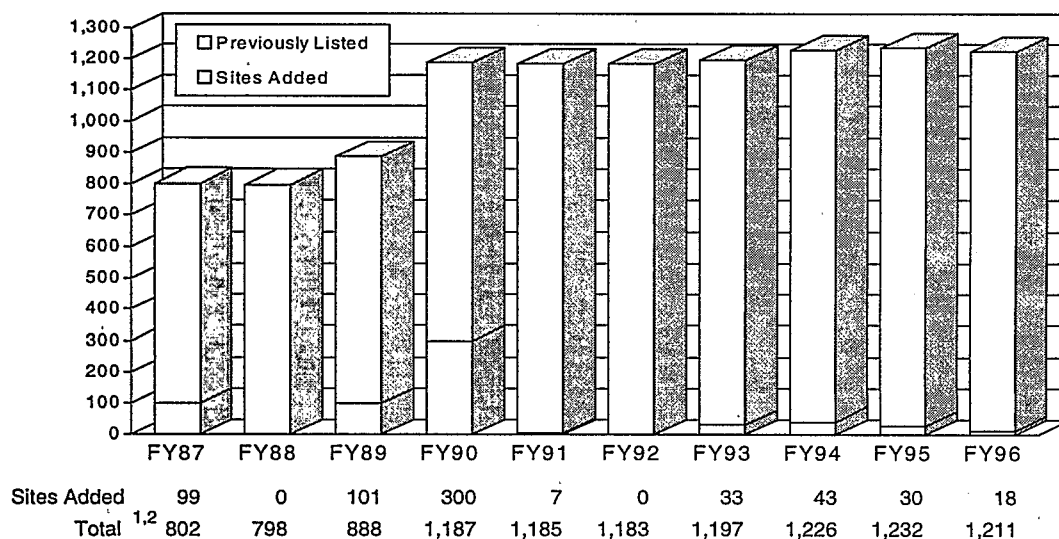
Updates to the NPL during FY96 included proposal of 27 sites (25 non-federal and 2 federal facility sites), final listing of 18 sites (all non-federal) and deletion of 34 sites (31 non-federal sites and 3 federal facility sites). These proposals to and listings on the NPL were included in two proposed rules

(NPL Proposals 19 and 20) and one final rule. The proposed rules were published in the *Federal Register* on October 2, 1995 (12 non-federal sites) and June 17, 1996 (13 non-federal and 2 federal sites). The final rule was published in the *Federal Register* on June 17, 1996 (13 non-federal sites).

1.3.2 Relationship Between CERCLIS and NPL Update

CERCLIS is used to track the discovery of potential hazardous waste sites, including those that are subsequently listed on the NPL, and to track actions at these sites. Of the 39,600 sites in CERCLIS at the end of FY96, 1,387 were either proposed to, listed on, or deleted from the NPL. Although the sites on the NPL are a relatively small subset of the inventory in CERCLIS (approximately 3.4 percent), they generally are the most complex and environmentally significant sites.

Exhibit 1.3-1
Final NPL Sites for Fiscal Year 1987 Through Fiscal Year 1996



¹ This graph illustrates *final* NPL sites only and reflects the fact that EPA deleted 13 sites from FY80 to FY86, 4 sites in FY88, 11 sites in FY89, 1 site in FY90, 9 sites in FY91, 2 sites in FY92, 11 sites in FY93, 13 sites in FY94, 25 sites in FY95, and 34 sites in FY96. At these deleted sites, all CERCLA cleanup objectives were achieved. In FY93, one additional site was deleted because it was deferred to another authority for cleanup. Also, eight sites were either voluntarily removed from the NPL or removed from the NPL by court order (seven sites in FY93 and one in FY94). The total of *final*, proposed, and deleted NPL sites as of September 30, 1996 was 1,211.

² The total number of sites listed final on the NPL from 1983 to 1986 was 703.

Source: *Federal Register* notices through September 30, 1996.

1.4 Site Evaluation Support Activities

EPA is managing a new site evaluation support program designed to promote the redevelopment of abandoned and contaminated properties known as the Brownfields Initiative. In addition, EPA manages two ongoing support programs dedicated to addressing lead and radionuclide contamination because these contaminants present special hazards and problems. During FY96, EPA continued to work with all stakeholders to prevent, assess, safely cleanup, and sustainably reuse brownfields. Under the lead program, EPA continued to work on risk assessment procedures and tools as well as provide advice on national lead issues. Under the radiation program, EPA continued to develop Superfund guidance, examined environmental fate and transport modeling for radionuclides, and provided technical support to the Regions in addressing radioactive sites. The Agency also worked to enhance site evaluation guidance.

1.4.1 Brownfields Initiative

EPA is promoting the redevelopment of abandoned and contaminated properties across the country that were once used for industrial and commercial purposes ("brownfields"). While the full extent of the brownfields problem is unknown, the General Accounting Office estimated in its report, *Community Development Reuse of Urban Industrial Sites* (GAO/RCED-95-172, June 1995), that approximately 450,000 brownfields sites exist in this country, affecting virtually every community in the nation. EPA believes that environmental cleanup is a building block to economic redevelopment, and that cleaning up contaminated property must go hand-in-hand with bringing life and economic vitality back to communities.

The Brownfields Economic Redevelopment Initiative is a comprehensive approach to empowering states, local governments, communities and other stakeholders interested in economic redevelopment to work together in a timely manner to prevent, assess, safely cleanup, and sustainably reuse brownfields. EPA is addressing implementation of this initiative through a Brownfields Action Agenda. The Action Agenda is a collection of bold strategies that will continue to evolve as the

Brownfields Initiative matures. Activities have focused on four main categories:

- (1) implementing Brownfields Pilot programs in cities, counties, towns and Tribes across the country;
- (2) clarifying liability and other issues of concern for lending institutions, municipalities, prospective purchasers, developers, property owners and others;
- (3) establishing partnerships with other EPA programs, federal agencies, states, cities, and stakeholders; and
- (4) promoting community involvement by supporting job development and training activities linked to brownfield assessment, cleanup, and redevelopment.

By the end of FY96, EPA announced the selection of 76 Brownfields Pilots to be funded through cooperative agreements at up to \$200,000 each for a two-year period. The cooperative agreements for all pilots are subject to negotiation. Of the 76 pilots, 39 are national pilots selected and funded through Headquarters; while 37 are Regional pilots selected and funded through the 10 Regional offices. EPA intends the pilots to perform the following: provide redevelopment models; direct efforts toward the removal of regulatory barriers; and facilitate coordinated public and private efforts at the federal, state, and local levels.

EPA signed Memoranda of Understanding (MOU) with other federal partners to coordinate issues related to brownfields redevelopment and to leverage additional opportunities. In FY96, MOUs were signed with the Department of Housing and Urban Development, Economic Development Administration, and the Departments of Labor and Interior.

EPA conducted a Brownfields Pilot National Workshop in Washington, D.C. in February 1996 and a Brownfields National Conference in Pittsburgh, Pennsylvania in September 1996. A variety of guidances and other initiatives announced

by the Agency in FY96 have affected the liability aspects of the Brownfields Action Agenda.

Each EPA Region has established a Brownfields coordinator position to oversee Brownfields pilots and initiate other Brownfields activities. EPA also has assigned five staff members to cities through inter-governmental personnel assignments to assist in addressing the Brownfields redevelopment challenges presented at the State and local levels.

EPA is promoting and fostering job development and training through partnerships with brownfields pilot communities and community colleges. EPA is working with the Hazardous Materials Training and Research Institute to expand environmental training and curriculum development. In November 1995, EPA hosted a workshop in Baltimore, Maryland to assist community colleges from 17 Brownfields pilot communities in developing environmental job training programs. In July 1996, EPA held a second workshop in St. Louis, Missouri with additional community colleges from more recently selected Brownfields pilot communities. Through a cooperative agreement with Rio Hondo Community College, EPA has established an environmental education and training center to provide comprehensive technical-level training. EPA and the National Institute of Environmental Health Sciences (NIEHS) are working to coordinate minority worker training grant recipients with Brownfields pilot city activities.

By mid-1996, EPA completed all of its commitments under the initial Action Agenda and it became clear that the problem required more interaction between all levels of government, the private sector and non-governmental organizations. The need for continuation and expansion of the national brownfields response has been further buttressed by the recommendations of the President's Council on Sustainable Development regarding the redevelopment of brownfields sites. To that end, EPA began working with other federal agencies in the summer of 1996 and established an interagency working group on brownfields. A new action agenda enhancing public participation in local decision-making, building safe and sustainable communities through public/private partnerships; and recognizing

that environmental protection can be a positive force for economic redevelopment is being developed.

1.4.2 Lead Program Progress

Lead is one of the most frequently found toxic substances at Superfund sites. Exposure to lead at Superfund sites occurs by multiple media and EPA risk assessments consider all sources of exposure to more fully assess lead risks. In order to promote more consistent evaluations and continually improve upon our assessment and management practices, the use of Agency experts to that provide advice on national lead issues has been part of the Agency's Administrative Reforms. During 1996, two significant steps were taken. First, a national workshop was held to discuss lead model validation. Second, efforts were initiated to increase the involvement of site managers and senior managers in their interactions with the Lead Technical Review Workgroup.

Lead Model Validation Workshop

The lead model validation workshop was held in October of 1995 in Research Triangle Park, North Carolina. The workshop involved invited scientists from outside of EPA and various EPA staff who address lead issues. This meeting provided an opportunity for open exchange of ideas on model validation and advanced the understanding of activities ongoing both within and outside of EPA. Industry representatives who attended this meeting have recommended that workshops like this continue and EPA is planning to hold similar workshops in the future.

Lead Technical Review Workgroup

The Lead Technical Review Workgroup provides advice and recommendations on lead risk assessment issues. This advice has included the development of guidance documents and review of individual risk assessments. While discussions with individual site managers have taken place on a regular basis, interactions with multiple site managers to identify information needs and prioritize activities was facilitated through the formation of the Lead Sites Workgroup (LSW). The LSW is a group of site managers that address lead issues from across

different EPA Regions and Headquarters. During FY96, coordination and information sharing were also improved by exchanging of information with senior Regional and Headquarters managers.

1.4.3 Radiation Program Progress

During FY96, EPA made progress in addressing technical complexities associated with site assessment, risk assessment, technology assessment and transfer, emergency response, and policy development and implementation.

Site Assessment

The Office of Radiation and Indoor Air (ORIA) continued to provide technical assistance to OERR with staff from Headquarters and both ORIA laboratories. ORIA gave this assistance directly to remedial project managers (RPMs) and on-scene coordinators (OSCs) to address National Priorities List (NPL) sites contaminated with radioactive materials.

In FY96, the ORIA National Air and Radiation Environmental Laboratory (NAREL) and the ORIA Las Vegas facility continued to serve as an EPA Technical Support Center (TSC) in the areas of radiochemical analysis of samples, site-specific remedial technologies, detection and measurement of radioactive contamination, site remediation oversight, risk assessment, and document review.

ORIA, working with Regional radiation program staff, continued to provide ongoing technical support to regional Superfund staff for questions related to radiation risk assessment. The sites where ORIA provided direct technical support to RPMs in FY96 include:

- Ottawa – Illinois radium site
- Maywood – New Jersey radium site
- Weldon Springs – DOE FUSRAP site in Missouri
- Rocky Flats – DOE facility in Colorado
- Kerr-McGee/West Chicago Thorium and Radium Site, Illinois
- Denver Radium Site, Colorado
- Oak Ridge Reservation, Oak Ridge, Tennessee
- Captains Cove Site, New York

Risk Assessment

EPA published the Radiation Exposure and Risk Assessment Manual (RERAM) in June, 1996 (EPA/402-R-96-016). This document explains how EPA developed its radionuclide cancer incidence slope factors. Since there were no updates to the radionuclide slope factors during FY96, no changes were made to these values in the Health Effects Assessment Summary Tables (HEAST). The HEAST and other radiation dose and risk modeling information were published on the Internet in September 1996, at the following web pages:

- <http://www.epa.gov/radiation/modeling/>
- <http://www.epa.gov/radiation/heast/>

In addition, two fact sheets focusing on ionizing radiation and health effects were also made available on the Internet in September 1996, at the following web page:

- <http://www.epa.gov/radiation/>

Representatives from OSWER and ORIA completed work with representatives from the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) during FY96 as part of an interagency workgroup evaluating environmental fate and transport modeling for radionuclides. Issues addressed include determining the mathematics for transport modeling and the estimation of water flow in specific underground conditions. Additional work by the multi-agency group included development of fact sheets, fate and transport modeling, and guidance documents. The final two documents from this interagency workgroup were published in January 1996.

- Documenting Ground Water Modeling at Sites Contaminated with Radioactive Substances (EPA/540-R-96-003)
- Three Multimedia Models Used at Hazardous and Radioactive Waste Sites (EPA/540-R-96-004)

Work continued on two other documents supporting fate and transport modeling: (1) a technical support document on the selection of

distribution coefficient (K_d) values and their use in remediation and contaminant transport modeling, and (2) a guidance document to evaluating unsaturated zone infiltration methodologies to assist remediation and contaminant transport modeling.

Technology Assessment

The following OERR/ORIA technology assessment projects were either initiated, completed, or continued during FY96.

EPA in conjunction with the Departments of Defense (DoD), DOE, NRC, the U. S. Geological Survey, the Food and Drug Administration, and the National Institute of Standards and Technology initiated development of the Multi-Agency Radiation Laboratory Protocols Manual (MARLAP). MARLAP, which is the laboratory counterpart to the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) will be a multi-agency consensus guidance document. MARLAP will provide guidance for laboratories and project planners to assure the generation of consistent and comparable data among laboratories and to assure that laboratory data is of sufficient quality to support the site-specific environmental decisions.

A mill tailings site in Fry Canyon, Utah was characterized as part of a field scale demonstration study investigating the effectiveness of several types of permeable reactive walls to control uranium contamination in the groundwater. ORIA staff also assisted the Superfund program in developing an approach for outlining presumptive remedies for soils contaminated with metals (including radionuclides).

A working group of industry, government, and academic representatives met in a technical workshop (October 1995) to discuss the latest developments in containment technologies. Proceedings from this workshop were published in the Spring of 1996, "Assessment of Barrier Containment Technologies: A Comprehensive Treatment for Environmental Remediation Applications."

EPA in conjunction with the DoD, DOE, and NRC continued working to develop the Multi-Agency Radiation Survey and Site

Investigation Manual (MARSSIM). When finalized, MARSSIM will be a multi-agency consensus guidance document. It will provide guidance for planning, conducting, evaluating, and documenting environmental radiological surveys for demonstrating compliance with dose-based or risk-based regulations. Internal agency review was completed in FY96, and the draft document was readied for public comment and external peer review.

Work also continued on a remedial technology selection decision support guidance for RPMs and OSCs responsible for radioactively contaminated sites. A guidance document to assist RPMs in performing or reviewing treatability studies for radiologically contaminated sites was also being rewritten. Finally, work continued on the Sandia Environmental Decision Support System (SEDSS). This software tool will eventually be available to DOE, DoD, EPA, and NRC for site characterization, cleanup and remediation decisions.

Technology Transfer

During FY96, ORIA presented workshops in EPA Regions 1, 3, 9, and 10 that were designed to present an overview of radiation risk assessment methodology to Regional Superfund staff. The target audience was familiar with chemical risk assessment methodology so the workshop emphasized the similarities and critical differences between chemical and radiation risk assessment.

Emergency Response

Staff from ORIA headquarters and two laboratories along with Region 6 OSCs participated in DOE's Digit Pace Exercise in Albuquerque, New Mexico. This exercise included the spread of radioactive contamination resulting from a transportation accident involving nuclear weapons and other hazardous materials.

ORIA and the State of Texas agreed to hold a Texas/EPA radiological exercise in Austin, Texas in September 1998. The exercise will examine the ability of EPA emergency response personnel to respond to a State request for assistance under both the National Contingency Plan (NCP) and the Federal Radiological Emergency Response Plan.

ORIA and OERR continued working on the EPA Radiological Emergency Response Plan which will delineate when a response is conducted under the NCP and the Federal Radiological Emergency Response Plan. The EPA plan will also designate which office has the lead for a particular response activity.

Policy Development and Implementation

EPA also continued participation on the Interagency Steering Committee on Radiation Standards (ISCORS). Efforts focused on harmonizing the approaches taken by EPA and NRC to risk assessment and risk management involving radiation hazards. Other issues being studied include modeling, recycling, mixed waste and interagency cooperation.

1.4.4 Site Evaluation Regulations and Guidance

During FY96, the Agency undertook several initiatives to enhance the site evaluation process including enforcing the state role in identifying NPL sites and issuing several site evaluation guidance documents.

Enforcing the State Role in Identifying NPL Sites

In FY96, the Department of Veteran Affairs and Housing and Urban Development, and Independent Appropriations Act, 1996, included a requirement that EPA must receive a written request from the Governor of the State in order for the Agency to propose to place a site on the NPL or to place a site on the NPL.

Issuing Site Evaluation Guidance

EPA published several site evaluation guidance documents and memorandums during FY96 including guidance on redeveloping contaminated property, partial site deletions, identifying sites eligible for archiving, and establishing soil screening levels.

EPA issued several crosscutting enforcement guidance documents related to redevelopment of

contaminated property. These guidance documents provide some assurance to prospective purchasers, lenders and property owners that they need not be concerned with Superfund liability:

- *"Guidance on Agreements with Prospective Purchasers of Contaminated Property;"*
- *"Policy Towards Owners of Property Containing Contaminated Aquifers;"*
- *"Policy on CERCLA Enforcement Against Lenders and Government Entities that Acquire Property Involuntarily;"* and
- *Policy on the Issuance of Comfort/Status Letters."*

EPA sent guidance to the Regions to map and track partial deletions at NPL sites on April 30, 1996. A partial deletion of an NPL site may occur when a portion of a formerly contaminated area of a site is determined by EPA to need no further action. Several Regions have published Notices of Intent to Delete and the Regions are re-evaluating sites to determine if a partial deletion is warranted. The partial deletion guidance was signed and sent to the Regions on April 30, 1996 (OERR Directive 9320.2-11). Although the guidance does not outline partial deletion procedures since they are the same as deletion procedures for total site deletion, it does focus on mapping and tracking partial deletions at NPL sites in order to better portray the Agency's successes. Region 6 published the first Notice of Intent to Delete (NOID) in the *Federal Register* on April 11, 1996 (61 FR 16068). Regions 4 and 10 subsequently have published three more NOIDs.

In June 1996, EPA provided guidance identifying types of sites eligible for archiving, and initiated efforts to research those sites remaining in the CERCLIS inventory and make archive decisions as appropriate. These actions, combined with completions of ongoing assessment work, have yielded over 28,000 federal and non-federal sites archived from CERCLIS through FY96.

EPA issued final soil screening guidance in May 1996. The soil screening levels established in the guidance serve as a basis for partial deletions of NPL

listings. They also will complement the ongoing SACM initiative and provide the framework for other cleanup efforts, such as RCRA corrective actions, voluntary cleanup programs, and State/Tribal cleanup programs. Additionally, the development of soil screening levels will be useful in streamlining baseline risk assessment.

EPA issued a pre-CERCLIS screening guidance in September, 1996. The purpose of this directive is to ensure that the Agency's CERCLA Information System becomes a more accurate inventory of hazardous substance sites while minimizing the number of sites unnecessarily entered into CERCLIS. This is accomplished by introducing pre-CERCLIS screening criteria which assists the Regions in identifying sites which are likely to be addressed by states or under federal authority other than CERCLA, those for that information on releases is insufficient to substantiate the presence of hazardous substances, or those for which sufficient information exists to show that risk is low. In this way, CERCLIS will become a list of sites that the regions and states/tribes believe, based on available data, will require a response using Superfund authorities and resources.

Chapter 2

Emergency Response Progress

Throughout the 16-year history of Superfund, removal actions have successfully prevented, minimized, or mitigated threats to human health, welfare, or the environment. EPA and potentially responsible parties (PRPs) have initiated 4,238 removal actions to address threats posed by the release or threatened release of hazardous substances, including 267 undertaken in FY96. During FY96, the EPA continued to look for opportunities to expand the use of removal authority to rapidly reduce risks and speed the pace of overall cleanup at Superfund sites.

This chapter discusses the removal action process, the progress achieved through Superfund removals in addressing threats to human health and the environment, the contributions of the Environmental Response Team (ERT), and emergency response rulemaking and guidance development.

2.1 Removal Action Process

Removal actions are taken in response to a release or threat of release of a hazardous substance or of a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. Examples of situations that may warrant removal actions include chemical spills or fires at production or waste storage facilities, transportation accidents involving hazardous substances, and illegal disposal of hazardous waste (midnight dumping). A removal action can occur at any point in the Superfund process. Managed by a federal On-Scene Coordinator (OSC), a removal action is often short-term, and addresses the most immediate threats. Removals comply with substantive applicable or relevant and appropriate requirements (ARARs) to

the extent practicable, given the exigencies of the situation. ARARs are substantive requirements of federal and more stringent state environmental laws.

When notified of a release or threat of release that may require a removal action, the Agency (or lead-Agency) conducts a removal site evaluation to determine the source and nature of the release, the threat to public health and the environment, and whether an appropriate response has been initiated. A removal site evaluation could be completed in minutes or months, depending on the specific incident and the information available to determine the need for a removal action. When the removal site evaluation is completed, the Agency reviews the results and other factors to determine the appropriate extent of a removal action. At any point in this process, EPA may refer the site for further evaluation or determine that no further action is necessary. When it concludes that a removal action is required, the Agency undertakes an appropriate response to minimize or eliminate the threat.

The Agency defines three kinds of removal actions based on the time available before a response action must be initiated. "Emergency" removal actions require a prompt response at the site. "Time-critical" removal actions are conducted when the Agency (or lead Agency) concludes that the action must begin within six months. For "non-time-critical" removal actions, the planning period may extend for more than six months; during this planning period, the lead agency conducts an engineering evaluation/cost analysis for the response actions and seeks public comment on the response options.

To document the selection of a response action, the Agency prepares an action memorandum that states the authority for initiating the action, the action to be taken, and the basis for selecting the response. EPA also establishes an administrative record, compiling the documents that form the basis for the selection of the response action. The following sections discuss additional aspects of the removal action process, including community involvement, the role of the OSC, and CERCLA limitations on the scope of removal actions.

Community Involvement in Removal Actions

EPA provides many opportunities for community involvement during the removal process. The Agency appoints an official spokesperson to keep the public informed of the progress of a given removal action. The administrative record file and index of documents maintained at the central location is made available to the public (except confidential portions) at a repository at or near the site and at EPA offices. If the removal action is expected to continue beyond 120 days, the lead agency must involve local officials and other parties in the process through such

activities as community interviews and a community relations plan.

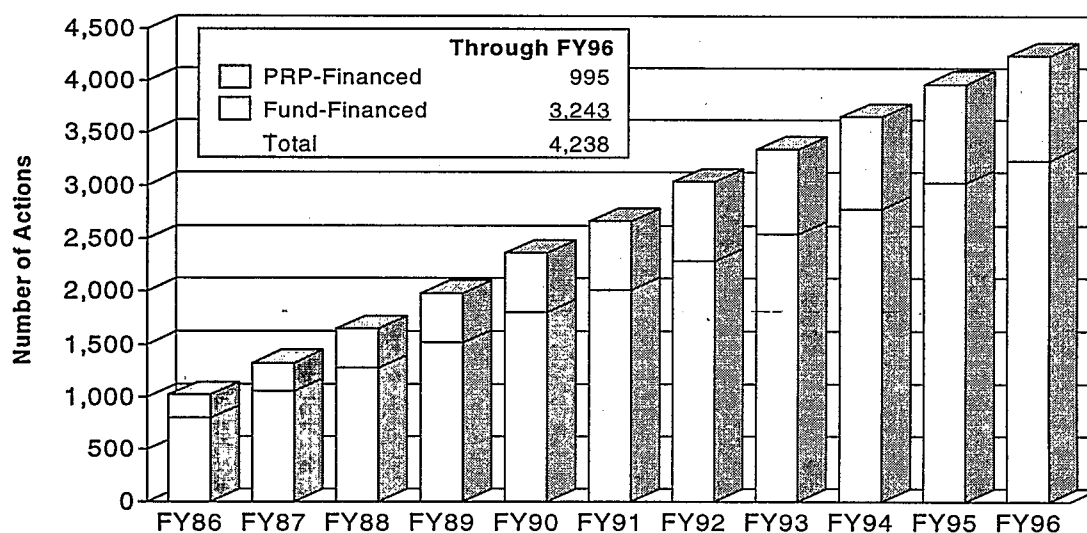
The On-Scene Coordinator

The OSC organizes, directs, and documents the removal action. The specific responsibilities of the OSC include conducting field investigations, monitoring on-scene activities, and overseeing the removal action. The OSC is required to prepare the action memoranda including description of the need for a removal response, the proposed action, and the rationale for the removal for all fund-financed actions conducted under removal authority. In addition, if requested by the National Response Team, the OSC will prepare a final report that describes the site conditions prior to the removal action, the removal action performed at the site, and any problems that occurred during the removal action.

Fund-Financed Removal Action Statutory Limits

Removal actions are generally short-term, relatively inexpensive responses to releases or threats

Exhibit 2.2-1
Cumulative Removal Action Starts



Source: CERCLIS. October 24, 1996.

of releases that pose a danger to human health, welfare, or the environment. Accordingly, Congress included limitations on removal actions in CERCLA. The cost of a removal action is limited to \$2 million, and the duration is limited to one year. Congress established exemptions from these limitations for specific circumstances. A removal action may exceed the monetary and time limits if:

- Continued response is required immediately to prevent, limit, or mitigate an emergency; there is an immediate threat to public health, welfare, or the environment; and such action cannot otherwise be provided on a timely basis; or
- Continued response action is otherwise appropriate and consistent with the remedial action (RA) to be taken.

During FY96, EPA granted 14 exemptions for removal actions to exceed the \$2 million limitation. In addition, EPA granted 15 exemptions allowing removal actions to continue for more than one year.

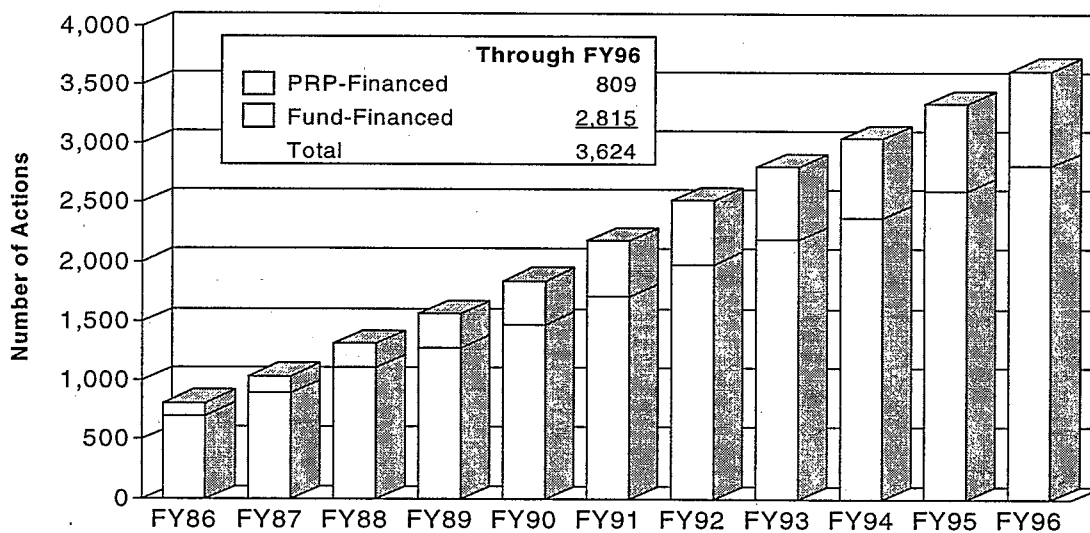
2.2 Fiscal Year 1996 Progress

Since the inception of Superfund, the Agency and PRPs have begun 4,238 removal actions at National Priorities List (NPL) and non-NPL sites to address threats to human health, welfare, or the environment posed by releases or potential releases of hazardous substances.

2.2.1 Status Report on Removal Progress

Of the 4,238 removal actions undertaken by EPA and PRPs under the Superfund program, 267 were started in FY96 (see Exhibit 2.2-1). Of these 267 removal actions, PRPs financed 56 and EPA financed 211. The removal actions started by PRPs included 13 removal actions at NPL sites and 43 removal actions at non-NPL sites. EPA started 29 removal actions at NPL sites and 182 removal actions at non-NPL sites. The 267 removal actions begun by EPA and PRPs in FY96 compared to 311 started in FY95.

**Exhibit 2.2-2
Cumulative Removal Action Completions**



Source: CERCLIS. October 24, 1996.

As shown in Exhibit 2.2-2, EPA and PRPs have completed 3,624 removal actions under the Superfund program, including 276 in FY96. Of the 3,624 removal actions completed during the fiscal year, PRPs financed 66, including 24 at NPL sites and 42 at non-NPL sites. EPA financed 210 of the completed removal actions, including 41 at NPL sites and 169 at non-NPL sites.

Removal actions that were begun but are not yet complete are considered "ongoing." Ongoing removals include actions that have been in progress less than 12 months at the end of a fiscal year and removal actions that have been granted exemptions from the statutory one-year duration limit. Sites where a removal action has taken place, including thermal treatment, but the contaminants have not yet been transported to a disposal facility are also defined as having ongoing removals.

2.3 Environmental Response Team Activities

Under the National Oil and Hazardous Substances Pollution Contingency Plan, EPA manages the ERT. Over its 16 years of service, this team of EPA experts has been available to OSCs and Remedial Project Managers to support removal and remedial actions 24 hours a day, 365 days a year. In addition to its response support, ERT conducts introductory and intermediate-level training courses in health and safety and other technical aspects of response. ERT provides expertise in emergency response, hazard assessment, health and safety, air monitoring, alternative and innovative technology, site investigation, ecological damage assessment, cleanup contractor management, and oil and chemical spill control.

During FY96, ERT conducted approximately 143 Superfund responses, and responded to 10 oil spills and 4 international incidents. ERT also offered 233 training courses nationwide.

2.4 Emergency Response Regulations and Guidance

Under the reportable quantity (RQ) regulatory program, the Agency proposed adjustments to certain

RQs and to several administrative reporting exemptions. In addition, the Agency continued updating the Superfund Removal Procedures (SRP) Manual.

2.4.1 Reportable Quantity Regulations

Section 102(b) of CERCLA, as amended, sets an RQ of one pound for hazardous substances, except those substances for which different RQs have been established in Section 311(b)(4) of the Clean Water Act. Section 102(a) of CERCLA authorizes EPA to adjust RQs for hazardous substances and to designate additional CERCLA hazardous substances.

Under CERCLA Section 103(a), the person in charge of a vessel or facility must immediately notify the National Response Center upon learning of a release of hazardous substance in a quantity that equals or exceeds its RQ. In addition to this reporting requirement, Section 304 of the Emergency Planning and Community Right-to-Know Act of 1986 requires that a release of a hazardous substance in a quantity that equals or exceeds its RQ (or one pound if a reporting trigger is not established by regulation) be reported to state and local authorities.

2.4.2 Reportable Quantity Exemptions

During FY96 the Agency reviewed and analyzed public comments on expanded exemptions from the reporting requirements of CERCLA Section 103 and EPCRA Section 304 for certain releases of naturally occurring radionuclides in preparation for promulgating a final rule on these exemptions. The expanded exemptions were proposed on August 4, 1995 (60 *FR* 40042). In that rule, the Agency proposed to grant reporting exemptions for releases of naturally occurring radionuclides associated with land disturbance incidental to extraction activities at certain kinds of mines, and coal and ash piles at all kinds of sites. The proposed exemptions were developed in response to public comments on a November 30, 1992 proposed rule on administrative reporting exemptions (57 *FR* 56726).

2.4.3 Removal Guidance

During FY96 EPA issued guidance entitled, *Questions and Answers on Release Notifications Requirements and Reportable Quantity Adjustments*. The guidance provides answers to common questions and concerns raised to the Agency by the regulated community and the general public. The purpose of the guidance was to promote a better understanding of CERCLA and EPCRA release notification requirements and the RQ adjustment process. Also during FY96, EPA completed the last draft of the guidance document, *Removal Response to Radiation Sites: Reference Document*. The guidance provides OSCs with references and a planning guide for conducting removal actions involving radioactive materials.

This page intentionally left blank

Chapter 3

Remedial Progress

The Agency's progress during FY96 illustrated its continuing commitment to accelerating and completing cleanups at Superfund sites. The Agency started more than 116 remedial actions (RAs) to construct remedies, and completed construction activities to place 64 sites in the construction completion category. To date under the Superfund program, the Agency has completed clean-up activities to place a total of 410 National Priorities List (NPL) sites in the construction completion category. This chapter describes the remedial progress during the fiscal year. Specifically, this chapter provides information on:

- FY96 progress in remediating NPL sites;
- Remedies selected during FY96;
- FY96 results of five-year reviews under CERCLA Section 121(c) at sites where contamination remained after the initiation of the RA;
- FY96 efforts to develop and use innovative treatment technologies, including an evaluation of newly developed and achievable permanent treatment technologies, as required by CERCLA Section 301(h)(1)(D); and
- Other programs to improve remedial efforts at sites.

3.1 Remedial Process

The remedial process complements the removal process (see Chapter 2) by addressing more complicated, long-term evaluation and response for hazardous waste sites on the NPL. The remedial

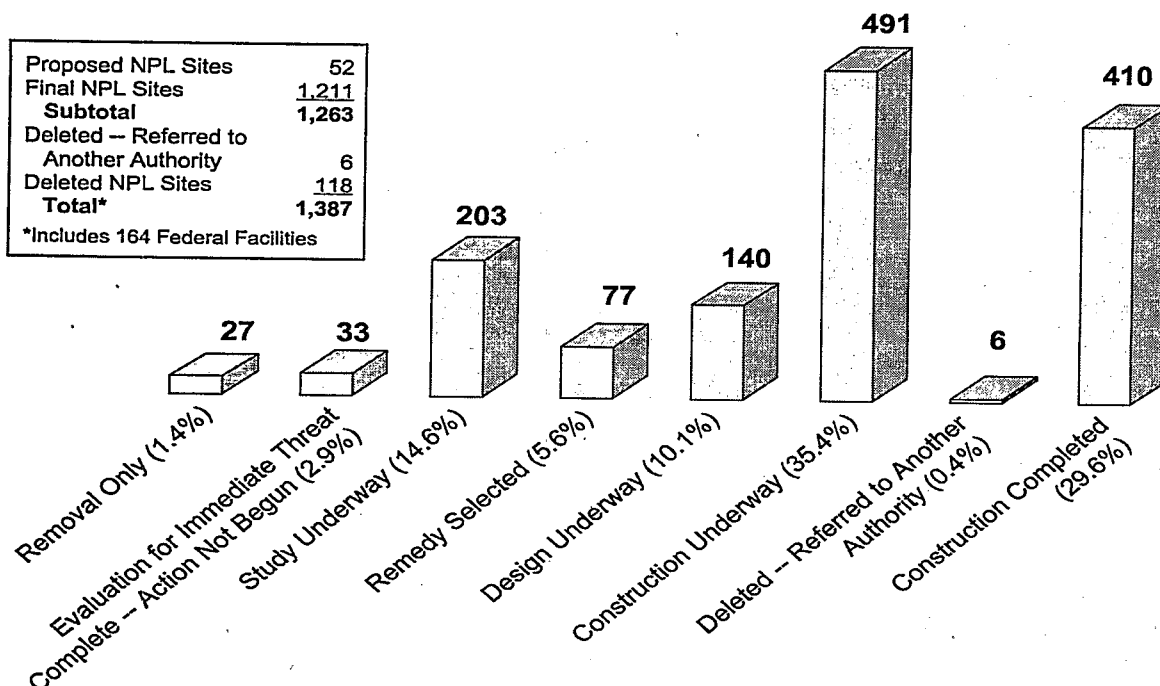
process is preceded by the site evaluation process, which consists of the discovery or identification of a potential site, the preliminary assessment of the site, and the site inspection (SI). During the SI, the site is evaluated for possible listing on the NPL. If a site is listed on the NPL after the SI, the Trust Fund can be used to finance cleanup activities at the site under the remedial authority of CERCLA.

The remedial process to clean up NPL sites is comprised of the following activities:

- The remedial investigation/feasibility study (RI/FS) to determine the type and extent of contamination and to evaluate and develop remedial cleanup alternatives;
- The record of decision (ROD) to identify the remedy selected, based on the results of the RI/FS and public comment on the cleanup alternatives;
- The remedial design (RD) to develop the plans and specifications required to construct the selected remedy;
- The remedial action (RA) to implement the selected remedy, from the start through the completion of construction of the remedy; and
- Operation and maintenance (O&M) to ensure the effectiveness and/or integrity of the remedy. O&M occurs after implementation of a response action.

A Remedial Project Manager (RPM) oversees all remedial activities and related enforcement activities. Regional coordinators at EPA Headquarters assist

Exhibit 3.2-1
Work Has Occurred at Over 97 Percent of the National Priorities List Sites



Source: CERCLIS (as of September 30, 1996).

RPMs by reviewing remedial and enforcement activities and by answering technical and policy questions.

3.2 Fiscal Year 1996 Remedial Progress

The Agency's progress during the fiscal year in initiating RAs and completing construction activities to classify sites as construction completions indicates its continuing commitment to accelerate the cleanup of NPL sites. By the end of FY96, work had occurred at over 97 percent of the 1,387 NPL sites. In addition, over 124 sites were removed from the NPL. Exhibit 3.2-1 illustrates the status of the work at NPL sites, showing sites by the most advanced stage of activity accomplished. The following sections of this chapter highlight progress made at the sites during FY96.

3.2.1 Construction Completions

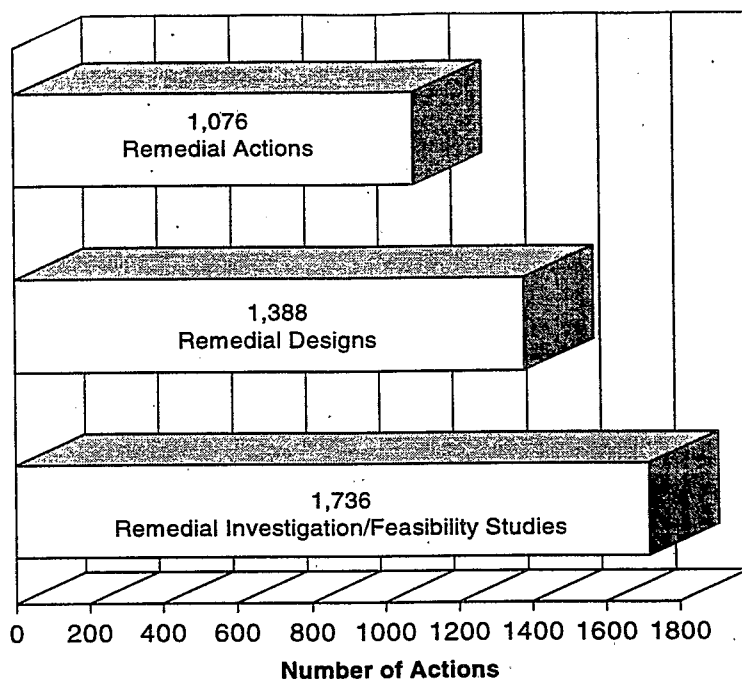
Responding to the recommendations of the 1991 30-Day Study and the 1993 Superfund Administrative Improvements Task Force, the Agency has worked to accelerate and complete cleanup at NPL sites. The Agency completed construction activities at 64 sites during FY96, bringing the total number of sites in the construction completion category to 410. Nearly 50 percent of the construction completions have been achieved in the past three years.

3.2.2 New Remedial Activities

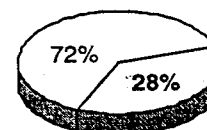
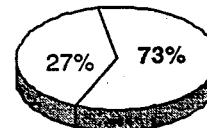
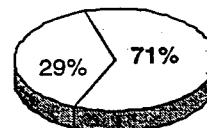
As shown in Exhibit 3.2-2, the Agency or potentially responsible parties (PRPs) had undertaken approximately 1,736 RI/FSs, 1,388 RDs, and 1,076 RAs since the inception of the Superfund program through the end of the FY96.

The remedial activities started during FY96 reflect the Agency's continued emphasis on

Exhibit 3.2-2

Remedial Accomplishments Under the Superfund Program
for Fiscal Year 1980 Through Fiscal Year 1996

FY96 Remedial Accomplishments



□ PRP-Financed Actions
□ Funded-Financed Actions

Source: CERCLIS. October 24, 1996.

accelerating the pace of cleanup and focusing resources on RAs. New remedial activities undertaken this fiscal year include:

RI/FS Starts: The Agency or PRPs started approximately 36 RI/FSs during FY96, including 26 (72 percent) financed by EPA and 10 (28 percent) financed by PRPs.

RD Starts: The Agency or PRPs started approximately 74 RDs during FY96, including 20 (27 percent) financed by EPA and 54 (73 percent) financed by PRPs.

RA Starts: The Agency or PRPs started 116 RAs during FY96. EPA was financing 34 (29 percent) and PRPs were financing 82 (71 percent).

3.2.3 Status of Remedial and Enforcement Activities in Progress

At the end of FY96, 1,766 RI/FS, RA, and RD projects were in progress at 845 sites. Projects in

progress at the end of FY96 included 1,396 RI/FS and RA projects and 370 RD projects. As required by CERCLA Sections 301(h)(1)(B),(C), and (F), a listing of the RI/FS and RA projects in progress at the end of FY96 is provided in Appendix A, along with a projected completion schedule for each project. A listing of all RDs in progress at the end of FY96 is provided in Appendix B.

Of the 1,396 RI/FS and RA projects in progress at the end of FY96, 57 percent were on schedule, ahead of schedule, started during the fiscal year, or had no previously published completion schedule, and 43 percent were behind schedule. These projects include 439 on schedule, 37 ahead of schedule, 223 started during the fiscal year, 94 that had no previously published completion schedule, and 603 that were behind schedule. Exhibit 3.2-3 compares the number of projects in progress at NPL sites at the end of FY96 with the number in progress at the end of FY95, by lead.

PRPs were conducting 429 of the RI/FS and RA projects in progress at the end of FY96. Of these 429 PRP-financed projects, 56 percent were on schedule, ahead of schedule, started during the fiscal year, or had no previously published completion schedule, and 44 percent were behind schedule. Projects include 125 on schedule, 10 ahead of schedule, 80 started during the fiscal year, 23 that had no previously published completion schedule, and 191 that were behind schedule.

3.2.4 Remedy Selection

The Agency signed 156 RODs in FY96, including 44 new and amended ROD for PRP-financed sites, 31 RODs for Fund-financed sites, and 81 RODs for federal facility sites. For comparison, in FY95, 187 RODs were signed, including 52 new and amended RODs for PRP-financed sites, 53 RODs for Fund-financed sites, 82 RODs for federal facility sites. The ROD documents

the results of all studies performed on the site, identifies each remedial alternative that the Agency considered, and explains the basis for selecting the remedy. The ROD is signed after the RI/FS is completed and the public has had the opportunity to comment on the remedial alternatives that are being considered to clean up the site.

The Agency selected a variety of remedies in FY96 RODs, based on a careful analysis of characteristics unique to each site and the proximity of each site to people and sensitive environments (wetlands and endangered wildlife are examples of environmental resources that are taken into consideration when evaluating remedies). Congress, with the enactment of SARA, indicated that EPA should give preference to permanent remedies, such as treatment, rather than temporary remedies, such as containment.

A complete list of the 156 RODs signed during FY96 is provided in Appendix C. To fulfill the

**Exhibit 3.2-3
Projects in Progress at National Priorities List Sites
by Lead for Fiscal Year 1995 and Fiscal Year 1996**

	RI/FS		RDs		RAs	
	FY95	FY96	FY95	FY96	FY95	FY96
Fund-Financed—State-Lead	15	20	18	20	37	37
Fund-Financed—Federal-Lead ¹	135	136	89	77	100	110
Fund-Financed—EPA Performs Work at Site ²	9	8	4	0	2	2
PRP-Financed and PRP-Lead	179	161	218	192	241	268
Mixed Funding—Monies from Fund and PRPs	3	3	1	0	4	6
PRP-Financed—State Order and EPA Oversight ³	23	22	12	11	26	29
State Enforcement	2	2	1	1	0	0
Federal Facility	470	450	70	69	106	142
Total	836	802	413	370	516	594
¹ Includes remedial program-lead projects and enforcement program-lead projects. ² Projects at which EPA employees, rather than contractors, perform the site cleanup work. ³ Projects where site cleanup work is financed and performed by the PRPs under state order, with EPA oversight.						

Sources: *Progress Toward Implementing Superfund*: FY95 (Appendices A and B) and FY96 (Appendices A and B).

statutory requirement of CERCLA Section 301(h)(1)(A) to provide an abstract of each feasibility study (i.e., ROD), the National Technology Information Services (NTIS) can provide requested RODs. Appendix C provides detailed information on how to make these ROD requests.

3.3 Remedy Improvement Programs

In addition to selecting remedies in the RODs, EPA undertakes numerous programs to facilitate remedy implementation and to encourage the use of innovative technologies at NPL sites that are better, faster, and more cost-effective than available technologies. These include the Superfund Innovative Technology Evaluation (SITE) program, the Superfund Technical Assistance Programs, the Technology Transfer and Interagency Coordination Programs, and other programs. The FY96 accomplishments of these programs are detailed in the sections below.

3.3.1 Superfund Innovative Technology Evaluation (SITE) Program

The SITE program was established more than ten years ago to encourage the development and implementation of innovative treatment technologies for hazardous waste site remediation. Development of this program was in direct response to the legislative mandate under the 1986 Superfund Amendments and Reauthorization Act (SARA). SITE is the pioneer program in testing and evaluating innovative treatment technologies.

Exhibit 3.3-1 displays three of the four components of the program with the number of FY96 accomplishments. The fourth component, Technology Transfer, involves publication and distribution of SITE program results.

The SITE Emerging Technology Program was discontinued in 1996 in an effort to reduce expenditures. The program continues to honor commitments to technology developers currently in the program, but new technologies were not admitted into the program after 1995.

Exhibit 3.3-1 FY96 SITE Program Accomplishments

	FY96 Projects	Cumulative Projects
Demonstration Program	4	86
Emerging Technology Program	4	57
Characterization and Monitoring Program	0	31

The Characterization and Monitoring Program has leveraged its resources with EPA's Environmental Technology Verification Program. These programs, now known collectively as the Consortium for Site Characterization Technologies (CSCT), have developed a partnership agreement with the Department of Energy to identify the topics and procedures of mutual interest. This agreement will allow the CSCT portion of the SITE program to supplement its funding of characterization and monitoring demonstrations and will also include the expertise of DOE's national laboratories to assist in the demonstrations process. As a result of decreased funding, no new demonstrations were conducted during FY 96.

More detail on the SITE program is available in *The Superfund Innovative Technology Evaluation Program Annual Report to Congress, FY 1996* (EPA/540/R-97/508), September 1997.

3.3.2 Superfund Technical Assistance Programs

Superfund projects require broad technical knowledge and expertise. To provide multidisciplinary expertise and technical support for Superfund cleanups, the Agency sponsors the Technical Support Centers (TSCs) and the Groundwater, Engineering, and Federal Facilities Forums. The goals of these technical assistance programs are to increase the speed and quality of Superfund cleanups, reduce clean-up costs, address technical issues encountered in site cleanup, and provide Regional Superfund staff with direct access to the technical expertise and resources of the Agency's researchers.

Technical Support Centers and Superfund Technical Assistance Response Team

In FY96, the Agency funded TSCs at four ORD laboratories. ORD also sponsored the START program. The purpose of the TSCs and the START program is to provide site-specific technical assistance in the areas of release response, site characterization, human health risk assessment, ecological assessment, radiological evaluation, ground-water remediation, and engineering. The TSCs and START program are invaluable to the Agency's Superfund effort, fulfilling a critical niche in developing and delivering the best expertise available in support of faster, better, and more cost-effective cleanups. The TSCs funded in FY96 are listed below. Annual funding totaled \$1.7 million.

- **Monitoring and Site Characterization TSC:** ORD-National Exposure Research Laboratory (NERL), Characterization Research Division – Las Vegas, Nevada
- **Health Risk Assessment and Toxicology TSC:** ORD-NERL, Human Exposure Research Division – Cincinnati, Ohio
- **Engineering and Treatment TSC:** ORD-National Risk Management Research Laboratory (NRMRL) – Cincinnati, Ohio
- **Ground-Water Characterization and Remediation TSC:** ORD-NRMRL, Subsurface Protection and Remediation Division – Ada, Oklahoma

NRMRL also sponsors the START program, which provides intensive, long-term, site-specific technical and engineering support to provide better, faster, and more cost-effective remediation at Superfund sites with difficult engineering problems or sites of national significance. Sites admitted into the START program are nominated by EPA's Regional offices.

Groundwater, Engineering, and Federal Facility Forums

The Groundwater, Engineering, and Federal Facility Forums are regional volunteers who share a common concern of, and commitment to, EPA consistency in the type and quality of information needs for hazardous site remediation. They discuss technical and policy issues in monthly conference calls and meet once or twice a year (usually jointly with other federal agencies) to discuss technical issues representatives of the ORD TSCs and Headquarter's program offices.

In June, the Forums held an annual meeting in San Francisco, in conjunction with researchers from the Naval Facilities Engineering Services Center, Port Hueneme and Navy Remedial Project Managers from South West Division, San Diego. Some of the activities in which the Forums participated in FY96 include: initiated or reviewed five technical issue papers; provided comments on the DOE course "Principals of Environmental Restoration;" developed a subcommittee to draft guidelines for sampling wells in low flow aquifers; and commented on OSWER's draft position paper on natural attenuation, OERR's Soil Screening Guidance, the Air Force report "Natural Attenuation of Hydrocarbons," the Air Force protocol on chlorinated hydrocarbons, and the DoD Range Rule. The Forums also developed and distributed a summary of the two Air Force documents.

3.3.3 Technology Transfer and Inter-agency Coordination Programs

TIO, as a producer of technological information, is widely recognized as a leader in the technology innovation arena. Since its creation in 1990, TIO has identified, cataloged, and disseminated information to users related to technology demonstration and use, markets, procurement, and support services.

TIO also has brought federal agencies, academics, and the private sector together to demonstrate and evaluate technologies, and to remove impediments to their use. The following sections detail FY96 technology transfer and interagency information sharing efforts, including forums and conferences, demonstrations and

evaluations of innovative technologies, and reference materials.

Innovative Technology Forums and Conferences

To encourage collaborative efforts across EPA, other federal agencies, academics, and the private sector, EPA sponsored forums, conferences, and a center for exchanging information on innovative technologies. The Agency also participated in international information exchanges.

Ground-Water Remediation Technologies Analysis Center (GWRTAC): EPA continued to fund GWRTAC to enhance information exchange between groundwater technology developers and users. GWRTAC activities include monitoring the state of development of groundwater remediation technologies, compiling current data; analyzing data to identify trends and to provide technology summaries; and distributing the information in hard-copy and electronic form worldwide. GWRTAC is operated by the National Environmental Technologies Applications Center, in association with the University of Pittsburgh's Environmental Engineering Program.

Federal Remediation Technologies Roundtable: Through this forum, TIO provides an information exchange network for federal agencies that are conducting applied research and developing innovative remediation techniques. In FY96, the Roundtable published two documents, *Accessing Federal Databases for Contaminated Site Cleanup Technologies, Fourth Edition* and *Accessing the Federal Government: Site Remediation Technology Programs and Initiatives, First Edition*.

Bioremediation Action Committee: The BAC, co-chaired by TIO and ORD, is a partnership of experts from government, industry, and academia dedicated to expanding the use of bioremediation in treatment, control, and prevention of environmental contamination. In its August 1996 meeting, the BAC developed three subcommittees to address new research needs: alternative endpoints, natural attenuation, and oil spills. Subcommittees coordinate joint research and applied development activities across organizations, transfer information, identify

priorities, and conduct projects to accomplish BAC goals.

Marketplace Conferences: The purpose of these conferences is to highlight business opportunities and markets for vendors and developers of innovative treatment technologies. The conferences bring together top-level state, EPA, DoD, DOE, and Department of Commerce officials with business executives from technology firms. TIO held its fifth conference in Philadelphia in November 1995.

International Efforts: EPA continued to participate in the NATO-CCMS Pilot Study, a joint effort with 13 country participants to exchange information on innovative technologies to clean up sites.

Efforts to Demonstrate and Evaluate Innovative Treatment Technologies

To encourage increased use of innovative treatment technologies, OSWER issued its policy directive (OSWER Directive #9380.0-25) on the use of innovative technology in waste management programs, which sets forth nine initiatives in this area. Two of the initiatives were included in the Superfund Administrative Reforms. The first reform, Risk Sharing: Implementing Innovative Technology, allows EPA to share risks associated with implementing innovative technologies by underwriting the use of certain promising innovative approaches for a limited number of approved projects. Several Regions have identified candidate sites for this initiative, and EPA has entered into one risk sharing agreement with PRPs at the Somersworth Landfill site in New Hampshire. The second reform, Risk Sharing: Identifying Obstacles to Using Innovative Technology, was to explore and identify contractor concerns with the selection and use of innovative technologies. This issue was addressed in the directive by expanding indemnification coverage to include both the prime contractor and the innovative technology contractor when indemnification is offered. To date, this protection has not been requested by any vendors or primes.

TIO also engaged in two collaborative efforts among government agencies, research organizations, and the private technology user industry to jointly implement and evaluate innovative technologies.

The *Clean Sites Public-Private Partnership* is led by Clean Sites, Inc., a non-profit public interest and research organization, under a cooperative agreement with TIO. The technologies in this program are generally past the research and development stage. In FY96 six technology evaluation partnership projects continued: McClellan Air Force Base, California; Pinellas DOE Plant, Florida; Mound DOE Facility, Ohio; Massachusetts Military Reservation/Otis Air National Guard Base, Massachusetts; Lasagna Project (DOE); and Naval Air Station, North Island, California.

Technologies evaluated under the *Remedial Technologies Development Forum* (RTDF) are in earlier research and development stages. In FY96 there were five action teams dealing with separate remediation areas: Lasagna™ partnership, Permeable Barriers Action Team, Sediments Remediation Action Team, INERT Soil-Metals Action Team, and the Bioremediation Consortium. This year, the teams were conducting demonstrations at two sites: Paducah Gaseous Diffusion Plant, Kentucky (DOE) and Dover Air Force Base, Delaware.

Reference Materials

To encourage use of innovative technologies, the Agency provides and maintains a variety of reference materials on the technologies. Examples include electronic sources of information on innovative treatment technologies, hard copy publications, and traveling information booths.

Electronic Information

The Agency currently sponsors a variety of electronic sources of information on innovative treatment technologies. In FY96, TIO created its CLU-IN homepage on the Internet. TIO also released the first version of the Vendor Analytical and Characterization Technologies System (Vendor FACTS), and the sixth version of the Vendor

Information System for Innovative Treatment Technologies (VISITT).

Publications

TIO also has developed several publications that provide information on new developments and applications of innovative treatment technologies:

The Innovative Treatment Technologies: Annual Status Report provides technical background information and information on the selection and use of innovative treatment technologies at Superfund sites. The report is designed to enhance communication among vendors, experienced technology users, and those who are considering using innovative treatment technologies to clean up contaminated sites. In FY96, TIO made available the supplemental database to the 7th Edition of this report. The database contains site specific information on almost 300 innovative technology projects.

Completed North America Innovative Technology Demonstration Projects, also published this year, provides a matrix summarizing 259 government-sponsored demonstrations of innovative cleanup technologies. The matrix includes basic project information such as technology type, contaminants treated, demonstrations dates, reports available, and contacts.

Regional Market Surveys. TIO published *Market Opportunities for Innovative Site Cleanup Technologies: Southeastern States* (EPA542-R-96-007) and *Regional Market Opportunities for Innovative Site Cleanup Technologies: Middle Atlantic States* (EPA542-R-96-010). These documents give state- and site-specific information on the numbers and types of sites still requiring remediation in these two regions.

Tech Trends and *Ground Water Currents* are two newsletters distributed by TIO. These newsletters are published quarterly and are distributed to interested subscribers, including federal and state project managers, consulting engineers, academics, and technology users. In FY96, TIO published three issues of *TechTrends* and three issues of *Ground Water Currents*.

Citizen Guides are four-page descriptions of innovative technologies written in less technical language to be understood by the layperson. In FY96, TIO published eight revised and two new guides, including Spanish-language versions of each.

Traveling Information Booths

TIO also sponsored several traveling information booths that were sent to hazardous waste remediation conferences and other meetings around the country. These displays were major outlets for dissemination of EPA materials and database information on innovative remediation technologies. In FY96, the booth traveled to approximately 20 venues including state meetings and technical conferences.

3.4 Report on Facilities Subject to Review Under CERCLA Section 121(c)

Certain remedies, such as containment remedies, allow hazardous substances, pollutants, or contaminants to remain on site if they do not pose a threat to human health or the environment. CERCLA Section 121(c), as amended by SARA, requires that any post-SARA remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site be reviewed at least every five years after the initiation of such remedial action. Such reviews assure that human health and the environment are being protected by the selected remedial action. These five-year reviews are referred to as "statutory" reviews. Section 121(c) requires the Agency to report to Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result.

As a matter of policy, EPA also conducts a five-year review for sites where hazardous substances, pollutants, and contaminants will not remain on site upon completion of the remedy, but where the remedy will take longer than five years. These policy reviews are conducted every five years until the remedial action is complete and achieves cleanup levels that allow for unlimited use and unrestricted exposure. Additionally, at least one policy review is conducted for pre-SARA sites where upon attainment of the ROD cleanup levels, the remedial

action will not allow for unlimited use and unrestricted exposure.

"Policy" reviews were announced in Office of Solid Waste and Emergency Response (OSWER) Directive 9355.7-02, May 23, 1991, *Structure and Components of Five-Year Reviews*. Guidelines for the conduct of five-year reviews were further articulated in two supplemental directives in 1994 and 1995. The determination of whether a site requires a statutory or policy five-year review is generally made based on information provided in the ROD.

FY96 was the sixth year in which sites were eligible for five-year review. Headquarters data indicated that a total of 43 sites required five-year reviews in FY96. A total of 35 five-year reviews were completed in FY96, as illustrated in Exhibit 3.4-1. Three reviews were done for different portions of a single site, the Naval Air Engineering Station. Thus, 33 sites were reviewed during FY96. Reviews for eight sites were due in prior fiscal years. Reviews for fifteen sites were completed early and were due in later fiscal years. Headquarters data initially suggested that two of the reviews were not required. However, the Regions identified these sites as requiring reviews and submitted reports.

Of the 33 sites that were reviewed during FY96, 23 required statutory reviews and 10 required policy reviews. EPA determined that the remedies continue to protect human health and the environment at 29 of the 33 sites. Ongoing remedies are included among those considered protective. For the remaining four sites, the review report either did not include a protectiveness determination or stated that remedies do not currently protect human health and the environment. These four sites are addressed below:

1) The Picatinny Arsenal report did not include a protectiveness determination. It recommended that an additional well be added and that the delivery system be cleaned and upgraded so that the pump-and-treat system will fulfill its objective of arresting the flow of contaminated groundwater into Green Pond Brook.

2) The Gratiot County Landfill report did not include a protectiveness determination. The attached site

review and update stated that there is not an apparent health hazard at this time.

3) The Wildcat Landfill report stated that the site is not currently considered protective due to certain site conditions and outstanding administrative issues. Issues at the site include missing perimeter signs, not meeting the target survival rate for groundcover in some areas, the development of seeps in some areas of wetlands, and the protrusion of a drum through the landfill cover. Also, groundwater data at the site did not show any significant change in contaminants.

4) The Palmerton Zinc Pile report stated that the remedy is not at this time protective of human health and the environment. It noted that vegetation of some portions of the Cinder Bank was not adequate, and that a future operable unit will investigate many of the concerns at the site.

Exhibit 3.4-1
Sites at Which Five-Year Reviews, Required Under CERCLA
Section 121(c), Were Conducted During Fiscal Year 1996

Region	State	Site Name	Review Date	Type
2	NJ	Naval Air Engineering Center, Area C ^{1*}	2/16/96	Statutory
2	NJ	Naval Air Engineering Station, Area H*	2/16/96	Statutory
2	NJ	Naval Air Engineering Station, Site 28*	9/16/96	Statutory
2	NJ	Picatinny Arsenal ¹	5/24/96	Statutory
2	NY	SMS Instruments Inc. ²	1/22/96	Statutory
3	PA	Berks Sand Pit ²	12/15/95	Policy
3	PA	Butz Landfill ²	9/17/96	Statutory
3	PA	Middletown Air Field ²	9/17/96	Statutory
3	PA	Palmerton Zinc Pile ¹	9/26/96	Statutory
3	DE	Sealand Limited ²	9/24/96	Policy
3	DE	Wildcat Landfill ¹	8/26/96	Statutory
4	NC	Celanese Shelby Fibers OU2 ³	12/4/95	Statutory
4	FL	Hipps Road Landfill ²	2/21/96	Policy
4	TN	Mallory Capacitor Co. ²	9/24/96	Statutory
4	NC	National Starch & Chemical Corp. ¹	6/18/96	Statutory
5	MI	Gratiot County Landfill ⁴	7/9/96	Statutory
5	WI	Hagen Farm ¹	8/14/96	Statutory
5	IN	IMC Terre Haute East Plant ³	9/27/96	Statutory
5	IN	Lake Sandy Jo/M&M Landfill ²	3/26/96	Policy
5	MN	Lehillier Mankato Site ²	6/26/96	Policy
5	OH	Old Mill ¹	1/17/96	Policy
5	MN	Reilly Tar and Chemical St. Louis Park ³	3/28/96	Statutory
5	WI	Wausau Groundwater Contamination ²	8/20/96	Policy
6	LA	Bayou Bonfouca ¹	9/25/96	Statutory
6	TX	Highlands Acid Pit ⁴	11/2/95	Statutory
7	MO	Weldon Spring Quarry/Plant ¹	6/20/96	Statutory
8	MT	Burlington Northern (Somers Plant) ²	9/4/96	Statutory
8	CO	California Gulch ²	2/2/96	Statutory
8	CO	Marshall/Boulder Landfill ²	11/13/95	Policy
8	UT	Ogden Defense Depot ²	6/21/96	Policy
9	CA	City of Coalinga Operable Unit ³	5/15/96	Statutory
9	CA	Coast Wood Preserving ³	2/5/96	Statutory
9	CA	Intel Corp. (Santa Clara III) ²	11/6/95	Policy
9	AZ	Motorola Inc. (52nd Street Plant) ³	11/16/95	Statutory
9	CA	Sacramento Army Depot Activity ³	5/3/96	Statutory

1) Due in FY96; 2) Early -- due after FY96; 3) Late -- due prior to FY96; 4) Review not previously required.

* Three five-year reviews were done for different portions of the Naval Air Engineering Station site in FY96.

Source: Five-Year Review Program Implementation and Management System

This page intentionally left blank

Chapter 4

Enforcement Progress

The Superfund enforcement program uses the enforcement provisions of CERCLA, as amended by SARA, to maximize the involvement of potentially responsible parties (PRPs) in the cleanup of Superfund sites. The Agency's enforcement goals are to:

- Maintain high levels of PRP participation in conducting and financing cleanup through use of EPA's statutory authority;
- Ensure fairness and equity in the enforcement process; and,
- Recover Superfund monies expended by EPA for response actions.

FY96 accomplishments illustrate the continuing success of EPA's Superfund enforcement efforts. EPA achieved enforcement agreements worth over \$888 million in PRP response work. PRPs financed approximately 73 percent of the remedial designs (RD) and 71 percent of the remedial actions (RA) started during the fiscal year. Through its cost recovery efforts, EPA achieved \$451 million in settlements and collected more than \$252 million for reimbursement of Superfund expenditures.

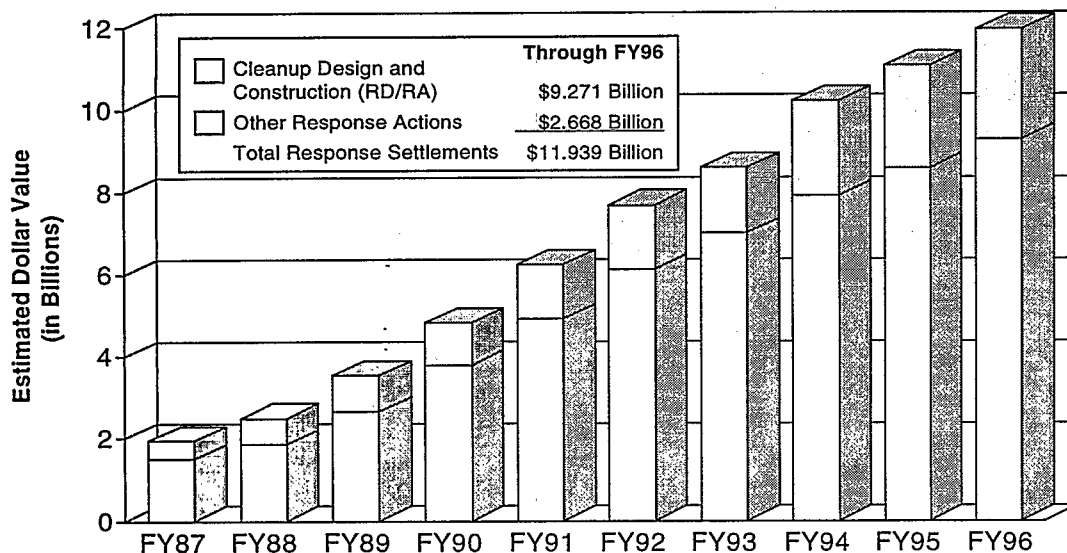
4.1 The Enforcement Process

The Superfund program integrates enforcement and response activities. To initiate the enforcement process, EPA identifies PRPs, notifies them of their potential liability, and seeks to negotiate an agreement with them to perform or pay for cleanup. If agreement is reached, the Agency oversees the work performed under the legal settlement. If the PRPs do not settle, EPA may issue a unilateral

administrative order (UAO) compelling them to perform the work. If PRPs do not comply with the UAO, EPA may conduct the cleanup itself using Superfund monies and later pursue a cost recovery action against the PRPs. These steps are fundamental for obtaining PRP involvement in conducting response activities and recovering expended Trust Fund monies. The Superfund enforcement process is explained in more detail below.

- When a site is being proposed for the National Priorities List (NPL), or when a removal action is required, EPA conducts a PRP search to identify parties who may be liable for site cleanup and collect evidence of their liability. PRPs include present and past owners or operators of the site, generators of waste disposed of at the site, and transporters who selected the site for the disposal of hazardous wastes.
- EPA notifies parties of their potential liability for future cleanup work and any past response costs incurred by the government, thus beginning the negotiation process between the Agency and the PRPs.
- EPA encourages PRPs to settle with the Agency and undertake cleanup activities, specifically to start removal actions, remedial investigation/feasibility studies (RI/FSs), or remedial design/remedial action (RD/RA). If PRPs are willing and capable of doing the response work, the Agency will attempt to negotiate an agreement allowing the PRPs to conduct and finance the proposed work and reimburse past government costs. For RD/RA, the settlement must be in the

Exhibit 4.2-1
Cumulative Value of Response Settlements
Reached With Potentially Responsible Parties



Source: CERCLIS.

form of a judicial consent decree (CD) that is lodged with a court by the Department of Justice (DOJ). For other types of response actions, the agreement may be in the form of a CD or an administrative order on consent (AOC) issued and signed by the EPA Regional Administrator. Both agreements are enforceable in a court of law. Under either agreement, PRPs conduct the response work under EPA oversight. PRPs who settle may later seek contribution toward the cost of the cleanup from non-settling PRPs by bringing suit against them.

- If negotiations do not result in a settlement, CERCLA Section 106 provides EPA with the authority to issue a UAO requiring the PRPs to conduct the cleanup; EPA may also bring suit through DOJ to compel PRPs to perform the work. If the Agency issues a UAO and the PRPs do not comply, the Agency again has the option of filing a lawsuit to compel the performance specified in the order or to perform the work itself and then seek cost recovery and treble

damages. Where the PRP notifies EPA in writing of its intent to comply with a UAO, EPA classifies the UAO as a settlement. Although UAOs in compliance are technically not legal settlements, they are counted as such programmatically because they result in PRPs performing response work.

- If a site is cleaned up using Superfund monies, DOJ will file suit on behalf of EPA, when practicable, to recover monies spent. Many of these suits to recover past costs will also include EPA claims for estimated future costs. Any sums recovered from the PRPs are returned to the Trust Fund.

4.2 Fiscal Year 1996 Superfund Enforcement Progress

FY96 progress reflects the continuing success of Superfund enforcement efforts in securing PRP participation in Superfund cleanup and recovering

Trust Fund monies expended by EPA in its response efforts.

4.2.1 Settlements for Response Activities

During FY96, the Agency reached 154 settlements (CDS, AOCs, CAs, or UAOs in compliance) with PRPs for response activities worth over \$888 million. As shown in Exhibit 4.2-1, the cumulative value of PRP response settlements achieved under the Superfund program is almost \$12 billion.

Of the 154 settlements achieved in FY96, 68 settlements worth over \$700 million were for RD/RA. These RD/RA settlements included 39 CDS referred to DOJ for work estimated at \$487 million, 9 AOCs and 1 consent agreement for approximately \$17 million, and 19 UAOs in compliance for \$196 million. These RD/RA settlements include 42 RD/RA negotiations started and 64 RD/RA negotiations completed by EPA during the fiscal year.

During FY96, the Agency issued 70 UAOs. The Agency also signed 111 AOCs. The UAOs issued and the AOCs signed include agreements for removal actions, RI/FSs, RD, and RD/RA.

4.2.2 PRP Participation in Cleanup Activities

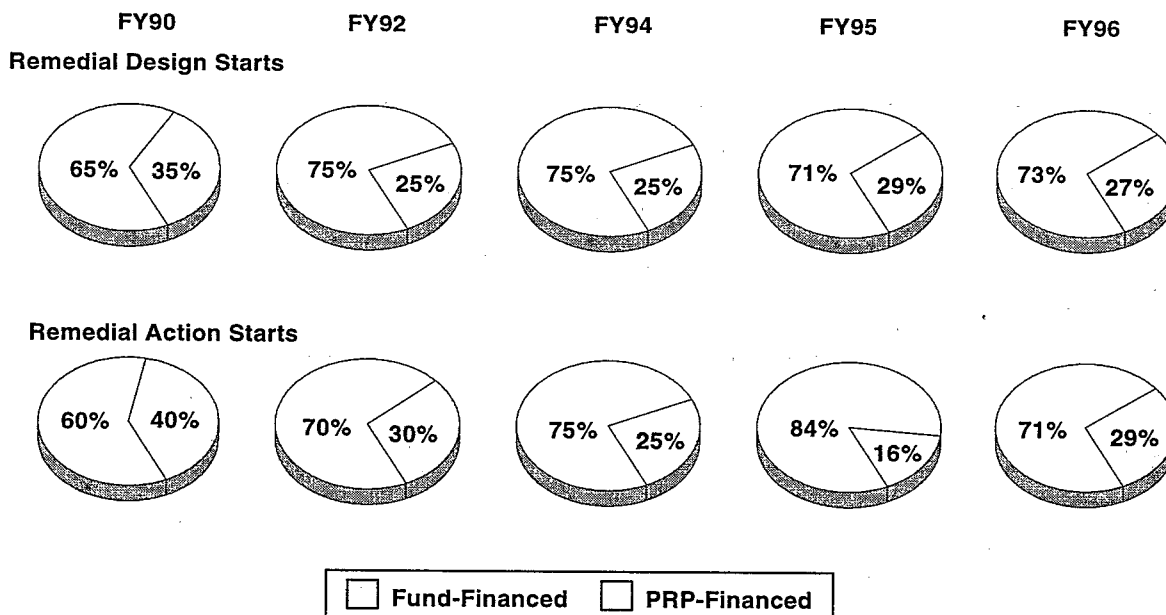
Exhibit 4.2-2 illustrates the continuing high level of PRP participation in undertaking and financing RDs and RAs since the implementation of the "Enforcement First" initiative in 1989.

In FY96, PRPs continued to finance and conduct a high percentage of the remedial work undertaken at Superfund sites: 73 percent of new RDs, 71 percent of new RAs, and 28 percent of new RI/FSs.

4.2.3 Cost Recovery Achievements

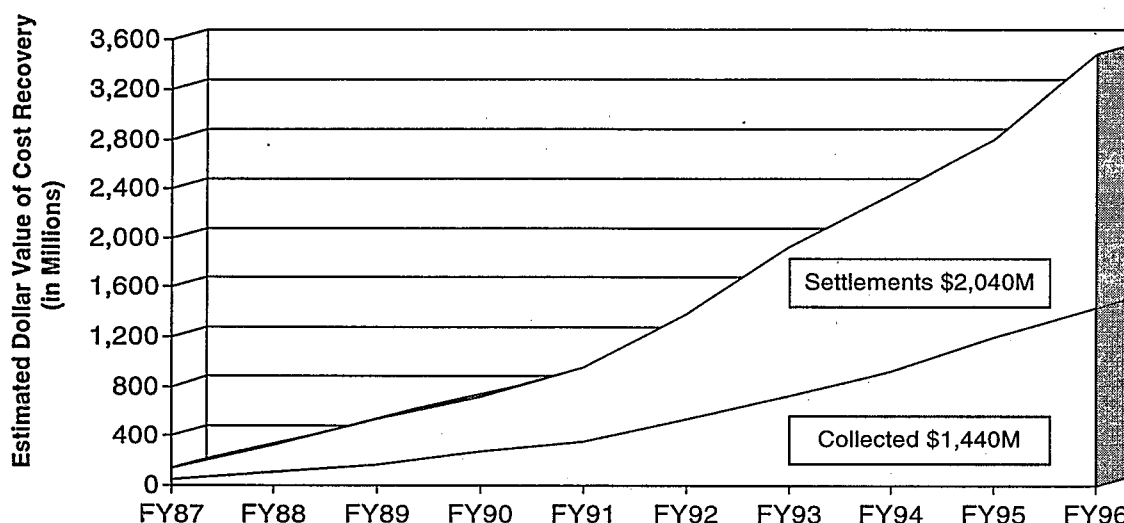
EPA and DOJ reached 220 cost recovery settlements worth more than \$451 million. These included 181 CERCLA Section 106/107 or Section

Exhibit 4.2-2
Percentage of Remedial Designs
and Remedial Actions Started by PRPs



Source: CERCLIS. October 24, 1996.

Exhibit 4.2-3
Cumulative Value of Cost Recovery Dollars Collected and Settlements



Source: CERCLIS.

107-only cost recovery actions each valued at \$200,000 or more. FY96 cost recovery actions represent 22 percent of the \$2.04 billion achieved in cost recovery settlements since the inception of Superfund. More than 50 percent of the total \$2.04 billion has been achieved in the last five years. Exhibit 4.2-3 illustrates cost recovery settlements achieved and collected to date.

EPA collected over \$252 million from cost recovery settlements, bankruptcy settlements, and other sources during the fiscal year. This sum is more than 17 percent of the approximately \$1.44 billion in past costs collected by EPA to date; approximately 75 percent of the \$1.44 billion has been collected in the past five years.

4.3 Enforcement Initiatives

During FY96, EPA continued to build upon prior Administrative Reform successes; it also introduced a new round of reforms targeted at

making Superfund a fairer program and further reducing transaction costs.

Fairness. Continuing to ensure fairness in enforcement was the primary objective of the reforms and activities undertaken in FY96. While EPA's Office of Site Remediation Enforcement (OSRE) introduced a number of new initiatives, it continued to implement, evaluate, and learn from Administrative Reforms that were initiated in prior fiscal years. First, EPA continued to rely heavily on Alternative Dispute Resolution (ADR) to arrive at quicker, fairer, and more cost-effective settlements. Second, EPA issued the "Revised Guidance on CERCLA Settlements with De Micromis Waste Contributors," designed to discourage third party contribution litigation against contributors of extremely small volumes of waste and, where necessary, improve EPA's ability to resolve their liability concerns quickly and fairly. Third, in response to criticism that EPA routinely issued cleanup orders under Section 106 (Unilateral

Administrative Orders or UAOs) to only a subset of possible parties, the Agency committed to issuing such UAOs to the largest manageable number of PRPs. Fourth, EPA published the "Interim Guidance on Orphan Share Compensation for Settlers of Remedial Design/Remedial Action and Non-Time-Critical Removals," which established the amount of orphan share compensation that the Regions may offer to settling parties. Finally, EPA continued to promote redevelopment of contaminated properties by shielding some purchasers from Superfund liability.

Reducing Transaction Costs. During FY96, EPA continued to focus on identifying and implementing procedures for reducing the time and costs associated with Superfund enforcement. First, EPA issued "Reducing Federal Oversight at Superfund Sites with Cooperative and Capable Parties," which established guidelines for identifying high-quality PRP site remediation that qualifies for reduced federal oversight. Second, EPA made significant progress with respect to applying the interest earned on site-specific accounts to the remediation of a site.

These enforcement initiatives are described in more detail below. Highlights of successful enforcement accomplishments are given at the end of the chapter in Exhibit 4.3-1.

4.3.1 Continued Use of Alternative Dispute Resolution

FY96 was an outstanding year for the use of ADR in the Superfund program. Significant strides were made in every aspect of the ADR Program, including case use, case support systems, training, provision of ADR services, and outreach to the regulated community.

Case Development

During FY96, regional offices supported PRP allocation settlement efforts at over 30 sites by encouraging and/or providing ADR services in coordination with OSRE. Regional support for the use of ADR grew substantially, with all regional offices using or supporting PRP use of ADR to assist settlement efforts. Awareness of ADR as a tool for

increasing the efficiency of future disputes also increased during FY96, with mediation included in the dispute resolution provisions of several judicial and administrative settlement documents.

Region I used ADR in fully 13 cases during FY96. Of these, seven used ADR as an essential enforcement tool, three used ADR in consensus building, two used ADR in convenings (i.e., use of a neutral to bring parties together to consider using ADR, select a neutral and/or design an ADR process), and one case used ADR in conjunction with a precedential ADR provision in a Consent Decree. Region IV also enjoyed considerable success with ADR techniques. Among these was the use of ADR at the Aberdeen Dump Site in North Carolina, which resulted in an agreement among PRPs for allocation of past costs and future work totaling an estimated \$44.7 million.

ADR Training

Training in the effective use of mediation and other ADR techniques was provided to all regional offices during FY96. This intensive one-day training is designed for legal and program staff who participate in settlement activities. The ADR Users Training, taught jointly by EPA ADR staff and ADR professionals who have served as mediators in Superfund cases, concentrates on the inherent difficulties in Agency negotiations and how use of ADR can facilitate prompt resolution of such disputes.

A five-day advanced training, Mediating Environmental and Public Policy Disputes, was also given to ADR Specialists and Regional Judicial Officers in Boulder, Colorado. The training included advanced mediation skills training as well as principles and process training in convening complex multi-party mediations.

Institutionalization of ADR

During FY96, the national network of regional and Headquarters ADR specialists continued their efforts to implement the Agency's ADR Guidance requirement for routine consideration and appropriate use of ADR standard operating procedure in all enforcement and site-related disputes. The members

of the ADR Specialists Network, comprised of experienced ADR staff from each Region and Headquarters, serve as consultants to Agency and DOJ staff on the effective use of ADR in enforcement actions. The ADR Specialists Network held monthly conference calls to exchange information and coordinate ADR program efforts.

Senior staff to the Agency's Dispute Resolution Specialist provide consultation and design services to several offices of the Agency. In cooperation with the Federal Mediation and Conciliation Service, these individuals continue the Agency's efforts to foster the use of ADR in all Federal disputes, consistent with the Alternative Dispute Resolution (ADR) Act of 1996 and the National Performance Review (NPR).

Outreach Efforts

Substantial progress has also been made to educate the regulated community about the Agency's support for the use of ADR and the potential for use of ADR techniques to reduce private and government transaction costs. As part of this effort, members of the ADR Specialists Network have made presentations and provided consultation services on effective ADR use for numerous professional and PRP organizations, including the American Bar Association (ABA), the Center for Public Resources (CPR), the Information Network for Superfund Settlements (INSS), the Society of Professionals in Dispute Resolution (SPIDR), and several Federal and state agencies.

Provision of Neutral Services

Pursuant to confidentiality agreements between regional offices and site PRPs, the ADR Liaison continues to serve as a neutral convener, assisting PRPs in the design of ADR procedures and the selection of allocation professionals.

Superfund Administrative Reform Initiatives

Members of the ADR Specialists Network assisted Agency efforts to implement several of the Superfund Administrative Reform Initiatives. The ADR Implementation Initiative involves several activities designed to further implementation of the

ADR Act, and the Agency's ADR Guidance. This highly successful effort, which required coordination across Headquarters and regional Superfund offices, resulted in the establishment of an ADR Implementation Plan in each Region. In addition, several Network members continue to assist in the development of the Allocation Pilot, which involves the design and implementation of a comprehensive program to test the use of an ADR-based cost allocation method modeled after the Superfund Reform Act of 1994, HR 4916, 103rd Congress, 2nd session.

4.3.2 Revised "De Micromis" Guidance

In June 1996, EPA issued its "Revised Guidance on CERCLA Settlements with De Micromis Waste Contributors," modifying and superseding its 1993 guidance on "de micromis" settlements. The revised policy and associated model settlement documents are designed to discourage third party contribution litigation against contributors of extremely small volumes of waste ("de micromis parties") and, where necessary, improve EPA's ability to resolve their liability concerns quickly and fairly.

The revised guidance makes three important changes to the 1993 "de micromis" policy. First, it doubles the volumetric cut-off level that the 1993 policy established for "de micromis" eligibility. This will significantly increase the number of parties who can be protected under the "de micromis" designation. Second, consistent with EPA's policy that "de micromis" parties should not participate in financing site cleanups, it recommends that "de micromis" settlements be effected without any exchange of money. The 1993 guidance, in contrast, instructed the Regions to determine "de micromis" settlement payments using a method that considers individual volumetric contribution and total site costs. Third, it clarifies that "de micromis" settlements should only be considered when the Region finds that minuscule contributors are being pursued by other PRPs at a site.

In addition to the guidance memorandum, the revised guidance includes supplemental materials intended to establish routine "de micromis" settlement practices, thereby increasing the speed and

efficiency of the "de micromis" settlement process. These materials are identified below:

- Brochure that provides introductory information for potential settlers about the Superfund program and "de micromis" settlements;
- Sample cover letter to be used with the "de micromis" questionnaire;
- Questionnaire that asks potential "de micromis" parties about their waste contribution and involvement with the site, which EPA uses to determine eligibility for "de micromis" settlements;
- Sample cover letter that accompanies the "de micromis" settlement when it is sent out for signature by the settling party;
- "De micromis" administrative order on consent (AOC) that provides model settlement language for administrative resolution of a *de micromis* party's liability;
- "De micromis" consent decree (CD), that provides model settlement language for judicial resolution of a "de micromis" party's liability;
- Model Federal Registrar notice for use by EPA when providing the notice and comment required by section 122(I) of CERCLA.

In FY96, EPA succeeded in reducing Superfund liability for "de micromis" parties. Consistent with the FY95 model consent decree for the finance and performance of RD/RAs, EPA increased the number of settlements in FY96 that included agreements by settling parties to waive their rights to pursue "de micromis" parties for further contribution. Furthermore, where "de micromis" parties were pursued for contribution, EPA routinely attempted to protect the smallest volume contributors from Superfund liability. For example, at the Keystone Sanitation Landfill in Pennsylvania, EPA entered into settlements with approximately 167 third and fourth party defendants whose "de micromis" status protected them from future contribution suits.

4.3.3 Equitable Issuance of Unilateral Administrative Orders

It has long been EPA's policy to issue Section 106 unilateral administrative orders (UAOs) to the largest manageable number of parties, after taking into account the adequacy of evidence of liability, financial viability, and waste contribution. Concerns have been raised, however, that EPA is failing to issue UAOs to all parties who have been identified as viable and viable. To address this concern and to ensure that UAOs are implemented fairly and equitably, EPA issued a supplemental policy memorandum, "Documentation of Reason(s) for Not Issuing CERCLA Section 106 UAOs to All Identified PRPs," on August 2, 1996. The memorandum does not substantively change current UAO policy; rather, it clarifies the criteria for UAO party selection and requires documentation of decisions not to pursue parties, including parties who are identified after a UAO has been issued.

EPA actions at the Green River Disposal Site in Maceo, Kentucky demonstrate the Agency's commitment to selecting UAO parties in a fair and equitable manner. Several years ago, Region IV issued a UAO requiring four PRPs to perform an RI/FS and removal actions at the site. In FY96, the Region issued another UAO directing these same PRPs and six additional PRPs to undertake design and implementation of the remedial action. The Region considered including several other PRPs in the second UAO, but decided against it due to insufficient evidence of liability or financial viability concerns. Consistent with the new reform, the Region documented specific reasons why these parties were excluded from the UAO.

4.3.4 Orphan Share Compensation

Under CERCLA's joint and several liability scheme, viable PRPs are required to assume the liability share of insolvent or defunct parties who are unable to pay the costs of cleanup (i.e., the orphan share). In an effort to mitigate this effect and encourage PRPs to settle, EPA announced in October 1995 that it would compensate parties conducting cleanup actions for a limited portion of the orphan share in future cleanup settlements. The Agency

intended to compensate parties through forgiveness of past costs and projected oversight costs.

Soon after the announcement, however, sources of revenue for the Superfund program were suspended—Superfund's taxing authority expired and was not reinstated and Congress did not provide EPA with a separate appropriation for orphan share compensation. Committed to implementing this reform, the Agency examined alternative means of orphan share compensation. The result of this effort was the "Interim Guidance on Orphan Share Compensation for Settlers of Remedial Design/Remedial Action and Non-Time-Critical Removals," which was issued on June 3, 1996.

The guidance establishes the amount of orphan share compensation that the Regions may offer to viable parties. This amount is not to exceed 25 percent of the estimated cost of a cleanup action at a site. EPA believes that such a limitation strikes a glance between preserving the Trust Fund and providing parties with meaningful relief by minimizing transaction costs and delays in cleanup negotiations associated with calculation and allocation of the orphan share.

The guidance instructs Regions to offer compensation only where the following conditions have been met: 1) EPA initiates or is engaged in ongoing negotiations for an RD/RA at a site or for a non-time-critical (NTC) removal at a National Priorities List (NPL) site; 2) a PRP or group of PRPs agrees to conduct the RD/RA pursuant to a consent decree or the NTC removal pursuant to an administrative order on consent; and 3) an orphan share exists.

To assist the Regions in determining the appropriate orphan share component of a federal compromise (i.e., forgiveness of past costs), EPA and the Department of Justice established an orphan share assistance team. The team worked closely with Regional staff to resolve issues on a site-by-site basis and to ensure consistent application of the reform.

In FY96, EPA offered to compromise orphan shares worth over \$57 million to parties who agreed to conduct cleanups at 24 Superfund sites. This achievement fulfilled Administrator Browner's

commitment to compensate parties for over \$50 million in costs associated with orphan shares. The initiative has proven effective in expediting the settlement process by reducing the conflict over who should pay for the orphan share.

4.3.5 Prospective Purchaser Agreements

In FY96, EPA continued to promote redevelopment of contaminated properties by protecting prospective purchasers, lenders, and property owners from Superfund liability. EPA's May 1995 *Guidance on Agreements with Prospective Purchasers of Contaminated Property* is helping to stimulate the development of contaminated sites where parties, particularly developers, have been reluctant to take action. Under this guidance, EPA issues agreements known as "prospective purchaser agreements" (PPAs), which provide assurances that prospective purchasers of contaminated properties will not be held responsible for cleanup costs when they did not contribute to or worsen the contamination. Of the 45 agreements to date, more than half have been reached since the guidance was issued in FY95.

Region VII recently finalized two prospective purchaser agreements. One agreement involves a parcel of land located at the Jasper County Site (a.k.a., the Oronogo-Duenweg Mining Belt NPL site), a large mining site in southwest Missouri, that is contaminated with mining waste. The prospective purchaser agreed to perform work to reduce potential exposure to mining wastes, including grading the site, leveling piles of mining wastes, filling open mine shafts with rock, and fencing the site to prevent public access. The purchaser plans to use the property for operation of a metal recycling facility.

A second agreement involves the Kansas City Structural Steel Site in Kansas City, Kansas. The purchaser is a neighborhood organization working with disadvantaged Latino and Hispanic community members, who will use the property for light industrial purposes. The current plan is to construct a self-storage complex on the property. Consideration received by EPA includes institutional controls concerning use of the property, and implementation of operation and maintenance requirements.

4.3.6 Reducing Federal Oversight at Sites with Cooperative and Capable Parties

As the Superfund program has matured, parties have developed substantial expertise in performing cleanup activities. Many of these parties perform high quality cleanups and work closely and cooperatively with EPA. To encourage and reward such actions, EPA issued a policy memorandum on July 31, 1996 entitled "Reducing Federal Oversight at Superfund Sites with Cooperative and Capable Parties." The memorandum sets guidelines for determining PRP cooperativeness and capability. If these guidelines are met, EPA may reduce federal oversight of remedial and non-time-critical removal actions performed by PRPs at Superfund and non-Superfund sites. Regions are instructed to reduce such oversight costs wherever practicable.

While the guidance provides site managers with examples of opportunities for reducing oversight costs, it is careful to point out that not all circumstances may warrant a reduced federal oversight role (e.g., highly complex sites). Furthermore, managers are instructed to estimate, document, and measure reductions in oversight activities and costs.

Regions identified approximately 100 sites with cooperative and capable parties and have either already reduced or plan to reduce oversight activities. Cost savings are already being realized. EPA may also explore opportunities to involve communities in determining the appropriate level of PRP oversight.

4.3.7 Site Specific Special Accounts

CERCLA provides EPA with the authority to retain and use funds for future cleanup work that were received as a result of settlements with PRPs. EPA has used this authority to create special accounts at individual sites. Prior to FY96, however, interest earned on settlement funds could not be credited to these accounts. This changed in FY96 when EPA reached an agreement with the Office of Management and Budget (OMB) and the Department of Treasury that interest can accrue directly to special accounts. This agreement will benefit parties who enter into settlements with EPA at Superfund sites because settlement payments designated for future

work will now both earn and retain interest. The 1996 events that led to the establishment of interest bearing special accounts are listed below.

- In March 1996, EPA issued a memorandum encouraging Regional offices to place settlement funds in special accounts and detailed the process and utility of establishing these accounts;
- In June 1996, EPA reached an agreement with OMB and the Department of Treasury that interest can accrue to special accounts. The Agency can now use interest from the accounts to carry out the terms of its settlement agreements;
- In October 1996, OMB approved EPA's methodology for calculating interest rates for the accounts. EPA then sent a memorandum to the Regions outlining the agreement with OMB, listing principal and interest balances for special accounts, and describing the procedures for requesting these funds.

In FY96, Regions established 23 special accounts with an aggregate balance of \$78 million. As of the end of FY96, EPA had opened a total of 59 accounts with an aggregate balance of \$261 million (\$226 million in principal and \$35 million in interest through August 1996). The following examples illustrate the success of this reform in making site-specific special accounts available for response actions at Superfund sites:

- **Love Canal Superfund site in New York.** Five million dollars in special account funds is being applied toward the remaining work at the site, which entails revitalizing the site and completing a health register.
- **Oronogo-Duenweg Superfund site in Missouri.** EPA entered into a \$1 million settlement with a PRP who had limited resources. EPA used funds from a special account to expedite the settlement process with the PRP.
- **Sharon Steel and Midvale Slag Superfund sites in Utah.** EPA has established a special account for the two contiguous sites worth \$65

million. While most of these funds have already been used to clean up the sites, \$11 million in interest recently credited to the account will be used to pay for future cleanup activities.

- **San Fernando Valley-North Hollywood Superfund site in California.** Five PRPs contributed to a special account that EPA plans to use to pay for the operating costs of the site's groundwater treatment system.

Exhibit 4.3-1

Highlights of Successful Enforcement Accomplishments

<p>Central Landfill Rhode Island (Region 1)</p> <p>Settlement: Consent Decree (CD01) for RA and cost recovery for RI/FS, and its appropriate RD lodged on 7/16/96 at the Federal District Court for the District of Rhode Island and entered on 10/2/96.</p> <p>Estimated Value: \$32,000,000</p>	<p>EPA reached a Consent Decree with a major PRP to perform remedial activities at the Central Landfill site in Johnston, Rhode Island. The Consent Decree was lodged in the Federal District Court for the District of Rhode Island on July 16, 1996. Remedial action costs are estimated at \$32,000,000.</p> <p>Wastes that contaminated and affected nearby aquifers, wells, surface waters, bedrock trenches, and wetlands included latex wastes, acid wastes, and solvents containing various VOCs and heavy metals. The owner of the landfill entered into a Consent Order with EPA in 1987 to conduct a study of the level of contamination at the site. Once the contaminants were identified in the summer of 1994, a Record of Decision (ROD) was issued by EPA and cleanup remedies were selected: capping the landfill, extracting and treating the contaminated groundwater in the most contaminated ½ acre of the site, conducting a detailed study of the landfill gas combustion system that was installed as an initial remedy, as well as maintaining public water supply lines. These remedies have significantly reduced health risks to the public while studies are being completed and final remedies are being planned.</p>
<p>Carroll & Dubies Sewage Disp. New York (Region 2)</p> <p>Settlement: UAO (UA001) for RD/RA issued on 9/29/95; notice of intent to comply given on 10/30/95.</p> <p>Estimated Value: \$8,500,000</p>	<p>On September 29, 1995, EPA issued a Unilateral Administrative Order (UA001) requiring the implementation of remedies to source areas on the Carroll & Dubies Sewage Disposal Site in Port Jervis, New York. On October 30, 1995, the PRPs gave notice of intent to comply. The site was once used for disposal of numerous wastes, including septic and cosmetic wastes. Wastes accepted at the site were placed into unlined lagoons and trenches. Contamination studies for seven lagoons, groundwater, and nearby soils were performed in 1992 and 1993. Separate RODs regarding the use of remedial actions were signed by the EPA in 1995 (Operable Unit 1), and September 1996 (Operable Unit 2), based on results of the studies.</p> <p>Groundwater and nearby soils were contaminated with VOCs and heavy metals, and the lagoon liquids were contaminated with VOCs, heavy metals, and phthalates, a plastic byproduct. The first remedy (OU1) addressed the actual source areas (surrounding lagoons and impacted soils) at the site and the actions that needed to be taken to ensure that source areas would pose no threat to human life and no further threat to groundwater. The second remedy (OU2), whose investigation is currently underway, will address removal and control of contaminated groundwater beneath the site. The two PRPs who performed the RI/FS for OU1 are currently conducting the RI/FS for OU2.</p>

<p>Waste, Inc. Landfill Indiana (Region 5)</p> <p>Settlement: UAO (UAO01) for RD/RA in Operable Unit 1 (OU1) on 12/8/95. Notice of Intent to comply given on 1/8/96.</p> <p>Estimated Value: \$16,000,000</p>	<p>On December 8, 1995, a UAO was issued by EPA for cleanup of the Waste, Inc. Landfill site in Michigan City, Indiana. Notice of intent to comply was given on January 8, 1996. RD/RA activities worth an estimated \$16,000,000 will address the contaminated area. The 32-acre site was once used as a permitted landfill. However, in the early 1970's, the landfill began accepting unapproved materials. The site was closed in 1983. Preliminary assessment and site screening inspections revealed that the soil and groundwater were contaminated with VOCs, PCBs, phthalates, and other organic substances, while sediments from a nearby stream yielded high levels of heavy metals, in addition to other organic compounds.</p> <p>In 1994, the EPA issued a ROD (OU1) that called for an eight-step plan to remediate the site, with an emphasis on control and treatment of groundwater. Steps included the installation of a RCRA Subtitle D cap, the collection of contaminated leachate, and the installation and operation of groundwater wells on site.</p>
<p>Sherwood Medical Co. Nebraska (Region 7)</p> <p>Settlement: Consent Decree for RD/RA at Operable Unit 1, RD/RA at Operable Unit 2, and cost recovery for oversight at Operable Units 1 & 2 lodged on 8/30/96 in the District of Nebraska Federal District Court.</p> <p>Estimated Value: \$6,833,135</p>	<p>EPA reached a Consent Decree with PRPs for remedial design and remedial action at Operable Units 1 and 2 on the Sherwood Medical Company site in Madison County, Norfolk, Nebraska, worth an estimated \$6,833,135. The Consent Decree was lodged in the District of Nebraska Federal District Court on August 30, 1996. The selected remedy addresses the VOC contamination found in the groundwater and the soil. Contaminants identified in the groundwater include TCE, PCE, and DCE.</p> <p>EPA issued a prior ROD that called for the excavation of contaminated soil and monitoring of groundwater, among other things. Components of a remedy currently under investigation include providing a potable water supply to the Park Mobil Home Court and certain other residences situated within the contaminated groundwater aquifer, and treating contaminated soil onsite with a soil vapor extraction method. A decision on the remedy is expected to take place in November of 1996.</p>

<p>Kennecott (North Zone) Utah (Region 8)</p> <p>Settlement: Administrative Order by the EPA on June 4, 1996, for Removal Action and cost recovery for oversight at operable Unit 8.</p> <p>Estimated Value: \$76,000,000</p>	<p>Kennecott Utah Copper Company is conducting cleanup activities at the Kennecott North Zone site near Magna, Utah in Salt Lake County after EPA issued an administrative order on June 4, 1996. The estimated cost of the cleanup is \$76,000,000. Streams, ditches, ponds, and wetlands were contaminated by mine wastes from years of smelting and processing ore. The contaminants, identified as lead, arsenic, and selenium, occur in the sludge ponds, slag piles, and tailings ponds on the site. The removal action (OU8) is being conducted in three major steps: a short-term investigation of soils and two long-term cleanup phases. The initial analysis of soils indicates no threat to human health. The two long-term phases address the removal of contaminants from nearby sludge ponds, tailings ponds, surface waters, and groundwater plumes.</p> <p>The company is responsible for cleaning up the site under state and federal supervision. The site was proposed for NPL status in January of 1994. In 1995, however, Kennecott, EPA, and the Utah Department of Environmental Quality (UTDEQ) entered into a memorandum of understanding (MOU). This MOU ensures that Kennecott itself will continue the cleanup process. The EPA, in turn, was to defer the site's final listing on the NPL. In 1996, the U.S. Corps of Engineers (COE) issued a Clean Water Act, Section 404 permit allowing the tailings ponds to be expanded to further the surface cleanup efforts in the future.</p>
<p>Mouat Industries Montana (Region 8)</p> <p>Settlement: UAO (UAO03) issued to 6 PRPs on July 22, 1996, for removal actions; notice of intent to comply given in August of 1996.</p> <p>Estimated Value: \$20,000,000</p>	<p>On July 22, 1996, EPA issued a UAO to six PRPs for removal activities at the Mouat Industries site near Columbus, Montana in Stillwater County. The site served as a plant that processed chromium ore into sodium dichromate from 1957 to 1963. In 1976, yellow mineral deposits containing chromium began to appear at the surface. The soil and groundwater were found to be contaminated with hexavalent chromium, which is the primary health and environmental threat. In 1990, EPA requested that the city of Columbus construct a chain link fence around the contaminated soil area, and re-route the ditches that transported run-off into the contaminated soil area. In addition, monitoring wells drilled in the 1970's were capped.</p> <p>An earlier administrative order (UAO01) was issued by EPA to the PRPs to remove and treat all contaminated soil at the site. This action was completed in 1994. The current administrative order (UAO03) addresses all environmental and health issues (primarily surface water and groundwater) remaining at the site. PRPs gave notice of intent to comply in August 1996.</p>

<p>Stringfellow California (Region 9)</p> <p>Settlement: Consent Decree (CD04) lodged on 5/9/96 in the US District Court for the Central District of California for Long-Term Response (LR2).</p> <p>Estimated Value: \$4,881,300</p>	<p>EPA reached a <i>de minimis</i> settlement with 79 PRPs for Long-Term Response (LR2) pertaining to the Stringfellow site located in Riverside, California. The Consent Decree was lodged in the US District Court for the Central District of California on May 9, 1996.</p> <p>Between 1956 and 1972, approximately 34,000,000 gallons of toxic waste were disposed of at the site. Liquid wastes such as acids and heavy metals were discharged into on-site evaporation pools. Past EPA RODs spanning 1983-1990 called for the maintenance of the existing cap, on-site pre-treatment of contaminated leachate, construction of a groundwater barrier system and surface channels, de-watering the original disposal area, and treating and re-injecting that water. The expected capital cost for the selected remedy is approximately \$1,136,000 with O&M costs around \$1,408,000. As of 1996, EPA was in the process of completing a Feasibility Study (FS) and producing a final Proposed Plan and ROD, which address the remaining soil contamination on the site.</p>
<p>Standard Chlorine of Delaware, Inc. Delaware (Region 3)</p> <p>Settlement: UAO (UA001) for the RD/RA issued on 5/30/96; notice of intent to comply given on 7/1/96</p> <p>Estimated Value: \$17,000,000</p>	<p>A Unilateral Administrative Order (UA001) calling for cleanup action was issued by EPA on May 30, 1996, for RD/RA at the Standard Chlorine of Delaware, Inc. site near Delaware City, Delaware in New Castle County. In 1981 and 1986, benzene spills (some containing VOCs) occurred, leaving the soil, groundwater, sediment, and surface water areas contaminated with chlorobenzenes. In addition, wetlands nearby were left under threat of contamination from the spill areas.</p> <p>An earlier EPA ROD also put into effect a final remedy plan. That plan entailed two phases. The first phase included the containment of groundwater by slurry wall or trench as well as the treatment of contaminated groundwater. The second action called for the use of bioremediation to treat contaminated soils and sediments. PRPs gave notice of intent to comply on July 1, 1996.</p>
<p>Palmetto Recycling, Inc. South Carolina (Region 4)</p> <p>Settlement: CD (CD01) for RD/RA beginning on 8/14/96.</p> <p>Estimated Value: \$300,000</p>	<p>EPA reached an agreement with a major PRP on August 14, 1996, for RD/RA activities at the Palmetto Recycling, Inc. site near Columbia, South Carolina. The site was used to reclaim lead from old batteries. Discharge of wastewater of unknown composition into the sewer system and mishandling of wastes containing lead, sulfuric acid, barium, and chromium led to soil, groundwater, and sediment contamination.</p> <p>Two major phases made up the structure of the cleanup process. The first and immediate phase, which was conducted by a major trustee of the company, consisted of removal and treatment of 365 tons of contaminated soil and 10,800 gallons of contaminated water from one of the on-site pits. This action was completed in 1985. The second phase addressed complete cleanup of the entire site, and included an investigation of the severity of site contamination. This action was completed in the fall of 1994, and led to a final remedy chosen by the EPA in 1995 to address contaminated surface soil and groundwater monitoring. Remedy design is expected to begin in early 1997.</p>

<p>Fike Chemical, Inc. West Virginia (Region 3)</p> <p>Settlement: CD (CD04) for RD/RA at OU4, RD/RA at OU8, and cost recovery for RA, RV, and RI/FS lodged with the Southern District Court Of West Virginia on 4/24/96.</p> <p>Estimated Value: \$59,000,000</p>	<p>EPA reached a settlement with 59 PRPs to recover past costs and for RD/RA at Operable Units 4 and 8 at the Fike Chemical, Inc. site in Nitro, West Virginia. The terms of the settlement, which is worth approximately \$59,000,000, are set forth in a consent decree (CD04) that was lodged with the Southern District Court of West Virginia on April 26, 1996. The Consent Decree is expected to be entered into in January of 1997. The 11-acre site, once used as a chemical manufacturing plant and abandoned in 1988, includes trenches in which drummed waste was disposed of. After conducting numerous investigative studies, EPA found the drums to be highly contaminated with VOCs, and other inorganic contaminants. A water treatment facility is also located on the site.</p> <p>An earlier ROD (OU3) focused on removing buried drums and other sources of contamination. Removal of these materials has greatly reduced immediate health and environmental risks to the surrounding area. Cleanup work in Operable Unit 4 (OU4) addressed soil and groundwater contamination. A two-phase investigation of soil and groundwater contamination is underway, and cleanup alternatives are expected to be identified in 1997. The remedy for Operable Unit 8 (OU8) includes the dismantling of the on-site water treatment facility, to be conducted once all cleanup of contaminants has been accomplished.</p>
---	--

Chapter 5

Federal Facility Cleanups

Federal departments and agencies manage a variety of industrial activities at more than 27,000 installations. Due to the nature of such activities, whether they are federally or privately managed, federal installations may be contaminated with hazardous substances and therefore subject to CERCLA requirements. Although federal facilities comprise only a small percentage of the community regulated under CERCLA, many federal facilities are larger and more complex than their private industrial counterparts and are likely to host continuing activities. Because of their size and complexity and the existence of ongoing activities, compliance with environmental statutes may present unique management issues for federal facilities.

5.1 The Federal Facilities Program

CERCLA Section 120(a) requires that federal facilities comply with CERCLA requirements to the same extent as private facilities. Executive Order 12580 delegates the President's authority under CERCLA to federal departments and agencies, making them responsible for cleanup activities at their facilities. At federal facilities that are National Priorities List (NPL) sites, which are sites having the highest priority for remediation under Superfund, CERCLA mandates that cleanups be conducted under interagency agreements (IAGs) between EPA and relevant federal agencies. States are often a party to these agreements as well. The federal facility agreement (FFA) is another type of agreement that may govern cleanup terms at a federal facility. To ensure federal facility compliance with CERCLA requirements, EPA provides technical advice and assistance and may take enforcement action when appropriate.

In addition to CERCLA, there is a range of authority and enforcement tools under state statutes that apply to non-NPL federal facility sites. Indian tribes also may be involved in federal agency compliance with environmental regulations when acting as either lead or support agencies for Superfund response actions.

5.1.1 Federal Facility Responsibilities Under CERCLA

Federal departments and agencies are responsible for identifying and addressing hazardous waste sites at the facilities that they own or operate. They are required under CERCLA to comply with all provisions of federal environmental statutes and regulations and all applicable state and local requirements during site cleanup.

5.1.2 EPA's Oversight Role

EPA oversees federal facility cleanup activities and provides cleanup assistance to federal agencies. EPA's responsibilities include:

- listing sites on the NPL,
- negotiating IAGs,
- promoting community involvement through site-specific advisory boards and restoration advisory boards,
- selecting or assisting in the determination of cleanup remedies,
- concurring with cleanup remedies,

- providing technical advice and assistance,
- overseeing cleanup activities,
- reviewing federal agency pollution abatement plans, and
- resolving disputes regarding noncompliance.

To fulfill these responsibilities, EPA relies on personnel from Headquarters, Regional offices, and states. This includes personnel from the Federal Facilities Enforcement Office (FFEO) in the Office of Enforcement and Compliance Assurance (OECA) and the Federal Facilities Restoration and Reuse Office (FFRRO) in the Office of Solid Waste and Emergency Response.

To track the status of a federal facility, EPA uses several information systems. The Facility Index System provides an inventory of federal facilities subject to environmental regulations. Through the CERCLA Information System (CERCLIS), EPA maintains a comprehensive list of all reported potentially hazardous waste sites, including federal facility sites. CERCLIS also contains cleanup project schedules and achievements for federal facility sites. A list of federal facility sites potentially contaminated with hazardous waste, which is required by CERCLA Section 120(c), is made available to the public through the Federal Agency Hazardous Waste Compliance Docket and through routine docket updates published in the *Federal Register*.

5.1.3 The Roles of States and Indian Tribes

Under the provisions of CERCLA Section 120(f), state and local governments are encouraged to participate in planning and selecting remedial actions to be taken at federal facility NPL sites within their jurisdiction. State and local government participation includes, but is not limited to, reviewing site information and developing studies, reports, and action plans for the site. EPA encourages states to become signatories to the IAGs that federal agencies must execute with EPA under CERCLA Section 120(e)(2). State participation in the CERCLA cleanup process is carried out under the provisions of CERCLA Section 121.

Cleanups at federal facility sites not listed on the NPL are carried out by the federal agency that owns or operates the site, often under state or federal oversight. Federal agencies use the CERCLA cleanup process outlined in the National Oil and Hazardous Substances Pollution Contingency Plan at these sites. In addition to CERCLA, these cleanups are subject to state laws regarding response actions. A state's role at a non-NPL federal facility site, therefore, will be determined both by that state's cleanup laws and CERCLA.

CERCLA Section 126 mandates that federally recognized Indian tribes be afforded substantially the same treatment as states with regard to most CERCLA provisions. Thus, the role of a qualifying Indian tribe in a federal facility cleanup would be substantially similar to that of a state. To qualify, a tribe must be federally recognized; have a tribal governing body that is currently performing governmental functions to promote the health, safety, and welfare of the affected population; and have jurisdiction over a site.

5.2 Fiscal Year 1996 Progress

FFEO and FFRRO, in conjunction with other EPA Headquarters offices, Regional offices, and states, ensure federal department and agency compliance with CERCLA and Resource Conservation and Recovery Act requirements. Progress in achieving federal facility compliance may be measured by the status of federal facility sites on the Federal Agency Hazardous Waste Compliance Docket and on the NPL, and by the execution of IAGs for federal facility sites.

5.2.1 Status of Facilities on the Federal Agency Hazardous Waste Compliance Docket

Federal facilities where hazardous waste is managed or from which hazardous substances have been released are identified on the Federal Agency Hazardous Waste Compliance Docket. The docket was established under CERCLA Section 120(c) and functions as an important record in the Superfund federal facilities program. Information submitted to EPA on identified facilities is compiled and

maintained in the docket and then made available to the public.

The initial federal agency docket was published in the *Federal Register* on February 12, 1988. At that time, 1,095 federal facilities were listed on the docket. Although a docket update was not issued in FY96, the April 11, 1995, docket update listed a total of 2,070 facilities. Of this total, the Department of Defense (DoD) owned or operated 933 (45 percent) of the facilities and the Department of the Interior (DOI) owned or operated 434 (21 percent). The remainder were distributed among 18 other federal departments, agencies, and instrumentalities.

5.2.2 Status of Federal Facilities on the NPL

To distinguish the increasing number of federal facility NPL sites from non-federal NPL sites, NPL updates list federal facility sites separately from non-federal sites. NPL updates also contain language that clarifies the roles of EPA and other federal departments and agencies with regard to federal facility sites. Consistent with Executive Order 12580 and the National Oil and Hazardous Substances Pollution Contingency Plan, EPA is typically not the lead agency for federal facility sites on the NPL; federal agencies are usually lead agencies for their own facilities. EPA is, however, responsible for overseeing federal facility compliance with CERCLA.

At the end of FY96, there were 164 federal facility sites proposed to or listed on the NPL.

Federal departments and agencies made substantial progress during FY96 toward cleaning up federal facility NPL sites. Activity at federal facility NPL sites during the year included the start of approximately 57 remedial investigation/feasibility studies (RI/FSs), 58 remedial designs (RDs), 41 removals, and 70 remedial actions (RAs). Also, 76 records of decision (RODs) were signed, and a total of nine sites have achieved construction completion. Ongoing activities at the end of FY96 included 459 RI/FSs, 71 RDs, and 151 RAs.

5.2.3 Interagency Agreements Under CERCLA Section 120

IAGs are the cornerstone of the enforcement program for federal facility NPL sites. They are enforceable documents and contain, among other things, a description of remedy selection alternatives, schedules of cleanup activities, and provisions for dispute resolution. During FY96, one CERCLA IAG was executed to accomplish hazardous waste cleanup at federal facility NPL sites. Of the 160 final federal facility sites listed on the NPL, 100 were covered by enforceable agreements by the end of the fiscal year.

IAGs between EPA and each responsible federal department or agency, to which states may be signatories, address some or all of the phases of remedial activity (RI/FS, RD, RA, operation and maintenance) to be undertaken at a federal facility NPL site. IAGs formalize the schedule and procedures for submission and review of documents and include a time line for remedial activities in accordance with the requirements of CERCLA Section 120(e). They also must comply with the public involvement requirements of CERCLA Section 117.

Included in IAG provisions are mechanisms for resolving disputes between the signatories. EPA can also assess stipulated penalties for noncompliance with the terms of IAGs. The agreements are enforceable by the states, and citizens may seek to enforce them through civil suits. Penalties may be imposed by the courts against federal departments and agencies in successful suits brought by states or citizens for failure to comply with IAGs.

5.3 Federal Facility Initiatives

The growing awareness of environmental contamination at federal facilities has increased the public demand for facility cleanup. To address this demand, EPA has worked to establish priorities for cleanup programs and thereby maximize the cleanups that can be accomplished with the limited resources available. EPA's federal facility offices (FFRRO and FFEO) directed their efforts to cleaning up closing military bases, accelerating cleanups, prioritizing cleanups, addressing issues through

interagency forums, and promoting the use of innovative technologies at federal facility sites.

5.3.1 Military Base Closure

During the fiscal year, DoD, EPA, and States continued to implement the Fast Track Cleanup Program for the Base Realignment and Closure (BRAC) Act. EPA's program activities were directed at working with DoD and the states to achieve President Clinton's goal of "making property environmentally acceptable for transfer, while protecting human health and the environment" at closing or realigning installations. In FY 1996, EPA and DoD worked together to determine what BRAC '95 installations should be included on the "Fast Track Cleanup" list and then develop an appropriate workload assessment of what would be necessary to achieve installation cleanup and reuse. Under the revised Memorandum of Agreement, EPA participated on BRAC Cleanup Teams (BCTs) at 110 BRAC 1, 2, 3, and 4 installations. Of these installations, 32 were NPL sites, and 78 were non-NPL.

DoD, EPA, and State regulators have developed BCTs to deal with the complex environmental problems at closing and realigning bases. BCTs work to expedite and integrate cleanup with potential reuse options.

As part of this effort, EPA and state regulators assemble technical and legal experts to support the BCTs. This leads to real-time decision making, reduction in documents, and identification of innovative ways to accomplish faster cleanup. In the FY95 *Defense Environmental Response Task Force Report*, EPA reported via an initial survey, that the first two years of this creative approach eliminated over 80 years of project work and avoided over \$100 million in costs. In FY96, EPA's second survey showed an additional savings of 70 years of project work and avoided over \$50 million in costs.

5.3.2 National Risk-Based Priority Setting

During FY96, FFRRO developed a draft guidance to address the role of risk and other factors, including cost, community concerns, environmental justice, and cultural considerations, in setting

priorities for cleanup at federal facility sites. The guidance also discusses DoD and DOE approaches to evaluating risks at sites, and the appropriate role of stakeholders in the process of setting priorities. Federal agencies and states were provided with the opportunity to comment on the draft guidance. Regions began to implement the risk-based priority setting concept, including Regions 3, 9, and 10, which had success setting risk-based priorities at Navy Superfund sites.

5.3.3 Interagency Forums

Through its participation in interagency organizations, EPA made significant progress in addressing concerns associated with federal facility cleanup.

Federal Facilities Environmental Restoration Dialogue Committee

The Federal Facilities Environmental Restoration Dialogue Committee (FFERDC), established in 1992 as an advisory committee under the Federal Advisory Committee Act, provided a forum for developing consensus policy recommendations aimed at improving the process by which federal facility environmental cleanup decisions are made. Committee members included individuals from EPA, U.S. Department of Agriculture, DOI, DOE, DoD, the National Atmospheric Administration (NOAA), and the Agency for Toxic Substances and Disease Registry (ATSDR); state, tribal and local governments; and numerous other nationally, regionally and locally based environmental, community, environmental justice, Native American and labor organizations. In April 1996, FFERDC released its final report, *Consensus Principles and Recommendations for Improving Federal Facilities Cleanup*. The report contained fourteen principles that should be the basis for making federal facility cleanup decisions.

Defense Environmental Restoration Task Force

EPA continued to participate in the Defense Environmental Restoration Task Force (DERTF). The goals of DERTF are to examine environmental issues associated with the cleanup and reuse of

closing military installations and to identify and recommend ways to expedite and improve environmental response actions at military installations scheduled to be closed. DERTF conducted three meetings in FY96, and provided the public the opportunity to participate and comment on its activities along with cleanup and reuse issues at closing military installations. The Future Land Use Working Group addresses the effectiveness of existing DoD guidance on full disclosure and understanding of the implications of restricted future land use.

BRAC Cleanup Teams

EPA conducted BCT member training for BCTs, which were established in coordination with DoD and the states at all major installations scheduled for closure. EPA and DoD prepared and conducted bottom-up reviews of BRAC cleanup plans for closing installations, established restoration advisory boards (RABs) at closing installations, provided RAB training workshops, and determined, by consensus, the suitability of property to transfer or lease for reuse. As mandated by the Community Environmental Response Facilitation Act, EPA reviewed, and where appropriate, concurred in the identification of uncontaminated parcels of property that are part of an NPL site.

In addition, EPA HQ developed training entitled "RCRA/CERCLA 101 Training" for the new BCT's formed to handle the BRAC '95 installations (a.k.a. BRAC 4). In addition, EPA issued the "Fast Track Cleanup Guidance," the Landfill policy, the "Operating Properly and Successfully" policy, and other BRAC related guidances to assist BCTs with their field work and the reuse acceleration.

In FY 1996, 146 Full Time Equivalent reimbursable positions were dedicated to supporting the BRAC program. Over 90 percent of the DoD resources were assigned to EPA's Regional offices.

RCRA/CERCLA Lead Regulator Workgroup

Federal facilities are governed by numerous environmental laws, such as CERCLA, the Resource Conservation and Recovery Act (RCRA), and state laws, with different sources of authority. Multiple

authorities with their own cleanup processes and standards may cause duplicative and inefficient use of cleanup resources. To discuss streamlining the application of multiple cleanup laws and overlapping authorities at a federal facility site, FFRRO hosted a workgroup composed of representatives from EPA Regions, federal agencies, and state agencies. The workgroup began developing guidance to establish clearly defined roles for various regulators at federal facilities, highlighting the concept of a predominant or "lead" regulator.

Environmental Management Advisory Board

With DOE, EPA participated in the Department's Environmental Management Advisory Board. The board consists of representatives from industry, academia, and the environmental community. It provides information, advice, and recommendations on issues confronting the national environmental management program. These issues include cleanup criteria and risk assessment, land use, priority setting, management effectiveness, cost-versus-benefit analyses, and strategies for determining the future national configuration of waste management and disposal facilities.

5.4 CERCLA Implementation at EPA Facilities

Of the 2,070 sites on the Federal Agency Hazardous Waste Compliance Docket at the end of FY96, 25 were EPA-owned or operated. Of these EPA-owned or operated sites, one was listed on the NPL. As required by CERCLA Section 120(e)(5), a report on cleanup progress at these 25 facilities is provided below.

5.4.1 Requirements of CERCLA Section 120(e)(5)

CERCLA Section 120(e)(5) requires an annual report to Congress from each federal department, agency, or instrumentality on its progress in implementing Superfund at its facilities. Specifically, the annual report to Congress is to include, but need not be limited to, the following items:

- Section 120(e)(5)(A): A report on the progress in reaching IAGs under CERCLA Section 120(e)(2);
- Section 120(e)(5)(B): The specific cost estimates and budgetary proposals involved in each IAG;
- Section 120(e)(5)(C): A brief summary of the public comments regarding each proposed IAG;
- Section 120(e)(5)(D): A description of the instances in which no agreement (IAG) was reached;
- Section 120(e)(5)(E): A progress report on conducting RI/FSs required by CERCLA Section 120(e)(1) at NPL sites;
- Section 120(e)(5)(F): A progress report on remedial activities at sites listed on the NPL; and
- Section 120(e)(5)(G): A progress report on response activities at facilities that are not listed on the NPL.

CERCLA also requires that the annual report contain a detailed description, by state, of the status of each facility subject to Section 120(e)(5). The status report must include a description of the hazards presented by each facility, plans and schedules for initiating and completing response actions, enforcement status (where applicable), and an explanation of any postponement or failure to complete response actions. EPA gives high priority to maintaining compliance with CERCLA requirements at its own facilities. To ensure concurrence with all environmental statutes, EPA uses its environmental compliance program to heighten regulatory awareness, identify potential compliance violations, and coordinate appropriate corrective action schedules at its laboratories and other research facilities.

5.4.2 Progress in Cleaning Up EPA Facilities Subject to Section 120 of CERCLA

At the end of FY96, the Federal Agency Hazardous Waste Compliance Docket listed 25 EPA-owned or operated facilities, including one that

has been listed on the NPL (the Old Navy Dump/Manchester NPL site in Washington). Two of the sites (the Brunswick Facility in Brunswick, Georgia; and the Philadelphia Site in Philadelphia, Pennsylvania) listed previously and four of the sites (the Bay City CERT Site in Bay City, Michigan; the Electro Voice Site in Buchanan, Michigan; the Ottati & Goss Site in Kingston, New Hampshire; and Fine Petroleum in Norfolk, Virginia) listed in FY95 may have been listed on the docket in error. EPA is currently investigating those listings. EPA has evaluated and, as appropriate, undertaken response activities at the 25 EPA sites on the docket for which it is responsible, including the site on the NPL. As required by CERCLA Section 120(e)(5), Exhibit 5.4-1 provides the status, by state, of EPA-owned or operated sites and identifies the types of problems and progress of activities at each site. EPA facilities that have undergone significant response activities in FY96 are discussed in detail below. As required for EPA-owned or operated NPL sites, the information presented below for the Old Navy Dump/Manchester NPL Site provides a report on progress in meeting CERCLA Section 120 requirements for reaching IAGs, conducting RI/FSs, and providing information on the status of remedial activities. For other EPA-owned or operated sites on the docket, the information presented below provides a report on progress in conducting response activities at the facilities.

National Air and Radiation Environmental Laboratory, Alabama

EPA's air and radiation laboratory formerly operated at a site near its current location at Gunter Air Force Base in Montgomery, Alabama. During operations at the original site, waste solvents, including xylene and benzene, were discharged into a pit adjacent to the laboratory building. The releases were identified by EPA's internal auditing program. The site was remediated initially by removing the accessible contaminated soil and replacing it with uncontaminated soil. Then EPA, in conjunction with the Underground Injection Control Program of the Alabama Department of Environmental Management, determined the extent of the remaining contamination and developed an appropriate mitigation program. EPA is monitored the ground-water wells on the property regularly and

Exhibit 5.4-1
Status of EPA Facilities on the Federal Agency Hazardous Waste Compliance Docket¹

State	EPA Facility	Known or Suspected Problems	Project Status
AL	National Air and Radiation Environment Laboratory (formerly known as the Eastern Environmental Radiation Facility)	Soil and groundwater contamination	No further remedial action required
MA	New England Regional Laboratory	no contamination	Pollution prevention plan continues
MI	Bay City CERT Site	Miscellaneous drums on EPA owned parcels	Site turned over to Bay City
MI	Electro Voice	Electroplating waste contamination	Remedial design completed, soil cleanup efforts performed
NH	Ottati & Goss Superfund Site	Groundwater, soil, and sediment contamination	1st Remedial design completed, FS initiated
NJ	EPA Edison Facilities (formerly known as the Raritan Depot)	No contamination that poses a threat to the environment	Continuing investigations
VA	Fine Petroleum	Decaying containers of hazardous materials	Remedial work completed, site referred to DOJ
WA	Old Navy Dump/Manchester NPL Site (formerly known as the Region 10 Environmental Services Division Laboratory)	Soil and sediment contamination attributable to DoD ownership	Remedial investigation/feasibility study completed

Source: Hazardous Waste Compliance Docket and the Office of Administration and Resource Management.

¹ This list does not include the following 16 EPA facilities where remedial activities have been completed, that have been conditionally exempt from PA requirements, or placed on the docket in error. These facilities include the Andrew W. Breidenback Environmental Research Ctr., Ann Arbor Motor Vehicle Lab., Brunswick Facility, Center Hill Hazardous Waste Engineering Research Lab., Central Region Laboratory-MD, Combustion Research Facility-AR, Corvallis Environmental Research Lab., Houston Laboratory, Mobile Incinerator-Demmry Farm, National Enforcement Investigation Ctr., Philadelphia Site, Region 5 Environmental Services Division Lab., Region 7 Environmental Services Division Lab., Technology Center-NC, Testing and Evaluation Facility-OH, and Washington Headquarters.

implemented a program to pump ground water from the contaminated area. In FY96, EPA received confirmation from the Alabama Department of Environmental Management that the monitoring wells and pumping system could be closed and that no further action was required at the site.

Casmalia Resources, California

The Casmalia Resources Hazardous Waste Facility operated as a commercial hazardous waste treatment, storage, and disposal facility from 1973 to 1989. During this time period, the facility accepted billions of pounds of waste materials. Subsequently,

efforts to close the facility properly and permanently were abandoned by the owner/operators. In 1992, the State of California requested EPA step in as the lead regulatory agency. EPA has since undertaken emergency response activities while seeking voluntary cleanup by PRPs.

New England Regional Laboratory, Massachusetts

An underground oil storage tank was replaced at the New England Regional Laboratory in October 1993. During excavation, the cavity left by the old tank filled with water and developed a sheen. The

laboratory was given a National Pollutant Discharge Elimination System (NPDES) permit exclusion and allowed to pump the water because tank inspection and water analysis indicated that no leaks were present and no groundwater contamination occurred. The laboratory continues to improve its environment, safety, and health program with regular audits by the Safety, Health, and Environmental Management Program (SHEMP).

Bay City CERT Site, Michigan

EPA was authorized by Congress to purchase property for the construction of a Center for Ecological Research and Training (CERT) in Bay City, Michigan. A preliminary site characterization and three subsequent phases of site characterization were performed on the approximately 90 acre (25 parcel) site. Field investigations (Phase II and Phase III) began in FY93 and were ongoing through FY96. Results of the investigations showed that localized areas of the CERT site had been impacted by past onsite and offsite land usage and related activities. Potential environmental liabilities at the site and costs associated with remediation of these liabilities were also identified. Authorization and funding was rescinded in FY94 halting the CERT project. EPA had acquired six of the 25 parcels at that time. During the investigation, miscellaneous drums deposited by unknown parties were discovered on two of the EPA owned parcels. The site was turned over to Bay City in FY96.

Electro Voice, Michigan

The Electro Voice site has been occupied by several manufacturing companies since the 1920s. Demolitions refuse was deposited in an onsite natural land depression from the 1920s to the early 1950's. Portions of Electro Voice, Inc.'s facilities have been built upon this fill. Electro Voice built two lagoons for the purpose of disposing electroplating waste in 1952. The lagoons were removed from service in 1962 and a wastewater treatment facility was installed. In 1979, an industrial sewer link broke discharging liquid waste into the north lagoon. Electro Voice responded to this spill by treating and removing the discharge and installing a holding tank to prevent similar incidents. The lagoons were closed and backfilled in 1980. In 1987, the EPA and

Electro Voice entered into a Consent Order requiring the company to carry out a feasibility study of site contamination. The study was completed by the EPA in September of 1991. Final remedies were selected for the lagoon area, onsite groundwater, and dry well area soils. The remedial design was completed in FY96 along with the excavation of contaminated soil and construction of a clay cap.

Ottati & Goss Superfund Site, New Hampshire

The Ottati & Goss Superfund Site was used by several companies and corporations for the purposes of drum reconditioning operations from 1959 until 1980. The site was then used by Ottati & Goss from March 1978 until July 1979 as a hazardous materials processing and storage facility. An RI/FS conducted in 1986 revealed that groundwater under the site was contaminated well above drinking water standards. The investigation also found a significant amount of soil and sediment contaminated above levels protective of human health and the environment. EPA conducted emergency removal actions at the site between December of 1980 and July of 1982. PRPs performed partial soil cleanup remediation at the site in 1989. The remedial design was completed in FY96 and a feasibility study was initiated.

EPA Edison Facilities, New Jersey

The EPA Edison Facilities site was formerly the Raritan Depot, which was owned by DoD and used for munitions testing and storage. In 1963, the General Services Administration (GSA) took possession of the property and, in 1988, transferred approximately 200 acres of the site to EPA. Although residual contamination from past DoD and GSA activities at the facility persists, EPA has not stored, released, or disposed of any hazardous substances on the property. A site inspection was conducted in FY91, following the discovery of a contaminated surface-water impoundment. The investigation resulted in the implementation of interim cleanup actions. Response activities have included spraying a rubble pile containing asbestos with a bituminous sealant; removing the liquid in the surface impoundment, excavating soil, installing a liner, and backfilling the impoundment with clean

material; excavating and storing munitions; and removing underground storage tanks. EPA expects that DoD will pursue additional cleanup work at the site.

Fine Petroleum, Virginia

The Fine Petroleum/Mariner HiTech site has been a paint and paint-related product recycling facility since the late 1960's. Approximately 13,000 containers with capacities ranging from 1 quart to 55 gallons were discovered in varying stages of decay in a field on the approximately 3 acre property. EPA performed a sampling assessment in July 1992 leading to a removal action in 1993 in which 26,330 gallons of paint and paint-related materials were removed. In May 1995, a fire occurred at the sole building on the property which housed numerous containers of hazardous substances. Following the fire, engineer evaluations indicated the warehouse to be structurally unsound. A runoff barrier was erected and air monitoring was conducted around the perimeter of the building's remains. A total of 365, 55-gallon drums of reportable quantity wastes, approximately 1120 cubic yards of non-hazardous demolition debris, and 916 tons of non-hazardous, petroleum-impacted soil was removed during this 1995 event. The site began cost recovery stage in FY96.

Old Navy Dump/Manchester NPL Site, Washington

EPA acquired this former Navy site from DoD in 1970 and used the land to construct an environmental testing laboratory in 1978. The property is also used for two other environmental laboratories run by the National Marine Fisheries Service and the Washington State Department of Ecology. The property adjacent to the laboratories had been used by the Navy to conduct firefighting training exercises, maintain metal anti-submarine nets, and serve as a Navy landfill. Investigations of the property history revealed that in the 1940s and 1950s, the Navy had used a lagoon on the property to dispose of metal debris and other waste from the nearby Bremerton Naval Shipyard. Also, chemical residues from the Navy firefighting training school had been allowed to drain into the ground. In FY93, a preliminary assessment and site inspection of the

property revealed the presence of hazardous substances in the soil, sediment, and surface-water run off. In January 1994, EPA proposed the site to the NPL, and in June 1994, EPA listed the site on the NPL.

Because the site is a former Navy site, the Defense Environmental Restoration Program for Formerly Used Defense Sites (FUDS) will provide funding for evaluating and correcting the hazardous conditions. Negotiations for an IAG for site cleanup were initiated in July 1994 and were ongoing as of the end of the fiscal year. Also during the year, the Seattle District of the U.S. Army Corps of Engineers was authorized under the Department of Defense's Environmental Restoration Program for FUDS to perform an RI/FS of the Old Navy Dump/Manchester NPL Site (FUDS Site No. F10WA011900) and to prepare a proposed plan and ROD. The RI/FS was completed in FY96.

This page intentionally left blank

Chapter 6

Resource Estimates

Section 301(h)(1)(G) of CERCLA requires EPA to estimate the resources needed by the federal government to complete Superfund implementation. The Agency interprets this requirement to be a report on the cost of completing cleanup at sites currently on the National Priorities List (NPL). Much of this work will occur after FY96.

Section 6.1 of this chapter includes annual information on Trust Fund resources needed by EPA and other federal departments and agencies through FY96, and on the allocation of the resources for FY96 and FY97. An overview of the method used to estimate the long-term costs associated with site cleanup is contained in Section 6.2, and an estimate of the long-term costs of cleaning up sites on the existing NPL is contained in Section 6.3. The estimate includes Trust Fund resource projections for EPA and other Superfund allocations to other federal departments and agencies for FY97 and beyond.

The long-term estimate provided in Section 6.3 is based primarily on the resources required to carry out the responsibilities and duties assigned to EPA and other federal departments and agencies by Executive Order 12580. To compute the estimate, EPA must make assumptions about the size and scope of the Superfund program, the nature and number of response actions, the level of participation by states and private parties, and the use of treatment technologies. For active NPL sites (those that have reached or passed the remedial investigation/feasibility study [RI/FS] planning stage), these assumptions relate to management of the workload already in the remedial pipeline and the costs of those actions. For NPL sites that have not yet entered the RI/FS planning stage, assumptions are

made about which activities will be necessary to clean up the sites and delete them from the NPL.

In developing the long-term resource estimate, EPA considered several sources of information:

- EPA Superfund budgets for FY93 through FY96, including budgets from other federal departments and agencies;
- The Federal Agency Hazardous Waste Compliance Docket developed under Section 120(c) of CERCLA and each federal department's and agency's annual report to Congress on federal facility cleanup as required under Section 120(e)(5) of CERCLA; and
- Various EPA information systems, primarily the CERCLA Information System (CERCLIS) and the Integrated Financial Management System.

Specifically, EPA has estimated resource needs for FY97 and beyond. This long-term effort has been coordinated with the development of the FY97 budget. In conjunction with the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and its policies affecting program direction and scope, EPA continues to refine the complete cost estimate for implementing CERCLA. The Agency is working to improve data quality, refine cost estimating methods, and collect additional information.

EPA's ability to project the federal resource requirement for CERCLA implementation improves each year as more experience is gained. Improved coordination with other federal departments and agencies and additional data on the implementation

of the federal facilities requirement of Section 120 also will increase the accuracy of future resource estimates.

6.1 Source and Application of Resources

Since the enactment of CERCLA in 1980, Congress has appropriated \$16.3 billion to the EPA Superfund program (FY81 through FY96). This estimate includes \$1.8 billion for FY81 through FY86 and \$14.5 billion for the post-SARA period, FY87 through FY96. The FY96 resources were spent for the following activities:

- EPA Response Activities (70.8 percent): Response activities include site assessment, time-critical and non-time-critical removals, long-term cleanup actions, and program implementation activities. These activities also include support provided by the Office of Water and the Office of Indoor Air and Radiation.
- Other Federal Agencies Response Activities (9.9 percent): Agencies included are: Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Federal Emergency Management Agency, General Services Administration, Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, National Institute of Environmental Health Sciences, Department of the Interior, Department of Justice, Department of Labor, National Aeronautics and Space Administration, Tennessee Valley Authority, Department of Transportation, and Department of Veterans Affairs.
- EPA's Enforcement Activities (9.5 percent): Enforcement activities include PRP negotiations, litigation, and settlements and cost recovery efforts.
- Management and Support (8.4 percent): This category includes program analysis provided by the Office of Program Planning and Evaluation; personnel, contracting and financial management services from the Office of Administration and Resources Management; legal services provided

by the Office of General Counsel; and the audit function provided by the Office of the Inspector General.

- Research and Development (1.4 percent): Research and development resources are used for technical support and for developing and evaluating faster, better and less expensive methodologies and technologies in the areas of site characterization, risk assessment, monitoring, remedy selection and remedy design, construction and operations

Exhibit 6.1-1 presents the actual obligations of Superfund resources for FY95 and FY96 within these categories. The snapshot data is from EPA's Senior Management Report.

6.1.1 Estimating the Scope of Cleanup

Site cleanup is the single largest category of Superfund expenditures and is expected to remain so in the future. To project EPA funding needs for cleanup activities, several key estimations were made, including:

- The projected number and average cost of studies, remedial designs (RDs), and remedial actions (RAs) undertaken;
- The extent and cost of removal activity; and
- The proportion of direct cleanup actions undertaken by PRPs.

6.1.2 PRP Contributions to the Cleanup Effort

The most significant way PRPs contribute to the hazardous substance cleanup effort is by conducting and financing response actions (whether voluntarily or under order). When PRPs finance site cleanup efforts, potential EPA Superfund obligations for those sites are dramatically reduced and the remaining principal cost is PRP oversight. EPA continues to develop and implement policies designed to encourage PRP cleanups.

In addition to response actions actually performed by PRPs, a portion of the costs of certain

Exhibit 6.1-1
EPA Superfund Obligations
(in Millions)

Program Area	FY95 Operating Plan	FY96 Operating Plan
Response Activities (Total)	\$1,030.3	\$1,202.7
EPA	893.9	1,054.7
Other Federal Agencies	136.4	148.0
Enforcement Activities	212.3	141.1
Management and Support	124.8	125.6
Research and Development	63.9	20.5
Total Superfund	\$1,431.3	\$1,489.9

Source: Senior Management Report FY96.

Fund-financed response actions will be recovered from PRPs through enforcement activities. Typically, there are delays of several years between expenditures from the Trust Fund and recovery of costs.

6.2 Resource Model Assumptions

Estimating the cost of cleaning up current NPL sites depends on a number of factors, many of which will change as the program continues to mature. The main factors are:

- Changes in Superfund program policies and procedures because of the revised NCP, particularly the cleanup standards as required under Section 121 of CERCLA;
- Changes in the remedial program because of revisions to the Hazard Ranking System, as required under Section 105 of CERCLA;
- The long period required to identify, develop, select, and construct a remedy, and the need for scheduling flexibility to maximize the impact of enforcement activities;
- The level of state Superfund program activity;
- The level of PRP participation in the program;

- Changes in cleanup approaches, such as implementing more early actions in favor of remedial actions; and
- The nature of and demand for removal actions.

Based on these factors, EPA uses the Outyear Liability Model (OLM) to estimate the long-term resource needs of the Superfund program. The OLM provides meaningful long-range forecasts, has the flexibility to refine forecasts, and can be adjusted for a large number of program-related variables. These variables can be individually adjusted to reflect actual or anticipated changes in the program. The four primary cost categories used in the OLM to estimate the long-term resources required to clean up the existing NPL sites are:

- Active NPL sites;
- NPL sites where the remedial process has not yet begun;
- Non-site activities; and
- RA costs.

EPA's estimate of resources required to clean up the existing NPL sites is provided in Section 6.3. To develop this estimate, the Agency has concentrated on remedial and removal activities. These activities

are the major components of the Superfund program and account for the majority of Fund expenditures by the Agency.

6.2.1 Active NPL Sites

Remedial efforts are underway at most of the sites on the current NPL. Remedial plans are being developed for the remaining sites on the NPL, leaving 60 sites on the existing NPL pending study at the end of FY96.

Data on the active NPL sites are stored in CERCLIS and incorporated into the OLM to present the most accurate picture of planned activities. The OLM estimates ancillary activities for sites at which some level of planning or remediation activity is underway. Because most of the existing NPL sites are active, they constitute a large portion of the total liability estimate.

In addition to planned remedial activities, enforcement activities have a significant impact on the costs of addressing Superfund sites. All enforcement activities are estimated by the model according to past program experience and several standard sequences of activities, each representing a different enforcement approach. Enforcement-related variables within the model include costs, workyears, and the shift in remedial costs when Superfund assumes responsibility from, or passes responsibility to, a PRP. As with remedial activities, most enforcement costs and workyears are estimated.

6.2.2 Sites Yet to Begin the Remedial Process

The OLM uses the same general approach for sites where the remedial process has yet to begin. Cleaning up an NPL site involves a number of different activities occurring over time and in predictable arrangements. For sites where the remedial process has yet to begin, the OLM must first approximate the activities that will be involved when remediation of the sites begins. Approximations are made by applying several generic activity sequences to the number of sites being estimated. When the activities have been set, cost and workyear pricing factors are applied to estimate the necessary resources. A consistent

approach is used for all site activities, both remedial and enforcement. In the approach, tradeoffs such as avoiding cleanup costs but incurring PRP oversight costs are handled automatically as assumptions are adjusted.

The OLM includes a library of different activity sequences. Each sequence represents a typical site and involves different activities, durations, and schedules. In addition to the key activity starts discussed above, the OLM includes a number of other factors to control the mix of these activity sequences.

6.2.3 Non-Site Costs

Although non-site activities comprise a substantial portion of the budget, individually they are fairly small and stable. For these reasons, resource needs for these activities are estimated by applying annual growth factors to the levels included in the requested budget for the current year.

Aside from the number of sites requiring cleanup and the cost of individual cleanups, the assumption of managerial and financial responsibility for a site has the largest potential impact on the cost of the Superfund program. There are many factors involved in establishing who is responsible for a site (referred to as the site lead), including:

- Level of emphasis on enforcement;
- Willingness of states to assume financial responsibility; and
- Cost-sharing arrangements between Superfund and the states and between Superfund and the PRPs.

The model accommodates each of these factors with one or more variables, allowing the estimation of Superfund liabilities across a wide range of site-lead and cost-sharing scenarios. Site variables include

- Proportion of sites addressed by each lead category (Fund, PRP, state, and state enforcement);

- Number of sites that are owned and/or operated by state or local governments; and
- Number of sites that follow each of several enforcement paths.

Choices among these variables generally affect both cost and duration of the program. Increases in PRP leads will ultimately result in lower Fund costs, but related litigation will substantially extend the amount of time required to reach deletion of a site from the NPL.

6.3 Estimated Resources to Complete Cleanup

As illustrated in Exhibit 6.3-1, EPA's estimate of the total liability to complete cleanup of existing NPL sites is \$31.2 billion. This total includes the OLM long-term estimate of \$14.9 billion for FY97 and beyond. Major assumptions shaping the long-term estimate are as follows:

- Costing sites that are only currently proposed to or listed on the NPL.
- Removal activities at sites on the NPL remain at current levels.
- The RA cost factor is estimated at \$7.8 million per RA (in 1995 dollars) based on an analysis of RODs signed from 1991 through 1995.
- Program support and other non-site elements are straightlined at the levels of the current request year budget (FY97 President's budget).

- Approximately 50 percent of all new RI/FS starts will be Fund-financed.
- For non-federal facility sites, PRPs will take the lead on 75 percent of the RAs. (Because oversight is significantly less expensive than cleanup, Fund costs drop dramatically when PRPs assume financial responsibility for more cleanups.)
- No resource and programmatic assumptions for federal facility sites are included in the OLM. The OLM does not generate a resource estimate for the federal facility program.

Assumptions about the future reflect planning assumptions from the Superfund Program Management Manual and historical performance averages, both of which are revised periodically. EPA will continue to monitor developments that affect program costs. Changes will be incorporated into the model as they occur, improving depiction of future programmatic direction and refining previous analysis. OLM estimates will vary over time as a result, and subsequent editions of this Report will most likely contain revised estimates.

6.4 Estimated Resources for Other Executive Branch Departments and Agencies

The second element in fulfilling the requirements of Section 301(h)(1)(G) of CERCLA is providing an estimation of the resources needed by other federal departments and agencies. The Superfund resource needs of the other Executive Branch departments and

Exhibit 6.3-1
Estimate of Total Trust Liability to Complete Cleanup
at Sites on the National Priorities-List
(in Billions)

	Total Allocations
FY96 and Prior	\$16.3
FY97 and Beyond	14.9
Total	\$31.2

Source: Superfund Budget Documentation and Outyear Liability Model

agencies are met through two sources: the Superfund Trust Fund and the individual federal department's or agency's budget.

Trust Fund monies are provided to other federal departments and agencies through two mechanisms:

- **Interagency Budgets:** EPA provides Trust Fund monies to other federal departments and agencies that support EPA's Superfund efforts. Transfers are accomplished through an interagency budget under Executive Order 12580.
- **Site-Specific Agreements:** EPA also provides money from the Trust Fund to other federal departments and agencies through site-specific agreements.

Federal departments and agencies also provide support to Superfund activities through CERCLA-Specific Funds and general funds of the department or agency. Exhibit 6.4-1 summarizes the other federal departments and agencies that receive Trust Fund monies. (Please see individual agency and department annual reports for specific site cleanup costs and descriptions)

Exhibit 6.4-1
List of Departments and Agencies
Receiving Trust Fund Monies

Department of Agriculture
National Oceanic and Atmospheric Administration
Department of Defense
Department of Energy
Federal Emergency Management Agency
General Services Administration
Agency for Toxic Substances & Disease Registry
National Institute for Environmental Sciences
Department of Interior
Department of Justice
Occupational Safety and Health Administration
National Aeronautics and Space Administration
Tennessee Valley Authority
Department of Transportation
Department of Veterans Affairs

Chapter 7

Superfund Program Support Activities

7.1 Overview of Program Support Activities

The Superfund program's other support activities primarily focus on enhancing community involvement, disseminating public information, and promoting partnerships with states and Indian tribes. This section provides an overview of new and ongoing program support activities conducted by the Superfund program during FY96.

7.1.1 Community Involvement

Superfund's community involvement efforts demonstrate EPA's commitment to informing potentially affected citizens about Superfund sites and involving them in the cleanup process. EPA focuses on:

- Informing the public of planned or ongoing actions;
- Giving the public an opportunity to comment on and provide input for technical decisions; and
- Identifying and resolving conflicts.

The guideline for EPA's proactive community involvement effort is "early, often, and always." EPA is committed to beginning outreach activities early in the Superfund process, meeting with citizens on a regular basis, and always listening to citizens' concerns.

EPA's policy of enhancing community involvement is demonstrated by its continued efforts

to tailor community involvement activities to each community's needs and to identify effective approaches for reaching concerned citizens. Each community is unique and requires an individual communication strategy. EPA, while satisfying statutory and regulatory requirements, also promotes the following innovative involvement techniques:

- Sponsoring open houses and public availability sessions for local citizens to meet one-on-one with EPA Superfund site teams to discuss community concerns or site information;
- Promoting greater public understanding and encouraging public participation in site activities to convey information from EPA to local citizens using various media, such as public access television and public monitoring equipment; and
- Conducting introduction to Superfund workshops and video presentations to educate affected citizens about the Superfund cleanup process and opportunities for involvement in the process.

Under the Superfund Accelerated Cleanup Model (SACM) and Superfund Administrative Improvements, the Agency remains committed to promoting meaningful community involvement in decision-making during all phases of site cleanup. EPA views early and frequent community involvement as critical to the success of EPA's mission to protect human health and the environment. The Agency continued offering technical assistance grants (TAGs) to communities to enable them to participate more fully in Superfund cleanup and decision making. Other efforts include

the establishment of community advisory groups (CAGs).

Fiscal Year 1996 Highlights

During FY96, EPA continued to improve the vigorous community involvement efforts by emphasizing the importance of public participation through a variety of means. In particular, the reorganization of the Office of Emergency and Remedial Response benefited community involvement nationally through the creation of an organization devoted to community involvement and outreach efforts at the Headquarters level. EPA's involvement in a DoD/DOE public participation workgroup also strengthened community involvement at federal facilities through enhanced coordination and cooperation within the "federal family." EPA provided the opportunity for greater involvement in the Superfund process for stakeholders through the establishment of a regional ombudsmen program in all 10 EPA regions. This program, based on an administrative reform, provides a point of contact for stakeholders to resolve issues when normal channels fail. EPA also sponsored a forum to discuss issues concerning relocation in Pensacola, FL with a variety of stakeholders. Finally, EPA introduced a job training initiative to provide training to community residents and promote their employment with Superfund site cleanup contractors.

Enhanced Community Involvement Through Administrative Improvements

The enhancement of meaningful community involvement is one of the areas where EPA is changing Superfund through the administrative improvements. Efforts focused on identifying ways to increase community involvement in the Superfund program, enhance outreach between EPA and communities, and ensure environmental justice by addressing concerns of minority and low-income communities.

Technical Outreach Services for Communities

The Agency continued support for the technical outreach program through initiation of an evaluation

effort to assess the three year-old Technical Outreach Services for Communities (TOSC) program. TOSC expands EPA's tools for community outreach by providing an alternative, independent source of technical information. EPA's Office of Research and Development's Office of Exploratory Research provides a national network of five hazardous substance research centers (HSRCs). Authorized by SARA Title III, Section 311(d), the HSRCs are supported by a network of 23 universities nationwide. Each HSRC supports two EPA Regions and provides technology transfer and training. The HSRCs also provide services that are flexible and tailored to each community's needs. For example, the technical expert at the HSRC may review site-related documents, attend public meetings, explain technical process information, or provide an independent assessment of site activities.

Community Advisory Groups

During FY96, the Agency issued *Guidance for Community Advisory Groups at Superfund Sites* to encourage the Regions to establish community advisory groups. CAGs are committees, task forces, or boards made up of citizens with diverse community interests that provide a public forum for discussing the needs and concerns of the community about the decision making process at Superfund sites. Based on the success of early CAG pilots, EPA took the program out of the pilot stage to a fully implemented program. EPA undertook efforts to evaluate the program by conducting five CAG case studies. The evaluation concluded that CAGs should be formed as early as possible in the cleanup process to ensure success. The case studies highlighted found that access to good technical expertise and strong community initiative in forming and operating a CAG are important factors for success.

National Community Involvement Conferences

EPA held its annual national Superfund community involvement conference in Chicago, Illinois. Topics discussed included the new ombudsmen program, CAGs, TAGs, and a keynote address focusing on public participation theory.

Technical Assistance Grants Under CERCLA Section 117(e)

The TAG Program, authorized by CERCLA Section 117(e), as amended by SARA, provides eligible communities affected by NPL sites with grant funds to hire independent technical advisors. Only communities affected by sites listed on the NPL or sites proposed to the NPL with response actions underway are eligible for such funds. By allowing communities to hire independent advisors, TAGs enable communities to become more knowledgeable about the technical and scientific aspects of a Superfund site. Communities are able to participate in the decision making process surrounding their sites using their increased understanding of site-specific cleanup strategies. Because TAG regulations require recipients to share their information with the entire affected community, the broader community benefits as well. Initial TAG awards are for \$50,000, but additional funds are available for more complex sites.

EPA continues to improve the TAG Program by establishing efficient lines of communication between potential TAG recipients and the Agency, including communication between the Regional offices and Headquarters. EPA sponsored a national conference to bring together regional TAG coordinators for a discussion on TAG issues as a key initiative to foster this regional/headquarter communication.

EPA's revision of the TAG rule throughout FY96 also played an important component in further streamlining and improving of the program. Revisions proposed for the TAG rule included:

- Reduction in reporting requirements for TAG recipients;
- Elimination of the cap on administrative expenses; and
- Inclusion of interpretation of congressional intent regarding the "not more than one grant may be made ... with respect to a single facility" language, to allow multiple, non-concurrent grant recipients.

As illustrated in Exhibit 7.1-1, since the TAG program began in FY88, EPA has awarded 189 TAGs, which are worth more than \$9.5 million to support community involvement in Superfund cleanup. This total includes 11 TAGs awarded during FY96. Because of the benefits of the TAGs, many TAG recipients choose not to close-out their grant award as they mature, but rather request additional funds through a waiver or deviation. EPA has awarded almost \$2 million additional grant dollars through waivers and deviations.

7.1.2 Public Information

A Coordinated Approach to Public Information

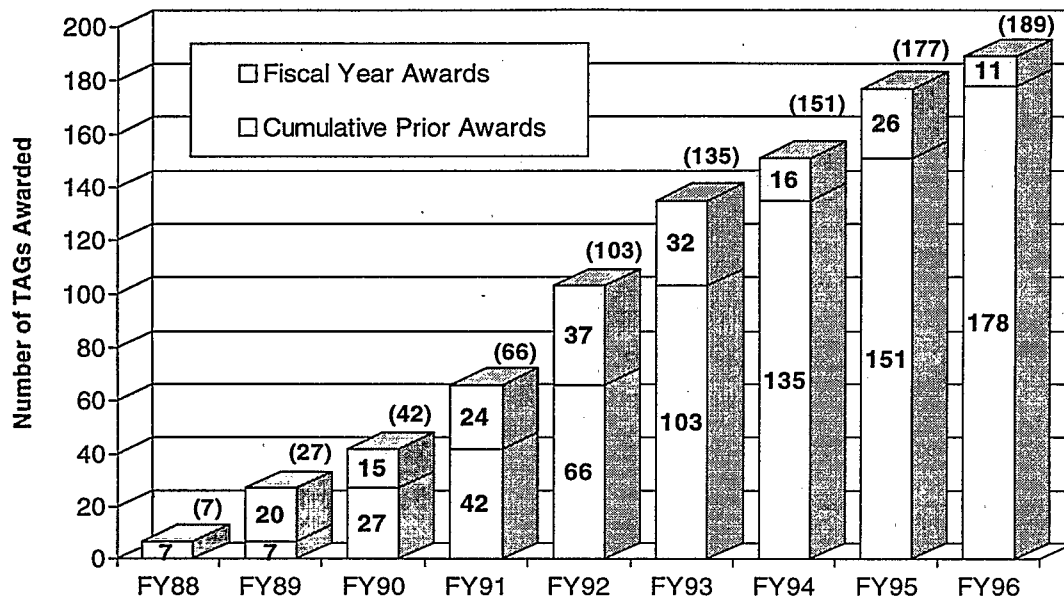
The Agency's public information outreach program is built on a system of information coordination and management. Under this program, EPA is committed to providing quick public access to high-quality documents.

All Superfund documents available to the public are listed in the *Catalog of Superfund Program Information Products* and its regular update bulletins. Copies of the catalog and updates are available from the Superfund Document Center or from the Department of Commerce's National Technical Information Service (NTIS). Electronic access to the catalog and updates is available through Agency internal electronic bulletin boards or through the NTIS FEDWORLD gateway to the Internet system which is advertised nationwide to the general public.

During FY96, EPA continued to participate in the full implementation of the EPA-NTIS Superfund partnership, a comprehensive interagency effort to provide maximum public access to Superfund documents. Through this partnership, the Agency and NTIS conduct an outreach and marketing program to inform the public about the availability of Superfund documents from NTIS. This partnership effort has provided the public with rapid delivery of Superfund documents and has conserved EPA resources.

The public can also access information about Superfund through other information sources, such

Exhibit 7.1-1
Number of Technical Assistance Grants Awarded
from Fiscal Year 1988 Through Fiscal Year 1996



Source: Office of Emergency and Remedial Response/Hazardous Site Control Division.

as the Superfund Docket and the Resource Conservation and Recovery Act (RCRA)/Superfund Hotline. Further information on public information services is provided below.

The National Technical Information Service

The Department of Commerce's NTIS serves as a permanent archive and general source of federal publications, including Superfund documents. Before the EPA-NTIS partnership, EPA had fulfilled requests for more than two million documents free of charge. Due to resource constraints, however, free document distribution was no longer possible. To fulfill its commitment to ensure that Superfund documents are available to the public, EPA has worked to maximize public access to and promote the availability of Superfund documents through NTIS.

The National Technical Information Service

The Department of Commerce's NTIS serves as a permanent archive and general source of federal publications, including Superfund documents. Before the EPA-NTIS partnership, EPA had fulfilled requests for more than two million documents free of charge. Due to resource constraints, however, free document distribution was no longer possible. To fulfill its commitment to ensure that Superfund documents are available to the public, EPA has worked to maximize public access to and promote the availability of Superfund documents through NTIS.

The Agency's joint effort with NTIS provides the public with ready access to the entire Superfund collection. Using NTIS employees provided considerable savings to the government and facilitates access to the many production services housed at the NTIS headquarters in Springfield, Virginia.

NTIS also maintains a Superfund Order Desk where users may purchase single copies of documents or customized subscriptions for categories of documents pertinent to their needs. Prepublication documents are available at the Superfund Order Desk prior to being formally printed and distributed.

In other FY96 efforts, EPA broadened its use of electronic tools such as the Internet and multimedia computers, to increase communication between Superfund stakeholders and to improve access to Superfund information. Homepages for Superfund and for each of the EPA Regions are posted on the Internet. The relative number of visits to these websites continues to increase.

The Superfund Docket

The Superfund Docket provides public access to the materials that support proposed and final regulations. In compliance with the Freedom of Information Act, the public is allowed access to docket materials following approval of the material by the Office of General Counsel and announcement of the proposed or final regulation in the

Other Information Sources

The RCRA/Superfund Hotline, managed by EPA Headquarters, provides information to the public and EPA personnel concerning hazardous waste regulations and policies. The hotline is a comprehensive source of general information about ongoing Superfund program developments.

EPA also maintains the Hazardous Waste Superfund Collection at EPA Headquarters and Regional libraries. The collection contains documents ranging from records of decision to commercially produced books on hazardous waste and the Superfund program.

7.1.3 EPA's Partnership with States and Indian Tribes

EPA continues to promote and maintain its partnership with states, federally recognized Indian tribes, commonwealths, territories, and political subdivisions in the Superfund cleanup process. (States, commonwealths, and territories will be

referred to as states for the purposes of this Report.) Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides mechanisms for ensuring meaningful state and tribal involvement in implementing Superfund response activities, as required by Sections 104 and 121(f) of CERCLA. Subpart O of 40 CFR Part 35 provides additional detail on requirements for transferring funds and responsibilities to states and Indian tribes to undertake response actions, as well as on building their overall program capabilities.

The following sections describe response agreements and Core Program cooperative agreements (CPCAs) between EPA and states, tribes, or political subdivisions because these agreements serve as a tool to enable states to participate in the Superfund cleanup process. In addition, FY96 highlights of EPA efforts to promote involvement of states and Indian tribes in Superfund response activities are provided.

Response Agreements and Core Program Cooperative Agreements

Response agreements provide states, tribes, and political subdivisions with the opportunity to participate in response activities at sites under their jurisdiction. Superfund CPCAs assist states and tribes in developing their overall Superfund response capabilities. This section discusses each type of agreement in detail.

Response Agreements: Response agreements fall into two categories: Superfund state contract (SSCs) and cooperative agreements (CAs). Both serve as the contractual tools through which states, tribes, and political subdivisions work with EPA to conduct or support Superfund response activities.

SSCs and remedial action CAs document assurances required from a state, tribe, or political subdivision by CERCLA Section 104. Before EPA provides funding to conduct a remedial action (RA) in a state (i.e., a Fund-financed RA), for example, the state must provide the Agency with the following assurances, required by CERCLA Section 104 and formalized in the SSC or remedial action CA:

- Provide for 100 percent of RA operation and maintenance;
- Provide 10 percent of the RA cost;
- Ensure the availability of a 20-year capacity for the disposal or treatment of hazardous wastes;
- Provide for off-site disposal, if necessary; and
- Acquire or accept transfer of interest in property, if necessary.

Assurances are not required for Fund-financed response actions that are not RAs. Where a state or a political subdivision was an operator at the facility at the time when hazardous substances were disposed, however, the state must provide at least 50 percent of the cost of the removal, remedial planning, and RA in cases where a CERCLA-funded RA is conducted. Tribes are exempt from providing most of the CERCLA assurances, but may need to provide the assurance to acquire or accept interest in property in certain cases. The following sections describe SSCs and CAs.

Superfund State Contracts: State or tribe must enter into an SSC with the Agency when EPA conducts (i.e., is the lead for) a Fund-financed RA. The SSC, which must be signed before EPA conducts the RA, documents the CERCLA assurances that have been made with a state or Indian tribe. The SCC also includes provisions detailing the cost-share required and specifying the process for the collection of cost-share payments.

A three-party SSC among the state/political subdivision/EPA is required when a political subdivision assumes the lead for remedial activities. The three-party SSC parties include EPA, the state, and the political subdivision. The SSC must be in place before EPA can transfer funds, through a remedial CA, to the political subdivision. Also, although the political subdivision will conduct the remedial activity, the state still is responsible for providing the required CERCLA assurances in the SSC.

Cooperative Agreements: Superfund CAs are the vehicle through which EPA provides funds to states, tribes, and political subdivisions to ensure

their meaningful involvement in implementing Superfund. The following five types of response CAs, described in 40 CFR Part 35 Subpart O, are available for site-specific response activities:

- Pre-remedial CAs are awarded to states, tribes, and political subdivisions to conduct pre-remedial activities, including preliminary assessments (PAs) and Site Investigations (SIs).
- Remedial CAs allow states, tribes, or political subdivisions to receive Superfund money for taking the lead in remedial planning, remedial design (RD), and RAs at specified sites within their jurisdiction. When a state or tribe takes the lead for an RA, the remedial CA documents the state or tribe's CERCLA Section 104 assurances, and an SSC is not required. When a political subdivision takes the lead for a remedial activity, a three-way SSC must be signed. This three-way SCC documents the state's CERCLA assurances.
- Removal CAs are awarded to states, tribes, or political subdivisions that lead a non-time-critical removal action (NTRC). Such actions are taken when a planning period of more than six months is available. Cost-share payment is not required (unless the facility was operated by the state or political subdivision, as described above), but EPA encourages cost-sharing for removal actions that cost more than \$2 million.
- Enforcement CA funds may be used by a state, tribe, or political subdivision to conduct potentially responsible party (PRP) searches, issue notice letters for negotiation activities, implement administrative and judicial enforcement actions, or oversee PRP response actions. Subpart O contains specific enforcement-related criteria that an applicant must meet to be eligible for an enforcement CA.
- Support agency cooperative agreements (SACAs) allow states, tribes, and political subdivisions that do not have lead-agency responsibility to actively participate in response activities at sites under their jurisdiction. SACAs may assist the state, tribe, or political subdivision in facilitating investigations,

response selection, and implementation through the sharing of information and expertise. They may not be used, however, to document CERCLA assurances.

In addition to describing response CAs, 40 CFR Part 35 Subpart O also specifies financial, administrative, and other requirements with which a state, tribe, or political subdivision must comply in order to receive funds. A multi-site cooperative agreement, which has the same requirements as the other types of agreements, is a multi-purpose agreement that has been used to consolidate funding for various response activities at different sites.

Core Program Cooperative Agreements

Congress has expressed the intent to include CERCLA funding to states and tribes for certain basic, or core, activities that are not attributable to a specific site but are necessary to implement CERCLA response capabilities. The legislative history of CERCLA Section 104(d), as amended, demonstrates this intent to support the development of Superfund infrastructure. Through CPCAs, EPA offers states and tribes the opportunity to develop comprehensive, self-sufficient Superfund programs.

CPCAs have a single budget and scope of work designed to enhance state or tribal program activities. Approval of the budget request and scope of work is dependent on the developmental needs of a state or tribal program, demonstrated progress in meeting previous core objectives, and funds availability. States are required to provide a 10 percent cost-share for Core Program awards.

The Core Program is intended to lay the groundwork for the implementation of an integrated EPA/state/tribal approach for meeting Superfund goals. EPA typically budgets and annually distributes \$10 million to \$13 million among the 10 Regional offices for CPCAs. Regions also may provide additional funding if resources are available.

Fiscal Year 1996 Highlights

From FY81 through FY96, EPA has awarded nearly \$1.8 billion in CAs to states, tribes, and political subdivisions to assist them in participating

in Superfund response activities. This total includes funding awarded through site-specific CAs. Remedial, removal, or enforcement CAs enable states, tribes, and political subdivisions to lead new or continuing Fund-financed remedial investigations and feasibility studies, RDs, and RAs, and enforced PRP responses at Superfund sites during the fiscal year.

State Highlights

EPA continued to build the state/EPA partnership through outreach initiatives with states. These initiatives included meetings with states on special topics of interest, such as soil screening levels, integrated assessments, and communications between EPA and state removal managers. EPA also provided states with assistance to enhance their Superfund programs by funding the participation of 54 representatives from 15 states in CERCLA training. The state representatives attended two sessions of state site managers' training that addressed the basics of the federal Superfund program.

Under the administrative improvements initiative to enhance states' role in cleanup, the Agency continued developing the Superfund state deferral program. Under this program, EPA may defer consideration of certain sites for listing on the NPL, while interested states or tribes compel and oversee response actions conducted and funded by PRPs. Twenty-two sites in seven states are serving as pilots for the deferral program.

Tribal Highlights

In FY96, the Superfund program was actively involved in addressing hazardous waste problems on Native American lands and in assisting tribes to assume regulatory and program management responsibilities. Tribes received funding, technical assistance, and training for Superfund implementation through SSCs, CAs, SACAs, CPCAs, and other agreements.

The development and enhancement of voluntary cleanup programs is being promoted by EPA in conjunction with states and tribes. Voluntary cleanup programs encourage private parties to

undertake protective cleanups of contaminated sites. EPA is developing guidance outlining the circumstances under which it will agree to take no further action at sites involved in the program. Ten states have signed agreements with the EPA to encourage participation in voluntary investigation and cleanup of properties under state programs. In exchange, EPA agrees to take no further action against program participants except in limited circumstances.

7.2 Minority Firm Contracting

Section 105(f) of CERCLA requires EPA to consider minority contractors for procurement opportunities when awarding Superfund contracts, encourage the participation of such firms in the Superfund program, and report annually on the number and types of minority contractors receiving Superfund contracts. EPA's Office of Small and Disadvantaged Business Utilization (OSDBU) is responsible for ensuring that the Agency complies with Section 105(f) of CERCLA.

7.2.1 Minority Firm Contracting During Fiscal Year 1996

EPA contracts include direct procurements awarded by the Agency, and indirect procurements that result from Superfund financial assistance awards to states and other federal agencies (i.e., contracts and subcontracts resulting from CAs awarded to the states and from interagency agreements (IAGs) with other federal agencies).

During FY96, contracts worth nearly \$59.7 million were awarded to disadvantaged businesses and minority contractors to perform Superfund work. This amount represents 8.2 percent of all Superfund contracts, which exceeds the 8 percent goal established by the Administrative Provisions of P.L. 103-389. As Exhibit 7.2-1 illustrates, EPA's CAs with states resulted in contracts worth nearly \$1.8 million to minority contractors. Other federal agencies awarded over \$39 million in contracts, subcontracts, and purchase orders to minority firms with funds transferred from the Superfund program under IAGs.

Through the Agency's direct procurements, minority business enterprises (MBEs) received \$18.7 million in Superfund contracts and subcontracts. This total was awarded through various contracting methods (i.e., Small Business Administration 8(a) awards and subcontracts).

Minority firms provide three types of services to the Superfund program: professional, field support, and construction. Exhibit 7.2-2 illustrates examples of tasks performed under each category.

7.2.2 Efforts to Identify Qualified Minority Firms

OSDBU conducted a number of outreach activities during FY96 to encourage qualified minority firms to seek contract and subcontract opportunities through the Superfund program. These activities included the following:

Exhibit 7.2-1
Minority Contract Utilization During Fiscal Year 1996

Type of Activity	Total Dollars Obligated	Minority Contractor Participation ¹	Percentage of Total
Direct Procurement	\$534,375,800	\$18,738,062	3.5
Cooperative Agreements	27,386,190	1,754,267	6.4
Interagency Agreements ²	166,590,970	39,176,210	23.5
Total	\$728,352,960	\$59,668,539	8.2
¹ This does not include women's business enterprise participation.			
² This amount represents the total dollars awarded in FY96 through interagency agreements.			

Source: Office of Small and Disadvantaged Business Utilization.

Exhibit 7.2-2
Services Provided by Minority Contractors

Professional	Field Support	Construction
Health Assessments	Drilling/Well Installation	Site Cleanup
Community Relations	Laboratory Analysis	Excavations
Feasibility Studies		Waste Hauling & Drilling
Data Management Security		Security
Geophysical Surveys		Site Support
Remedial Investigations		Facilities
Expert Witness		
Editing		
Air Quality Monitoring		

Source: Office of Small and Disadvantaged Business Utilization.

- NAMC and OSDBU conducted six training sessions designed to help minority contractors become more successful in winning Superfund direct prime contract and subcontract awards. A total of 150 attendees participated in the training sessions. In addition, 40 registrants attended the marketing seminar and several hundred individuals visited the various booths at a trade fair for minority contractors held in conjunction with Congressional Black Caucus Week.
- EPA, in cooperation with the Colorado District SBA Office and the Genesis Environmental Team (GET) conducted several seminars to provide information on Superfund contracting and subcontracting opportunities in the Colorado region, and to increase minority participation in Superfund contracting. More than 200 minority and women businesses were represented at these sessions. Directories of qualified minority firms were distributed to encourage their utilization by prime contractors and government agencies.

IAGs between EPA and any agency or department that involve Superfund monies also contain provisions to ensure that agencies or departments are aware of the requirements of CERCLA Section 105(f). In addition, the special provisions require that agencies or departments undertaking Superfund work submit an annual report to EPA on minority contractor utilization.

7.2.3 Efforts to Encourage Other Federal Agencies and Departments to Use Minority Firms

OSDBU continues to work with other federal agencies to enhance participation of minority contractors in the Superfund program. Throughout the fiscal year, federal agencies held numerous conferences, workshops, and seminars to encourage minority business participation in the Superfund program.

This page intentionally left blank

Appendix A

Status of Remedial Investigations, Feasibility Studies, and Remedial Actions at Sites on the National Priorities List in Progress on September 30, 1996

Appendix A satisfies the combined statutory requirements of CERCLA Sections 301(h)(1)(B) and (F). Accordingly, this appendix reports the status and estimated completion date of all remedial investigation/feasibility study (RI/FS) and remedial action (RA) Title I projects in progress at the end of FY96. This appendix also provides notice of RI/FSs and RAs that EPA presently believes will not meet its previously published schedule for completion, and includes new estimated dates of completion, as required by Section 301(h)(1)(C). These dates were previously published in Appendix A of *Progress Toward Implementing Superfund: Fiscal Year 1995*. In addition to meeting these statutory requirements, this appendix lists new remedial projects that were begun in FY94 and were in process at the end of FY96. Listed activities may include remedial projects at several operable units on a single site, as well as first and subsequent activities at a single operable unit.

Information in the appendix is organized under the following headings:

- **RG** – EPA region in which the site is located.
- **ST** – State in which the site is located.
- **Site Name** – Name of the site, as listed on the National Priorities List (NPL).
- **Location** – Location of the site, as listed on the NPL.
- **Operable Unit** – Operable unit at which the corresponding remedial activity is occurring; a single site may include more than one operable unit.
- **Activity** – Type of project in progress on September 30, 1996.
- **Lead** – The entity leading the activity, as follows:

EP: Fund-financed with EPA employees performing the project, not contractors;

F: Fund-financed and federal-lead by the Superfund remedial program;

FE: EPA enforcement program-lead;

FF: Federal facility-lead;

MR: Mixed funding; monies from both the Fund and potentially responsible parties (PRPs);

PRP: PRP-financed and conducted;

PS: PRP-financed work performed by the PRP under a state order (may include federal financing or federal oversight under an enforcement document);

S: State-lead and Fund-financed; and

SE: State enforcement-lead (may include federal financing).

Remaining terms used in the CERCLA Information System (CERCLIS) database, **O** (other), **SN** (state-lead and financed, no Fund money), and **SR** (state-ordered PRP response activities), are excluded from this status report because they do not include federal financing.

For some activities, the indicated lead is followed by an asterisk (*), which indicates that funding for the activity was taken over by the indicated lead during FY96.

- **Funding Start** – The date on which funds were allocated for the activity.
- **Previous Completion Schedule** – For projects ongoing at the end of FY95 that continued into FY96, the quarter and fiscal year of the planned completion date for the activity, as of 9/30/96. This column is blank for projects that were begun in FY95.
- **Present Completion Schedule** – The quarter and fiscal year of the planned completion of the activity, as of 9/30/96. This information was compiled from CERCLIS on 11/15/96.

An initial completion schedule is required to be put into CERCLIS when an activity is entered. Plans at this point are based on little site knowledge. As work continues, schedules are adjusted to reflect actual site conditions.

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
	GU	Anderson Air Force Base	YIGO	01	RI/FS	FF	03/30/93	3	2001	3	2001
				02	RI/FS	FF	06/29/93	3	2000	3	2000
				03	RI/FS	FF	06/29/93	3	1997	2	1998
				04	RI/FS	FF	06/29/93	3	2000	3	2000
				05	RI/FS	FF	06/29/93	3	2002	3	2002
				06	RI/FS	FF	06/29/93	3	2003	3	2003
1	CT	Barkhamsted-New Hartford Landfill	Barkhamsted	01	RI/FS	PRP	09/30/91	4	1996	4	1997
1	CT	Beacon Heights Landfill	Beacon Falls	02	RA	PRP	03/31/92	1	1996	4	1997
1	CT	Gallup's Quarry	Plainfield	01	RI/FS	PRP	09/07/93	1	1997	3	1997
1	CT	Kellog-Deering Well Field	Norwalk	02	RA	PRP	12/29/94	4	1996	1	1997
1	CT	Laurel Park Inc. (once listed as Laurel Park Landfill)	Naugatuck Borough	02	RA	PRP	07/29/96			3	1999
1	CT	New London Submaine Base	New London	03	RI/FS	FF	09/27/94	4	1997	4	1997
1	CT	New London Submarine Base	New London	01	RI/FS	F	09/23/94			1	1997
				02	RI/FS	FF	09/27/94	4	1997	4	1997
				04	RI/FS	FF	09/27/94	4	1998	3	1999
				05	RI/FS	FF	09/27/94	4	1998	4	1998
1	CT	Raymark Industries, Inc.	Stratford	02	RI/FS	F	09/04/96			3	1998
				03	RI/FS	F	09/20/93	4	1996	4	1997
1	CT	Solvents Recovery Service of New England	Southington	03	RI/FS	PRP*	07/12/96			4	1998
1	MA	Atlas Tack Corp.	Fairhaven	01	RI/FS	F	09/18/89	1	1997	4	1997
1	MA	Baird & McGuire	Holbrook	02	RA	F	06/26/90	3	1997	2	1998
				03	RA	F	09/30/91	4	1995	4	1995
				04	RA	F	04/20/95	4	1995	4	1995

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
1	MA	Charles-George Reclamation Trust Landfill	Tyngsborough	03 04	RA RA	F F	09/28/90 09/28/96	2 1998 1 1998	2 1998 1 1998
1	MA	Fort Devens	Fort Devens	01 02 05 06 07 08 09 10 11	RA RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF FF FF FF FF	06/13/96 05/13/91 08/31/92 05/24/94 05/24/94 03/25/96 07/06/95 07/06/95 10/15/95	2 1998 4 1996 3 1996 4 1996 3 1997 3 1998 4 1998 4 1998 4 1999	2 1998 2 1997 4 1997 1 1997 4 1998 3 1998 4 1998 4 1998 4 1999
1	MA	Fort Devens - Sudbury Training Annex	Fort Devens	01 03	RA RI/FS	FF FF	07/08/96 05/13/91	4 1997	2 1998 3 1998
1	MA	Groveland Wells	Groveland	02	RA	F	11/02/92	1 1998	1 1998
1	MA	Hocomonco Pond	Westborough	02	RA	PRP	06/02/93	1 1997	3 1997
1	MA	Industri-Plex (Mark Philips Trust)	Woburn	01 02	RA RI	PRP PRP	05/18/92 12/08/89	3 1997 1 1998	4 1997 1 1998
1	MA	Iron Horse Park	Billerica	01 02 03	RA RA RI/FS	PRP PRP F	07/15/91 09/27/95 01/31/90	4 1998 2 1997	4 1998 2 1998 2 1998
1	MA	New Bedford Site	New Bedford	03	RI/FS	F	09/28/93	4 1998	2 1999
1	MA	Norwood PCBs	Norwood	01	RA	PRP	08/08/96		2 1997
1	MA	Nyanza Chemical Waste Dump	Ashland	04	RI/FS	F	02/18/93	3 1997	2 1998
1	MA	Otis Air National Guard Base/Camp Edwards	Falmouth	03 05 06 08 09 10	RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF FF	07/17/91 07/17/91 07/17/91 07/17/91 02/01/93 03/02/93	1 1997 3 1997 1 1997 2 1998 3 1998 4 1998	1 1997 3 1997 1 1997 2 1998 3 1998 4 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
1	MA	Re-Solve, Inc.	Dartmouth	03	RA	MR	07/10/96			1	2000
1	MA	Shpack Landfill	Norton/Attleboro	01	RI/FS	PRP	09/24/90	3	1997	3	1998
1	MA	W.R. Grace & Co., Inc.	Acton	01	RA	PRP	09/03/93	4	1996	2	1997
1	MA	Wells G&H	Woburn	01	RA	PRP	09/30/92	4	2000	4	2000
				02	RI/FS	PRP	09/28/90	2	1998	2	1998
				03	RI/FS	F	09/28/90	2	1998	2	1998
1	ME	Brunswick Naval Air Station	Brunswick	01	RA	FF	12/06/94	1	1997	1	1997
				05	RI/FS	FF	06/22/90	2	1996	2	1997
				07	RI/FS	FF	06/22/90	4	1996	2	1998
1	ME	Eastern Surplus	Meddybemps	01	RI/FS	F	08/27/96			1	2001
1	ME	Loring Air Force Base	Limestone	02	RA	FF	07/25/95			4	1997
				05	RI/FS	FF	05/09/91	4	1996	3	1998
				08	RI/FS	FF	01/30/91	4	1996	1	1999
				10	RI/FS	FF	01/30/91	2	1997	3	1999
				12	RI/FS	FF	01/16/96			4	1998
				13	RI/FS	FF	02/15/96			4	1998
				15	RI/FS	FF	03/16/95	2	1996	4	1996
1	ME	O'Connor Co.	Augusta	01	RA	PRP	07/30/96			1	1998
1	ME	Saco Municipal Landfill	Saco	01	RI/FS	PRP	09/26/95	4	1998	4	1998
1	ME	Union Chemical Co., Inc.	South Hope	01	RA	PRP	04/05/95	2	1997	4	1997
1	ME	Winthrop Landfill	Winthrop	03	RA	PRP	04/28/94	4	1997	4	1997
1	NH	Coakley Landfill	North Hampton	01	RA	PRP	01/25/96			4	1998
1	NH	Fletcher's Paint Works	Milford	01	RI/FS	F	07/29/90	3	1996	3	1997
1	NH	New Hampshire Plating Co.	Merrimack	01	RI/FS	F	07/14/92	4	1996	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
1	NH	Ottati & Goss)	Kingston	04	FS	F	09/18/96		1 1998
1	NH	Pease Air Force Base	Portsmouth/Newington	03 08	RA RA	FF FF	11/01/95 03/29/96		1 1998 3 1998
1	NH	Tibbets Road	Barrington	01	RA	PRP	07/26/96		4 2000
1	NH	Tinkham Garage	Londonderry	02	RA	PRP	02/07/94	3 1998	3 1998
1	RI	Central Landfill	Johnston	02	RI/FS	PRP	08/25/94	4 1996	3 1997
1	RI	Davis (GSR) Landfill	Smithfield	01	RI/FS	F	09/27/90	2 1997	3 1997
1	RI	Davis Liquid Waste	Smithfield	01	RA	F	04/27/88	4 1996	4 1997
1	RI	Davisville Naval Construction Batt Center	North Kingstown	01 02 04 05	RI/FS RA RI/FS RI/FS	FF FF FF FF	03/23/92 01/04/95 03/23/92 03/23/92	4 1996 2 1996 4 1997 4 1997	3 1996 4 1997 4 1997 1 1998
1	RI	Landfill & Resource Recovery, Inc. (L&RR)	North Smithfield	01	RA	PRP	06/23/94	1 1997	4 1997
1	RI	Newport Naval Education/Training Center,	Newport	01 02 03 04	RA RA RI/FS RI/FS	FF FF FF FF	12/27/94 12/27/93 03/23/92 03/23/92	1 1997 4 1997 1 1999 4 1997	1 1997 4 1997 3 2000 4 1997
1	RI	Rose Hill Regional Landfill	South Kingstown	01	RI/FS	F	09/30/90	4 1996	3 1997
1	VT	Bennington Municipal Sanitary Landfill	Bennington	01	RI/FS	PRP	06/28/91	4 1996	1 1998
1	VT	Burgess Brothers Landfill	Woodford	01	RI/FS	PRP	08/27/91	4 1998	4 1997
1	VT	Pine Street Canal	Burlington	01	RI/FS	PRP	07/22/94	3 1996	4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NJ	American Cyanamid Co.	Bound Brook	04 05	RI/FS RI/FS	SE SE	05/28/88 05/28/88	1 1	2000 2001	1 1	2000 2001
2	NJ	Asbestos Dump	Millington	02 03	RA RI/FS	F FF	08/31/93 01/24/91	4 2	1995 1996	4 2	1995 1996
2	NJ	Bridgeport Rental & Oil Services	Bridgeport	01	RA	F	04/19/88	3	1996	3	1996
2	NJ	Burnt Fly Bog	Marlboro Township	02 03	RA RI/FS	S S	09/29/94 09/30/88	2 2	1997 1998	2 2	1997 1998
2	NJ	Caldwell Trucking Co.	Fairfield	01	RA	PRP	05/12/93	1	1996	4	1997
2	NJ	Chemical Insecticide Corp.	Edison Township	02 03	RI/FS RA	F F	03/29/85 09/13/95	4 1	1997 1997	4 4	1997 1997
2	NJ	Chemical Leaman Tank Lines, Inc.	Bridgeport	02	RI/FS	F	07/15/85	1	1997	1	1998
2	NJ	Chemsol, Inc.	Piscataway	01	RI/FS	F	09/28/90	1	1997	1	1997
2	NJ	Ciba-Geigy Corp. (TOMS RIVER CHEMICAL)	Toms River	02	RI/FS	PRP*	07/05/89	3	1998	3	1999
2	NJ	Combe Fill South Landfill	Chester Township	01	RA	S	09/28/90	3	1996	4	1996
2	NJ	Cosden Chemical Coatings Corp.	Beverly	01	RA	F	09/29/94	4	1996	4	1996
2	NJ	Curcio Scrap Metal, Inc.	Saddle Brook Township	02	RI/FS	PRP	04/21/95	1	1997	1	1997
2	NJ	D'Imperio Property	Hamilton Township	01	RA	PRP	05/10/94	4	1997	4	1997
2	NJ	Diamond Alkali Co.	Newark	02	RI/FS	PRP	04/20/94	1	1997	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
2	NJ	Dover Municipal Well 4	Dover Township	02	RI/FS	F	07/06/93	2 1997	2 1997
2	NJ	Evor Phillips Leasing	Old Bridge Township	01 02	RA RI/FS	PRP PRP	02/15/96 02/15/96		3 2000 1 1998
2	NJ	Fair Lawn Well Field	Fair Lawn	01	RI/FS	F	09/30/92	2 1996	2 1996
2	NJ	Federal Aviation Administration Technical Center	Atlantic City	01 02 06 07 08 09 10	RA RA RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF FF FF	08/19/92 10/24/95 06/01/87 06/01/87 06/01/87 06/01/87 06/01/87	3 1995 1 1997 3 1996 4 1996 4 1996 1 1996 1 1996	4 1996 1 1997 3 1996 4 1996 4 1996 3 1997 3 1997
2	NJ	Florence Land Recontouring Landfill	Florence Township	01	RA	S	09/29/89	1 1997	1 1997
2	NJ	Fort Dix (Landfill Site)	Pemberton Township	01 02 03	RA RI/FS RI/FS	FF FF FF	08/06/92 06/19/91 10/01/92	1 1996 1 1997 1 1997	3 1996 2 1998 4 1997
2	NJ	Franklin Burn	Franklin Township	01	RI/FS	F	09/30/92	2 1997	2 1997
2	NJ	Glen Ridge Radium Site	Glen Ridge	01 02 03	RA RI/FS RA	F F F	09/15/89 03/30/90 09/30/92	4 1998 2 1995 4 1998	4 1998 2 1995 4 1998
2	NJ	Goose Farm	Plumstead Township	01	RA	PRP	08/27/92	2 1996	2 1996
2	NJ	Hercules, Inc. (Gibbstown Plant)	Gibbstown	02	RI/FS	PS	07/02/86	4 1996	1 1997
2	NJ	Higgins Disposal	Kingston	01	RI/FS	F	05/17/90	4 1996	4 1996
2	NJ	Higgins Farm	Franklin Township	01 01	RA RA	F F	03/17/95 02/06/95	1 1997 3 1996	2 1997 3 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NJ	Hopkins Farm	Plumstead Township	01	RI/FS	PS	02/03/87	3	1996	3	1996
2	NJ	Imperial Oil Co., Inc./Champion Chemicals	Morganville	01 03	RA FS	S S	09/29/94 09/28/84	1 3	1998 1995	1 3	1998 1995
2	NJ	Industrial Latex Corp.	Wallington Borough	01 02	RA RI/FS	F F	04/28/95 09/30/93	1 4	1997 1996	4 4	1996 1996
2	NJ	Kauffman & Minter, Inc.	Jobstown	01	RI/FS	F	04/11/89	1	1996	1	1996
2	NJ	Kin-Buc Landfill	Edison Township	01	RA	PRP	06/23/93	2	1996	4	1996
2	NJ	King of Prussia	Winslow Township	03	RA	PRP	07/22/94	1	1995	1	1995
2	NJ	Lang Property	Pemberton Township	01	RA	F	09/30/92	4	1997	4	1997
2	NJ	Lipari Landfill	Pitman	02 03	RA RA	F PRP	09/30/88 12/29/93	4 4	1999 1997	4 4	1999 1997
2	NJ	Maywood Chemical Co.	Maywood/Rochelle Park	01 02	RI/FS RI/FS	PRP FF	09/21/87 07/21/90	4 4	1996 1996	4 4	1996 1996
2	NJ	Metaltec/Aerosystems	Franklin Borough	01	RA	F	03/29/91	4	1996	4	1996
2	NJ	Monitor Devices/Intercircuits, Inc.	Wall Township	01	RI/FS	F	03/12/92	4	1997	4	1997
2	NJ	Montclair/West Orange Radium Site	Montclair/West Orange	01 02 03	RA RI/FS RA	F F F	09/15/89 03/30/90 09/30/92	4 2 4	1998 1995 1998	4 2 4	1998 1995 1998
2	NJ	Nascolite Corp.	Millville	01	RA	PRP	06/15/95	1	1997	4	1996
2	NJ	Naval Air Engineering Center	Lakehurst	20 21 23	RI/FS RI/FS RA	FF FF FF	09/25/89 09/25/89 08/30/94	3 3 1	1997 1997 1996	3 2 4	1997 1998 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NJ	Naval Weapons Station	Colts Neck	01	RI/FS	FF	09/27/90	3	1997	3	1997
2	NJ	Picatinny Arsenal	Rockaway Township	02	RI/FS	FF	10/01/92	4	1998	4	1998
				03	RI/FS	FF	10/01/92	4	1997	4	1997
				04	RI/FS	FF	05/28/93	4	2000	4	2000
2	NJ	Renora, Inc.	Edison Township	02	RA	PRP	08/25/95	1	1996	3	1996
2	NJ	Rockaway Borough Well Field	Rockaway Township	03	RI/FS	F	09/30/92	1	1997	1	1997
2	NJ	Roebbing Steel Co.	Florence	04	RI/FS	F	09/29/92	1	1996	4	1996
2	NJ	Sayreville Landfill	Sayreville	01	RA	PS	02/13/96			3	1997
				02	RI/FS	PS	11/26/91	3	1996	1	1997
2	NJ	Scientific Chemical Processing	Carlstadt	02	RI/FS	PRP	12/19/88	1	1996	1	1996
2	NJ	Sheild Alloy Corp.	Newfield Borough	02	RI/FS	PS	10/05/88	1	1996	2	1997
2	NJ	Swope Oil & Chemical Co.	Pennsauken	01	RA	PRP	09/07/88	2	1997	3	1997
				02	RA	PRP	03/15/96			4	1997
2	NJ	Syncon Resins	South Kearny	01	RA	S	05/23/89	2	1994	2	1994
2	NJ	WR Grace & Co. Inc./Wayne Interim Storage Site	Wayne Township	01	RI/FS	FF	07/21/90	4	1996	4	1996
2	NJ	Williams Property	Swainton	01	RA	S	06/30/93	2	1995	2	1995
2	NY	American Thermostat Co.	South Cairo	02	RA	F	08/07/92	1	1997	1	1997
				02	RA	F	06/30/93	1	1999	3	1999
2	NY	Applied Environmental Services	Glenwood Landing	01	RA	PS	03/28/94	1	1998	3	1996
2	NY	Brewster Well Field	Putnam County	01	RA	F	09/23/87	1	1996	4	1996
2	NY	Brookhaven National Laboratory (USDOE)	Upton	01	RI/FS	FF	05/11/93	1	1997	2	1998
				02	RI/FS	FF	12/14/94	4	1998	4	1998
				03	RI/FS	FF	06/30/94	3	1998	3	1998
				04	RI/FS	FF	11/19/91	3	1996	3	1996
				05	RI/FS	FF	10/29/93	4	1997	4	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				06	RI/FS	FF	06/02/94	2 1997	2 1997
2	NY	Carrol & Dubies Sewage Disposal	Port Jervis	02	RI/FS	PRP	07/31/92	3 1996	3 1996
2	NY	Circuitron Corp.	East Farmingdale	01	RA	F	09/30/94	4 1995	4 1995
				03	RA	F	09/30/94	4 1996	4 1996
				04	RA	F	09/30/94	2 1998	2 1998
2	NY	Claremont Polychemical	Old Bethpage	01	RA	F	09/30/93	1 1997	2 1997
2	NY	Colesville Municipal Landfill	Town of Colesville	01	RA	PS	07/14/94	1 1997	1 1997
2	NY	Conklin Dumps	Conklin	01	RA	PS	07/06/93	1 1996	4 1996
2	NY	Endicott Village Well Field	Village of Endicott	02	RA	PRP	08/16/95	2 1997	2 1997
				03	RA	PRP	03/06/95	4 1996	4 1996
2	NY	FMC Corp. (Dublin Road Landfill)	Town of Shelby	01	RA	PS	05/02/94	4 1996	4 1996
2	NY	Facet Enterprises, Inc.	Elmira	01	RI/FS	PRP	05/22/86	3 1992	3 1992
				01	RA	PRP	05/14/96		1 1998
2	NY	Forest Glen Mobile Home Subdivision	Niagara Falls	02	RI/FS	F	09/30/92	4 1996	4 1996
2	NY	Fulton Terminals	Fulton	01	RA	PRP	09/29/94	3 1996	3 1996
				02	RA	PRP	03/31/95	4 1997	4 1997
2	NY	General Motors (Central Foundry Division)	Massena	01	RA	PRP	06/21/95	3 1999	3 1999
2	NY	Genzale Plating Co.	Franklin Square	01	RA	F	09/30/94	2 1997	2 1997
2	NY	Griffiss Air Force Base	Rome	01	RI/FS	FF	03/29/90	1 1997	2 1998
				02	RI/FS	FF	03/29/90	2 1996	2 1996
				03	RI/FS	FF	03/29/90	1 1997	2 1998
				04	RI/FS	FF	03/29/90	1 1997	2 1998
				05	RI/FS	FF	03/29/90	1 1997	4 1997
				06	RI/FS	FF	03/29/90	1 1997	4 1997
				07	RI/FS	FF	03/29/90	2 1997	2 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
2	NY	Hooker (102nd Street)	Niagara Falls	01	RA	PRP	04/08/96		4 1998
				01	RA	PRP	11/07/95		1 1995
2	NY	Hooker (Hyde Park)	Niagara Falls	01	RA	PRP	08/15/87	1 1997	1 1997
2	NY	Hooker (South Area)	Niagara Falls	01	RA	PRP	11/02/90	1 1998	1 1998
				01	RA	PRP	12/09/93	4 1997	4 1997
				01	RA	PRP	11/02/90	1 1999	1 1999
2	NY	Hooker Chemical/Ruco Polymer Corp.	Hicksville	03	RI/FS	PRP	09/23/94	4 1996	4 1996
2	NY	Hudson River PCBs	Hudson River	02	RI/FS	F	07/25/90	1 1997	1 1997
2	NY	Islip Municipal Sanitary Landfill	Islip	01	RA	PS	03/31/95	2 1999	4 1996
2	NY	Johnstown City Landfill	Town of Johnstown	01	RA	PS	06/23/95	4 1998	4 1998
				02	RA	PS	02/28/96		4 1997
2	NY	Jones Chemicals, Inc.	Caledonia	01	RI/FS	PRP	03/29/91	1 1997	1 1997
2	NY	Jones Sanitation	Hyde Park	01	RI/FS	PRP	03/26/91	4 1995	4 1995
2	NY	Kentucky Avenue Well Field	Horseheads	03	RI/FS	PRP	08/08/91	2 1996	2 1996
2	NY	Li Tungsten Corp.	Glen Cove	01	RI/FS	F	08/26/92	3 1997	3 1997
2	NY	Liberty Industrial Finishing	Farmingdale	01	RI/FS	F	09/28/90	1 1996	2 1996
				02	RI/FS	F	09/30/95		1 1998
2	NY	Love Canal	Niagara Falls	07	RA	S	02/09/87	3 1998	3 1998
				08	RA	S	06/26/87	1 1996	4 1996
2	NY	Malta Rocket Fuel Area	Malta	01	RI/FS	PRP	11/10/89	1 1996	1 1996
2	NY	Mattiace Petrochemical Co., Inc.	Glen Cove	04	RA	F	09/30/93	3 1998	3 1998
				05	RA	F	06/30/93	3 1996	4 1996
				06	RA	F	06/30/93	1 1997	4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NY	North Sea Municipal Landfill	North Sea	02	RI/FS	PRP	07/27/89	4	1992	4	1992
2	NY	Old Bethpage Landfill	Oyster Bay	01	RA	PS	11/13/90	1	1993	1	1993
2	NY	Onondaga Lake	Syracuse	01	RI/FS	PS	05/10/93	4	1998	4	1998
2	NY	Plattsburg Air Force Base	Plattsburgh	05	RI/FS	FF	04/23/91	1	1997	1	1997
				06	RI/FS	FF	06/04/92	3	1997	3	1997
				07	RI/FS	FF	10/01/92	1	1997	2	1998
2	NY	Port Washington Landfill	Port Washington	01	RA	PRP	03/31/95	1	1997	1	1997
2	NY	Preferred Plating Corp.	Farmingdale	01	RA	F	01/31/92	2	2007	2	2008
2	NY	Ramapo Landfill	Ramapo	01	RA	PS	06/20/94	3	1996	4	1996
2	NY	Richardson Hill Road Landfill/Pond	Sidney Center	01	RI/FS	PRP	07/22/87	1	1997	1	1997
2	NY	Rosen Brothers Scrap Yard/Dump	Cortland	01	RI/FS	PRP	01/04/90	4	1995	4	1995
2	NY	Seneca Army Depot	Romulus	01	RI/FS	FF	03/19/90	3	1996	2	1997
				02	RI/FS	FF	04/29/91	3	1996	2	1997
				03	RI/FS	FF	03/31/95	2	1997	4	1998
				04	RI/FS	FF	03/30/95	4	1997	4	1998
				05	RI/FS	FF	06/19/95	1	1998	3	1999
				06	RI/FS	FF	09/20/95	1	2000	2	2000
				07	RI/FS	FF	10/26/95			2	1999
				08	RI/FS	FF	11/15/95			4	1999
				09	RI/FS	FF	12/21/95			2	1999
				10	RI/FS	FF	01/22/96			1	2000
				11	RI/FS	FF	01/31/96			1	2000
2	NY	Sinclair Refinery	Wellsville	02	RA	PRP	03/03/95	1	1996	1	1996
2	NY	Syosset Landfill	Oyster Bay	02	RI/FS	PRP	11/15/90	1	1996	1	1996
2	NY	Tri-Cities Barrel Co., Inc.	Port Crane	01	RI/FS	PRP	05/14/92	1	1997	4	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
2	NY	Vestal Water Supply Well 1-1	Vestal	02	RA	F	09/30/94	3	1997	4	1998
2	NY	Volney Municipal Landfill	Town of Volney	02	RI/FS	PRP	09/28/90	4	2000	4	2001
2	NY	Warwick Landfill	Warwick	01	RA	PRP	08/25/95	2	1997	2	1997
2	NY	York Oil Co.	Warwick	02	RI/FS	PRP	05/21/92	1	1997	3	1997
2	PR	Barceloneta Landfill	Florida Afuera	01	RI/FS	PRP	09/28/90	1	1996	1	1996
2	PR	Fibers Public Supply Wells	Jobos	02	RA	PRP	09/28/95	2	1997	2	1997
2	PR	Naval Security Group Activity	Sabana Seca	01	RI/FS	FF	03/19/92	1	1997	2	1998
				02	RI/FS	FF	10/01/92	3	1996	3	1996
2	PR	Upjohn Facility	Barceloneta	01	RA	PRP	04/19/89	1	1996	1	1996
				01	RA	PRP	02/11/92	3	1994	3	1994
2	PR	Vega Alta Public Supply Wells	Vega Alta	01	RA	PRP	09/18/92	4	1994	4	1994
				02	RI/FS	PRP	10/23/90	4	1995	4	1995
2	VI	Island Chemical Corp/V.I. Chemical Corp	Christiansted	01	RI/FS	PRP	09/29/94	4	1996	4	1996
2	VI	Tutu Wellfield	Tutu	01	RI/FS	PRP	02/19/92	4	1995	4	1995
3	DE	Delaware City PVC Plant (Stauffer Chemical Co.)	Delaware City	03	RI/FS	PRP	06/30/95	1	1997	1	1998
				04	RI/FS	PRP	12/12/95			1	1997
3	DE	Delaware Sand & Gravel-Llangollen/Army Creek Landfill)	New Castle County	03	RA	PRP	07/28/93	3	1997	3	1997
				05	RA	PRP	07/24/96			3	1997
3	DE	Dover Air Force Base	Dover	02	RA	FF	08/09/94	4	1996	4	1996
				06	RI/FS	FF	09/20/93	2	1997	2	1997
				08	RI/FS	FF	09/20/93	2	1997	2	1997
				09	RI/FS	FF	09/20/93	2	1997	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	DE	Halby Chemical Co.	New Castle	02	RI/FS	F	12/20/91	3	1996	2	1997
3	DE	Koppers Co., Inc. (Newport Plant)	Newport	01	RI/FS	PRP	09/26/91	1	1998	3	1998
3	DE	Tybouts Corner Landfill	Smyrna	01	RA	MR	11/25/92			1	1997
3	DE	Wildcat Landfill	Dover	01	RA	PRP	10/16/89			2	1997
				02	RA	PRP	02/15/91			2	1997
3	MD	Aberdeen Proving Ground (Edgewood Area)	Edgewood	02	RI/FS	FF	03/27/90	4	1996	1	1998
				04	RA	FF	10/18/95			4	1996
				06	RI/FS	FF	03/27/90	4	1995	2	1997
				08	RI/FS	FF	03/27/90	4	1996	3	1997
				10	RI/FS	FF	03/27/90	3	1996	3	1997
3	MD	Aberdeen Proving Grounds (Michaelsville Landfill)	Aberdeen	02	RI/FS	FF	03/27/90	1	1996	4	1998
				03	RI/FS	FF	03/27/90	1	1997	1	2000
				06	RI/FS	FF	08/30/91	3	1996	1	2005
3	MD	Kane & Lombard Street Drums	Baltimore	02	RI/FS	PRP	07/16/93	2	1997	2	1998
3	MD	Ordanance Products	Cecil County	01	RI/FS	F	09/25/96			3	1998
3	MD	Sand, Gravel & Stone	Elkton	03	RA	PRP	05/18/95	2	1997	2	1997
3	MD	Spectron, Inc.	Elkton	01	RI/FS	PRP	05/20/96			4	1998
3	PA	Austin Avenue Radiation Site	Deleware County	01	RA	F	12/13/94	1	1999	1	1999
3	PA	Bally Ground Water Contamination	Bally Borough	01	RA	PRP	02/17/95	4	1996	4	1997
3	PA	Bendix Flight Systems Division	Bridgewater Township	05	RA	PRP	06/23/94	2	1996	4	1996
3	PA	Berks Landfill	Spring Township	01	RI/FS	PRP	06/26/91	2	1996	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	PA	Blosenski Landfill	West Caln Township	04	RA	PRP	04/29/95	1	1996	4	1996
3	PA	Boarhead Farms	Bridgeton Township	01	RI/FS	F	12/05/89	1	1997	2	1997
3	PA	Brodhead Creek	Stroudsburg	01	RA	PRP	05/04/94	2	1996	1	1997
3	PA	Commodore Semiconductor Group	Lower Providence Townsh	01	RA	PRP	11/18/94			2	1997
3	PA	Crater Resources/Keystone Coke/Alan Wood	Upper Marion Township	01	RI/FS	PRP	09/07/94	3	1997	3	1998
3	PA	Crossley Farm	Hereford Twonship	01	RI/FS	F	09/27/94	1	1997	2	1997
3	PA	Croydon TCE	Croydon	02	RA	F	09/30/91			2	2005
3	PA	CryoChem, Inc.	Worman	02	RA	F	09/30/93	3	1997	1	1998
3	PA	Delta Quarries & Disposal, Inc. (Stotler Landfill)	Antis/Logan Townships	01	RA	PRP	06/07/95	3	1998	1	1997
3	PA	Dorney Road Landfill	Upper Macungie Township	01 02	RA RA	PRP PRP	06/14/95 12/28/95	4	1997	4 1	1998 1997
3	PA	Drake Chemical	Lock Haven	03	RA	F	09/30/91	3	1998	3	1998
3	PA	Dublin TCE Site	Dublin Borough	02	RI/FS	PRP	08/15/91	4	1996	3	1997
3	PA	East Mount Zion	Springettsbury Township	01	RA	F	09/30/94	4	1997	4	1998
3	PA	Eastern Diversified Metals	Hometown	02	RA	PRP	08/29/96			4	1998
3	PA	Elizabethtown Landfill	Elizabethtown	01	RI/FS	PRP	09/28/90	1	1996	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	PA	Fischer & Porter Co.	Warminster	02	RI/FS	F	02/20/92	1	1997	2	1997
3	PA	Foote Mineral Co.	East Whiteland Township	01	RI/FS	PRP	09/30/96			2	1998
3	PA	Havertown PCP	Haverford	02	RA	F	09/27/96			4	1998
				03	RI/FS	F	08/15/91	1	1997	1	1998
3	PA	Hellertown Manufacturing Co.	Hellertown	02	RA	F	09/22/93	2	1997	2	1997
3	PA	Jack's Creek/Sitkin Smelting and Refining Inc.	Maitland	01	RI/FS	F	08/28/90	1	1996	1	1997
3	PA	Keystone Sanitation Landfill	Union Township	02	RI/FS	F	04/21/94	1	1997	3	1997
3	PA	Letterkenny Army Depot (Property Disposal Office Area)	Franklin County	02	RI/FS	FF	02/03/89	4	1995	3	1997
				03	RI/FS	FF	08/31/94			3	1997
				04	RI/FS	FE	08/31/94			3	1999
3	PA	Letterkenny Army Depot (Southeast Area)	Chambersburg	01	RA	FF	09/08/93	2	1995	1	1997
				02	RI/FS	FF	02/03/89	4	1995	1	1998
				03	RI/FS	FF	02/03/89	2	1996	3	1997
				04	RI/FS	FF	07/31/94			4	1997
				05	RI/FS	FF	07/31/94			2	1998
				06	RI/FS	FF	07/31/94			1	1998
3	PA	Lord-Shope Landfill	Girard Township	01	RA	PRP	07/20/94	3	1996	3	1997
3	PA	MW Manufacturing	Valley Township	04	RA	PRP	11/07/94	3	1996	1	1997
3	PA	Malvern TCE	Malvern	01	RI/FS	F	03/16/94	4	1996	2	1997
3	PA	Metal Banks	Philadelphia	01	RI/FS	PRP	05/29/91	3	1995	1	1997
3	PA	Metropolitan Mirror and Glass	Frackville	01	RI/FS	F	09/19/94	4	1996	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
3	PA	Mill Creek Dump	Erie	01	RA	F	02/01/92	3 2005	3 2005
				02	RA	PRP	05/04/92	1 1997	1 1998
3	PA	Modern Sanitation Landfill	Lower Windsor Township	01	RA	PRP	09/28/95	3 1998	2 1999
3	PA	Moyers Landfill	Eagleville	01	RA	F	09/29/88	4 1996	1 1997
3	PA	Naval Air Development Center (8 waste centers)	Warminster Township	01	RA	FF	01/15/95	1 1996	3 1997
				04	RA	FF	09/13/96		3 1998
				05	RI/FS	FF	06/27/94	2 1996	1 1997
3	PA	North Penn-Area 12	Township	01	RI/FS	F	12/23/91	3 1996	2 1997
3	PA	North Penn-Area 2 (Ametek, Inc. Hunter Spring Division)	Hatfield	01	RI/FS	F	06/30/88		2 1999
				02	RI/FS	PRP	01/31/93		1 1998
3	PA	North Penn-Area 6 (J.W. Rex/Allied Paint/Keystone hydra	Lansdale	02	RI/FS	PRP	05/11/95	3 1997	2 1998
				03	RI/FS	F	09/28/93	3 1997	1 1998
3	PA	Occidental Chemical Corp./Firestone Co.	Lower Pottsgrove Twp.	02	RA	PRP	09/23/96		3 1997
3	PA	Old City of York Landfill	Seven Valleys	01	RA	PRP	05/08/95	1 1997	1 1997
3	PA	Osborne Landfill	Grove City	01	RA	PRP	01/24/95	1 1998	1 1998
				02	RI/FS	PRP	10/31/92	2 1996	2 1996
3	PA	Palmerton Zinc Pile	Palmerton	01	RA	PRP	07/31/88	4 1999	1 2000
				03	RI/FS	F	01/05/94		3 1997
3	PA	Rodale Manufacturing Co., Inc.	Emmaus Borough	01	RI/FS	PRP	09/22/92	1 1997	2 1998
3	PA	Saegerton Industrial Area	Saegertown	02	RA	PRP	08/08/95	4 1996	3 1997
3	PA	Strasburg Landfill	Newlin Township	01	RA	F	08/08/96		2 1998
				04	RI/FS	F	01/14/92	3 1997	3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
3	PA	Tobyhanna Army Depot	Toby Hanna	01	RI/FS	FF	09/27/90	2 1996	4 1996
				04	RI/FS	FF	06/22/93	4 1996	1 1997
				05	RI/FS	FF	06/22/93	2 1996	1 1997
				06	RI/FS	FF	06/22/93	3 1996	2 1997
				08	RI/FS	FF	06/22/93	1 1997	1 1998
3	PA	Tysons Dump	Upper Merion Township	01	RA	PRP	06/03/88	1 1997	1 1997
				03	RA	PRP	07/22/96		3 1997
3	PA	Walsh Landfill	Honeybrook Township	04	RI/FS	F	05/01/90	1 1997	1 1998
3	PA	Westinghouse Elevator Co. (Sharon Plant)	Sharon	01	RI/FS	PS	09/20/88	2 1996	1 1998
3	PA	Whitmoyer Laboratories	Jackson Township	06	RA	PRP	05/10/96		3 1998
3	VA	Avtex Fibers, Inc.	Front Royal	04	RA	F	07/22/91	1 1998	1 1998
				06	RI/FS	F*	09/27/90	1 1998	4 1998
				07	RI/FS	PRP	03/30/93	1 1998	1 1998
				08	RI/FS	PRP	06/19/95	2 1996	1 1998
3	VA	C&R Battery Co., Inc.	Chesterfield County	01	RA	PRP	04/28/92	2 1996	1 1997
3	VA	Culpeper Wood Preservers, Inc.	Culpeper	01	RI/FS	PRP	06/16/93	1 1997	1 1998
3	VA	Defense General Supply Center	Chesterfield County	02	RI/FS	FF	09/21/90	4 1994	3 1997
				04	RI/FS	FF	09/21/90	3 1996	2 1998
				06	RI/FS	FF	10/11/91	1 1996	4 1997
				07	RI/FS	FF	10/11/91	3 1996	2 1997
				08	RI/FS	FF	10/11/91	1 1996	4 1998
				09	RA	FF	12/31/94	1 1997	1 1997
3	VA	Fort Eustis (US Army)	Newport News	01	RI/FS	FF	04/30/96		2 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
3	VA	Greenwood Chemical Co.	Newton	01	RA	F	09/29/94	1	1997	1	1997
				04	RI/FS	F	09/26/96			4	1997
3	VA	L.A. Clarke & Son	Spotsylvania County	02	RA	PRP	08/07/90	2	1996	2	1997
3	VA	Langley Air Force Base/NASA Langley Cntr	Hampton	03	RI/FS	FF	12/16/93	1	1998	1	1998
3	VA	Marine Corps Combat Development Command	Quantico	04	RI/FS	FF	04/30/95			1	1997
3	VA	Naval Surface Warfare - Dahlgren	Dahlgren	01	RI/FS	FF	12/13/93	4	1996	2	1997
				02	RI/FS	FF	12/13/93	4	1996	2	1997
				02	RI/FS	FF	07/25/94	1	1997	2	1997
				03	RI/FS	FF	12/13/93	4	1997	4	1997
				03	RI/FS	FF	07/14/95	1	1997	1	1997
				04	RI/FS	FF	12/13/93	3	1997	3	1997
				04	RI/FS	FF	04/30/95	1	1997	1	1997
3	VA	Rinehart Tire Fire Dump	Frederick County	01	RA	F	09/29/89	1	1996	1	1997
				02	RA	F	08/26/94	1	1996	1	1997
				03	RI/FS	F	06/17/94	3	1997	1	1998
3	VA	Saltville Waste Disposal Ponds	Saltville	04	RI/FS	PRP	09/15/88	4	1997	3	1998
3	VA	Saunders Supply Co.	Chuckatuck	01	RA	F	09/25/96			2	1998
3	VA	U.S. Titanium	Piney River	01	RA	PRP	08/18/94	3	1997	3	1997
3	WV	Allegany Ballistics Laboratory (USNAVY)	Mineral	01	RI/FS	FF	11/10/94	4	1996	1	1997
				02	RI/FS	FF	12/20/94	4	1996	1	1997
3	WV	Fike Chemical	Nitro	03	RA	PRP	02/07/96			2	1998
				04	RI/FS	PRP	09/30/94	1	1997	2	1998
				06	RA	PRP	08/28/95	3	1996	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
3	WV	West Virginia Ordnance	Point Pleasant	04	RA	FF	05/26/95	2 1996	1 1997
				08	RI/FS	FF	09/28/93	3 1998	3 1998
				09	RI/FS	FF	09/28/93	2 1998	2 1998
				10	RI/FS	FF	01/24/95	3 1998	3 1998
				11	RI/FS	FF	01/04/94	3 1998	3 1998
				12	RI/FS	FF	11/24/94	3 1999	3 1999
				13	RI/FS	F	12/20/95		2 1997
4	AL	Alabama Army Ammunition Plant	Childersburg	02	RA	FF	01/04/95	3 1999	3 1999
				03	RA	FF	10/02/94	4 1995	4 1996
				04	RI/FS	FF	09/27/94	2 1997	1 1998
				05	RI/FS	FF	09/29/94	1 1997	1 1997
				06	RI/FS	FF	09/27/94	3 1996	3 1996
4	AL	Anniston Army Depot (Southeast Industrial Area)	Anniston	01	RI/FS	FF	08/01/94	1 1998	2 2000
				01	RA	FF	05/04/92	4 1997	1 2000
				02	RI/FS	FF	12/12/90	3 1997	1 2000
4	AL	Ciba-Geigy Corp. (McIntosh Plant)	McIntosh	01	RA	PRP	09/28/89	1 2019	1 2019
				02	RA	PRP	09/30/96		4 1998
				04	RA	PRP	09/30/96		4 1998
				05	RI/FS	EP	05/21/93	1 2000	1 2000
4	AL	Olin Corp. (McIntosh Plant)	McIntosh	02	RI/FS	PRP	06/17/94	2 1996	2 1997
				03	RI/FS	EP	05/21/93	1 2000	1 2000
4	AL	Redstone Arsenal (USARMY/NASA)	Huntsville	01	RI/FS	FF	05/17/95	3 1998	1 1998
4	AL	Stauffer Chemical Co. (Clemoyne Plant)	Axis	01	RA	PRP	09/27/89	4 1999	4 1999
				01	RA	PRP	08/18/93	4 1999	4 1999
				01	RA	PRP	11/20/92	4 1995	1 1997
				02	RI/FS	PRP	01/05/90	4 1996	4 1996
				02	RI/FS	PRP	12/31/92	1 1998	1 1998
				04	RI/FS	PRP	05/21/93	1 2000	1 2000
4	AL	Stauffer Chemical Co. (Cold Creek Plant)	Bucks	01	RA	PRP	09/27/89	4 1999	4 1999
				01	RA	PRP	09/27/93	4 1999	4 2010
				04	RI/FS	F	05/21/93	1 2000	1 2000

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
4	AL	T.H. Agriculture & Nutrition Co. (Montgomery Plant)	Montgomery	01 02	RA RI/FS	PRP PRP	09/27/96 07/14/94	1 1996	4 1998 1 1997
4	FL	Agrico Chemical Co.	Pensacola	01	RA	PRP	09/23/94	1 1997	2 1997
4	FL	Airco Plating Co.	Miami	01	RA	PRP	12/20/95		1 1997
4	FL	B&B Chemical Co., Inc.	Hialeah	01	RA	PRP	12/07/95		4 1998
4	FL	Broward County --21st Manor Dump	Fort Lauderdale	01	RI/FS	F	03/02/93	1 2000	1 2000
4	FL	Cabot/Koppers	Gainesville	01 01 01 02	RA RA RA RI/FS	PRP PRP PRP F	12/29/93 09/29/93 09/23/94 05/17/94	4 1995 1 1996 2 1999 4 1996	4 1995 4 1996 2 1999 4 1997
4	FL	Cecil Field Naval Air Station	Jacksonville	02 03 04 05 06 07 08	RA RI/FS RI/FS RI/FS RA RA RI/FS	FF FF FF FF FF FF FF	02/02/95 10/22/90 02/18/92 02/18/92 06/08/95 06/02/94 02/29/96	2 1998 4 1999 1 1997 1 1997 4 1996 3 1999 1 1997	3 1998 1 1998 2 1997 2 1998 4 1996 3 1999 1 1997
4	FL	Dubose Oil Products Co.	Cantonment	01	RA	PRP	02/16/93	4 1995	1 2001
4	FL	Escambia Wood - Pensacola	Pensacola	00	RI/FS	F	09/20/94	1 1997	4 1997
4	FL	Florida Steel Corp.	Indiantown	01 02 02	RA RA RA	PRP PRP PRP	09/21/94 06/12/95 01/24/96	3 1996 3 1996	4 1996 4 1996 2 1997
4	FL	Helena Chemical Co.	Tampa	02	RI/FS	PRP	11/06/92	4 1995	4 1995
4	FL	Homestead Air Force Base	Homestead	02 05 07 08	RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	10/01/90 10/01/90 10/01/90 10/01/90	2 1996 1 1997 1 1997 1 1997	4 1996 3 1997 2 1997 2 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
4	FL	Jacksonville Naval Air Station	Jacksonville	01	RI/FS	FF	10/08/90	2	1996	4	1996
				01	RA	FF	03/20/95	1	2000	1	2000
				02	RI/FS	FF	07/01/92	3	1997	1	1998
				02	RA	FF	03/06/95	1	1997	1	1997
				02	RA	FF	02/12/96			4	1999
				03	RI/FS	FF	12/17/93	2	1997	2	1998
4	FL	Kassauf-Kimerling Battery Disposal (once listed as Timber Lake Battery Disposal)	Tampa	02	RA	PRP	09/02/94	3	1996	2	1997
4	FL	Madison County Sanitary Landfill	Madison	01	RA	PRP	02/07/95	1	1997	1	1997
4	FL	Munisport Landfill	North Miami	01	RA	PRP	12/21/95			2	1997
4	FL	Pensacola Naval Air Station	Pensacola	01	RI/FS	F*	11/01/90	3	1997	3	1997
				02	RI/FS	FF	10/15/90	1	1997	2	1998
				03	RI/FS	FF	10/15/90	1	1997	3	1997
				04	RI/FS	FF	10/15/90	1	1997	1	1998
				05	RI/FS	FF	10/15/90	1	1997	2	1998
				06	RI/FS	FF	10/15/90	3	1996	2	1997
				07	RI/FS	FF	10/15/90	1	1997	1	1997
				08	RI/FS	FF	10/15/90	1	1997	1	2000
				09	RI/FS	FF	11/29/93			2	1998
				10	RI/FS	FF	06/24/91	3	1996	1	1997
				11	RI/FS	FF	10/01/91	1	1997	3	1997
				13	RI/FS	FF	10/01/91	1	1997	3	1998
				14	RI/FS	FF	10/01/91	1	1997	2	1998
				15	RI/FS	FF	11/29/93	4	1997	2	1998
				16	RI/FS	FF	11/29/93	4	1997	2	1998
				17	RI/FS	FF	11/29/93	4	1997	2	1998
4	FL	Pepper Steel & Alloys, Inc.	Medley	01	RA	PRP	03/26/87	4	1995	4	1998
4	FL	Petroleum Products Corp.	Pembroke Park	02	RI/FS	F	09/15/89	3	1996	4	1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
4	FL	Pickettville Road Landfill	Jacksonville	02	RA	PRP	09/30/93	1 1997	1 1998
4	FL	Reeves Southeast Galvanizing Corp.	Tampa	01	RA	PRP	02/27/96		2 1997
4	FL	Sapp Battery Salvage	Cottdondale	01 02	RA RI/FS	PRP F	03/10/93 09/30/90	3 1996 4 1996	1 1999 1 2000
4	FL	Schuylkill Metal Corp.	Plant City	01 01	RA RA	PRP PRP	06/24/92 06/07/94	3 1996 1 1997	1 1997 2 1997
4	FL	Sherwood Medical Industries	Deland	03	RI/FS	PRP	06/25/93	2 1996	2 1997
4	FL	Stauffer Chemical Co (Tarpon Springs)	Tarpon Springs	01	RI/FS	PRP	07/28/92	2 1996	1 1997
4	FL	Stauffer Chemical Co. (Tampa Plant)	Tampa	02	RI/FS	PRP	12/12/92	4 1995	1 2000
4	FL	Tower Chemical Co.	Clermont	02	RI/FS	F	03/22/94	4 1995	1 1997
4	FL	Whitehouse Oil Pits	Whitehouse	01	RI/FS	F	04/15/94	2 1996	2 1997
4	FL	Whiting Field Naval Air Station	Milton	01 02 03	RI/FS RI/FS RI/FS	FF FF FF	11/27/95 11/27/95 11/27/95		3 1998 3 1998 2 1998
4	FL	Yellow Water Road Dump	Baldwin	01	RA	PRP	06/17/95	2 1997	3 1997
4	GA	Cedartown Industries, Inc.	Cedartown	01	RA	PRP	11/16/95		4 1999
4	GA	Cedartown Municipal Landfill	Cedartown	01	RA	MR	11/04/94	3 1997	4 1997
4	GA	Diamond Shamrock Corp. Landfill	Cedartown	01	RA	PRP	06/29/95	4 2015	4 1999
4	GA	Firestone Tire & Rubber Co.	Albany	01	RA	PRP	06/28/96		1 1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
4	GA	LCP Chemcials Georgia	Brunswick	01	RI/FS	PRP	07/06/95	1	1997	2	1997
4	GA	Marine Corps Logistics Base	Albany	01	RI/FS	FF	07/23/91	1	1997	1	1997
				01	RA	FF	12/30/94	4	1999	4	1999
				02	RI/FS	FF	07/23/91	1	1997	2	1997
				03	RA	FF	11/29/93	2	1998	2	1998
				04	RI/FS	FF	09/15/92	3	1997	3	1997
				05	RA	FF	01/16/96			2	1999
4	GA	Marzone Inc./Chevron Chemical Co.	Tifton	01	RA	PRP	05/20/96			1	1997
				02	RI/FS	F	04/15/95	3	1997	1	1997
4	GA	Robins Air Force Base (Landfill #4/ Sludge Lagoon)	Houston County	01	RA	FF	12/31/91	1	1998	1	1998
				02	RA	FF	08/02/94	3	1998	3	1998
4	GA	T.H. Agriculture & Nutrition Co.	Albany	01	RA	PRP	11/29/95			4	1998
4	KY	Airco	Calvert City	01	RA	PRP	09/29/95	4	1997	4	1997
4	KY	B.F. Goodrich	Calvert City	01	RA	PRP	09/29/95	4	1997	4	1997
4	KY	Distler Brickyard	West Point	01	RA	F	09/28/88	4	2000	4	2000
4	KY	Green River Disposal, Inc.	Macco	01	RA	PRP	04/29/96			1	1998
4	KY	National Electric Coil/Cooper Industries	Dayhoit	01	RA	PRP	02/25/93	3	1995	3	1995
4	KY	National Southwire Aluminum Co.	Hawesville	01	RA	PRP	12/12/94	1	1996	2	1997
4	KY	Paducah Gaseous Diffusion Plant (USDOE)	Paducah	01	RI/FS	FF	04/10/89	4	1999	4	2010
				03	RA	FF	05/20/96			3	1997
				04	FS	FF	08/12/93	2	1997	2	1999
				05	RI/FS	FF	09/10/92	3	1996	4	1996
				07	RI/FS	FF	07/09/93	4	1999	4	1999
				08	RI/FS	FF	03/29/95	3	1998	3	1998
				09	RI/FS	FF	10/25/94			4	1996
				10	RI/FS	FF	04/27/93	4	1999	4	1999
				11	RI/FS	FF	06/28/93	3	1999	3	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				12	RI/FS	FF	01/28/94		3 1997
				13	RI/FS	FF	07/25/94	3 1997	3 1999
				15	RI/FS	FF	05/15/94		3 1997
4	KY	Red Penn Sanition Co. Landfill	Peewee Valley	01	RI/FS	F	08/18/89	4 1994	1 1998
4	KY	Smith's Farm	Brooks	02	RA	PRP	03/13/96		3 1998
4	MS	Chemfax, Inc.	Gulfport	01	RI/FS	EP	09/07/94	3 1996	4 1999
4	MS	Newson Brothers/Old Reichhold Chemicals, Inc.	Columbia	02	RI/FS	PRP	10/21/94	1 1996	4 1996
4	NC	ABC One Hour Cleaners	Jacksonville	01	RA	F	09/30/96		1 2001
4	NC	Aberdeen Pesticide Dumps	Aberdeen	05	RI/FS	PRP	03/21/94	3 1996	4 1997
4	NC	Battery Tech (Duracell-Lexington)	Lexington	01	RI/FS	PRP	09/09/94	2 1996	3 1997
4	NC	Benfield Industries, Inc.	Hazelwood	01	RA	F	09/30/96		3 2000
4	NC	Camp Lejeune Military Reservation (Marine Corp Base)	Onslow County	02	RA	FF	03/20/95	1 1999	1 1999
				03	RA	FF	01/27/95	4 1996	4 1996
				07	RI/FS	FF	06/08/94	1 1997	3 1997
				08	RI/FS	FF	06/30/93	2 1996	4 1996
				10	RI/FS	FF	04/13/92	1 1997	1 1998
				12	RI/FS	FF	04/04/94	1 1997	1 1997
				13	RI/FS	FF	04/04/94	1 1997	1 1997
				14	RI/FS	FF	06/23/95	1 1997	1 1998
4	NC	Cape Fear Wood Preserving	Fayetteville	01	RA	F	09/29/94	2 2000	2 2000
4	NC	Charles Macon Lagoon & Drum Storage	Cordova	01	RA	PRP	06/28/94	1 2000	1 2000
4	NC	Chemtronics, Inc.	Swannanoa	01	RA	PRP	06/10/91	4 1996	2 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
4	NC	Cherry Point Marine Corps Air Station	Havelock	02 03	RI/FS RI/FS	FF FF	03/20/96 07/12/95	3	1996	1 2	1997 1997
4	NC	Davis Park Road TCE Site	Gastonia	01	RI/FS	F	08/03/95	2	1997	4	1997
4	NC	FCX, Inc. (Statesville Plant)	Statesville	01	RA	F	09/30/96			3	1997
4	NC	Flanders Filters Inc.	Washington	01	RI/FS	PRP	02/12/96			4	1997
4	NC	Geigy Chemical Corp. (Aberdeen Plant)	Aberdeen	01	RA	PRP	02/22/96			4	2000
4	NC	JFD Electronics/Channel Master	Oxford	01	RA	PRP	09/11/96			3	1999
4	NC	Jadco-Hughes Facility	Belmont	01	RA	PRP	06/20/95	4	2001	4	2001
4	NC	Koppers Co., Inc (Morrisville Plant)	Morrisville	01	RA	PRP	06/22/95	3	1999	3	1999
4	NC	Martin-Marietta, Sodyeco, Inc.	Charlotte	01	RA	PRP	09/25/89	2	1999	2	1999
4	NC	National Starch & Chemical Corp.	Salisbury	01	RA	PRP	06/27/90	2	1999	1	2000
4	NC	Potter's Septic Tank Service Pits	Maco	01	RA	F	09/23/94	1	1997	3	1996
4	NC	Reasor Chemical Company	Castle Hayne	01	RI/FS	F	08/09/96			1	1998
4	SC	Aqua-Tech Environmental Inc (Groce Labs)	Greer	01	RI/FS	PRP	09/26/95	4	1997	3	1998
4	SC	Calhoun Park/Ansonborough Home	Charleston	01	RI/FS	PRP	01/22/93	2	1996	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
4	SC	Carolawn, Inc.	Fort Lawn	01	RA	PRP	05/12/93	1	1996	2	1998
4	SC	Elmore Waste Disposal	Greer	01	RA	F	09/30/96			2	1998
4	SC	Geiger (C & M Oil)	Rantoules	01	RA	F	03/31/92	2	1996	2	1997
				02	RA	F	01/19/94	3	1997	4	1998
4	SC	Kalama Specialty Chemicals	Beaufort	01	RA	PRP	04/18/96			1	1997
4	SC	Koppers Co., Inc (Florence Plant)	Florence	01	RI/FS	PRP	02/29/88	2	1997	3	1997
4	SC	Koppers Co., Inc. (Charleston Plant)	Charleston	01	RI/FS	PRP	01/14/93	2	1995	4	1996
				01	RA	PRP	03/25/96			3	1998
4	SC	Leonard Chemical Co., Inc.	Rock Hill	01	RI/FS	PRP	12/13/90	2	1996	1	1997
4	SC	Lexington County Landfill Area	Cayce	01	RA	PRP	09/30/96			2	1998
4	SC	Palmetto Wood Preserving	Dixiana	02	RA	F	09/25/89	2	1996	1	2000
4	SC	Para-Chem Southern, Inc.	Simpsonville	01	RA	PRP	02/15/96			1	1998
4	SC	Rock Hill Chemical Co.	Rock Hill	01	RA	PRP	09/19/96			2	2006
4	SC	SCRDI Bluff Road	Columbia	01	RA	PRP	06/22/94	1	1995	1	1997
				01	RA	PRP	12/04/95			1	1997
4	SC	Sangamo Weston, Inc./Twelve-Mile Creek/Lake Hartwel PCB	Pickens	01	RA	PRP	11/22/93	1	1997	1	1997
4	SC	Savannah River Site (USDOE)	Aiken	04	RI/FS	FF	02/28/90	1	1997	2	1997
				05	RI/FS	FF	02/28/90	1	1997	2	1997
				08	RA	FF	04/05/96			3	1999
				09	RA	FF	04/05/96			3	1999
				10	RI/FS	FF	09/21/96	3	1995	4	2000
				10	RI/FS	FF	01/09/91			3	1995
				11	RI/FS	FF	03/06/91	3	1997	3	1997
				13	RI/FS	F*	06/07/91	4	1996	1	1997
				14	RI/FS	FF	07/01/91	3	1996	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				15	RI/FS	FF	07/01/91	3 1996	4 1996
				16	RI/FS	FF	03/06/91	1 1997	1 1997
				17	RI/FS	FF	05/08/91	2 1997	4 1997
				19	RI/FS	FF	08/05/91	4 1997	1 1998
				20	RI/FS	FF	10/31/91	1 1998	1 1998
				21	RI/FS	FF	10/28/91	1 1999	3 1999
				22	RI/FS	FF	03/25/92	3 1997	2 2001
				23	RI/FS	FF	10/21/91	3 1997	1 1998
				24	RI/FS	FF	02/25/92	4 1997	2 1998
				25	RI/FS	FF	02/05/92	4 1998	1 2000
				26	RI/FS	FF	07/15/92	1 1998	3 1999
				27	RI/FS	FF	08/15/92	1 1999	4 1997
				27	RA	FF	03/18/96		3 1998
				28	RI/FS	FF	08/05/91		3 1998
				29	RA	FF	02/15/96	2 1997	2 1997
				31	RI/FS	FF	07/16/90	3 1998	2 1998
				32	RA	FF	07/01/96		3 1999
				36	RI/FS	FF	12/29/89	2 1997	1 1999
				37	RI/FS	FF	08/05/91	2 1997	1 1999
				38	RI/FS	FF	01/31/95	1 1998	3 1999
				39	RI/FS	FF	03/31/95	1 1998	3 1999
				40	RI/FS	FF	03/31/95	1 1998	1 1999
				42	RI/FS	FF	01/31/92		4 1998
				44	RI/FS	FF	12/29/89	4 1999	4 1999
				45	RI/FS	FF	02/15/92	2 1995	1 1997
				46	RI/FS	FF	05/15/93	1 1997	3 1998
				47	RI/FS	FF	12/19/95		4 1999
				51	RI/FS	FF	04/04/96		2 2000
				52	RI/FS	FF	04/03/96		2 1998
				55	RI/FS	FF	03/31/92		3 1998
4	SC	Shuron Inc	Barnwell	01	RI/FS	PRP	11/21/94	2 1996	2 1997
4	SC	Townsend Saw Chain Co.	Pontiac	01	RA	PRP	06/21/95	3 1996	3 1996
				01	RI/FS	PRP	12/22/93		1 1997
4	SC	Wamchem, Inc.	Burton	01	RA	PRP	07/26/95	3 1996	4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
4	TN	Arlington Blending & Packaging	Arlington	01	RA	PRP	12/12/94	1	1996	1	2008
4	TN	Carrier Air Conditioning Co.	Collierville	01	RA	PRP	11/03/94	3	1995	3	1995
4	TN	Mallory Capacitor Co.	Waynesboro	01	RA	PRP	06/08/93	4	1997	2	2027
4	TN	Memphis Defense Depot (DLA)	Memphis	02	RI/FS	FF	02/09/94	3	1998	3	1998
				03	RI/FS	FF	03/10/94	3	1998	3	1998
				04	RI/FS	FF	05/09/94	4	1998	4	1998
4	TN	Milan Army Ammunition Plant	Milan	01	RA	FF	11/15/93	1	1998	1	1998
				02	RA	FF	11/01/94	2	1997	2	1997
				03	RI/FS	FF	10/01/89	3	1997	4	1998
				04	RI/FS	FF	10/01/89	1	1997	1	1998
				09	RI/FS	FF	10/01/89	1	1997	1	1998
				10	RI/FS	FF	10/01/89	1	1997	3	1998
				11	RI/FS	FF	10/01/89	1	1997	3	1998
				12	RI/FS	FF	07/23/90	1	1997	3	1998
				13	RI/FS	FF	11/26/91	1	1997	1	1998
4	TN	Murray-Ohio Dump	Lawrenceburg	01	RA	PRP	07/16/96			4	1998
4	TN	North Hollywood Dump	Memphis	01	RA	PRP	09/27/93	4	1996	4	1996
4	TN	Oak Ridge Reservation (USDOE)	Oak Ridge	04	RI/FS	FF	03/31/90	4	1997	3	1997
				05	RI/FS	FF	03/31/90	4	1999	4	1999
				07	RI/FS	FF	06/05/90	4	1998	4	1998
				09	RI/FS	FF	06/05/90	3	1998	4	1999
				10	RA	FF	07/15/96			2	1997
				12	RI/FS	FF	01/03/90	3	1999	3	1999
				13	RI/FS	FF	06/09/90	3	1998	3	1998
				14	RI/FS	FF	10/25/86	3	1997	3	1997
				15	RI/FS	FF	09/14/90	1	1999	1	1999
				19	RI/FS	FF	10/25/86	3	1997	4	1999
				20	RI/FS	FF	07/16/90	3	1996	4	1996
				21	RI/FS	FF	08/28/92	2	1998	4	1999
				22	RI/FS	FF	12/28/90	3	1998	3	1998
				23	RI/FS	FF	01/14/91	3	1999	3	1999
				24	RA	FF	04/10/96			3	1997
				25	RI/FS	FF	10/25/86	4	1999	4	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				28	RI/FS	FF	10/01/95		
				30	RI/FS	FF	10/04/93	4 1999	4 1999
				31	RI/FS	FF	09/23/93	4 1998	4 1998
				32	RI/FS	FF	09/30/93	2 1999	2 1999
				33	RI/FS	FF	10/25/86	4 1999	4 1998
				34	RI/FS	FF	12/02/92	4 1999	4 1999
				35	RI/FS	FF	02/02/94	4 1999	4 1999
				36	RI/FS	FF	03/31/94	4 1999	4 1999
				37	RI/FS	FF	12/31/92	1 1997	2 1997
				40	RI/FS	FF	12/22/94	2 1997	3 1999
4	TN	Tennessee Products	Chattanooga	01	RI/FS	F	03/22/95	3 1997	3 1997
4	TN	Velsicol Chemical Corp. (Hardeman County)	Toone	01	RA	PRP	05/26/95	2 1997	2 2027
4	TN	Wrigley Charcoal Plant	Wrigley	01	RA	F	09/29/93	2 1995	2 1995
5	IL	Acme Solvent Reclaiming, Inc.	Morristown	06	RA	PRP	09/29/94	1 2000	1 2000
5	IL	Amoco Chemicals (Joliet Landfill)	Joliet	01	RI/FS	PS	04/07/94	3 1996	3 1997
5	IL	Beloit Corp.	Rockton	01	RI/FS	PS	09/27/90	2 1998	2 1998
5	IL	Byron Salvage Yard	Byron	04	RI/FS	EP	12/29/89	3 1996	1 1997
5	IL	Cross Brothers Pail Recycling	Pembroke Township	01	RA	PRP	09/30/93	1 1996	4 1997
5	IL	DuPage County Landfill/Blackwell Forest Preserve)	Warrenville	01	RI/FS	PRP	09/29/89	1 1997	4 1997
5	IL	Galesburg/Koppers Co.	NEED TO IDENTIFY	01	RA	PS	05/05/95	2 1999	2 1999
5	IL	H.O.D. Landfill	Antioch	01	RI/FS	PRP	08/20/90	3 1996	2 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	IL	Ilada Energy Co.	East Cape Girardeau	01	RI/FS	PRP	06/19/89	1	1996	4	1997
5	IL	Joliet Army Ammunition Plant (Manufacturing Area)	Joliet	01 02	RI/FS RI/FS	FF FF	06/09/89 06/09/89	2	1996	4 1	1997 1998
5	IL	Kerr-McGee (Kress Creek/West Branch of Dupage River)	DuPage County	01	RI/FS	F	09/30/92	1	1997	3	1997
5	IL	Kerr-McGee (Reed-Keppler Park)	West Chicago	01	RI/FS	F	05/20/92	4	1998	4	1998
5	IL	Kerr-McGee (Residential Areas)	West Chicago/DuPage Cnty	01	RI/FS	F	09/17/93	4	1997	4	1997
5	IL	Kerr-McGee (Sewage Treat Plant)	West Chicago	01	RI/FS	F	05/20/92	4	1998	4	1998
5	IL	LaSalle Electric Utilities	LaSalle	02	RA	S	04/11/89	1	2005	1	2005
5	IL	Lenz Oil Service, Inc.	Lemont	01	RI/FS	PRP	09/29/89	1	1997	3	1997
5	IL	MIG/Dewane Landfill	Belvidere	01	RI/FS	F	05/01/95	4	1997	4	1997
5	IL	NL Industries/Taracorp Lead Smelter	Granite City	01 01	RA RA	F F	03/08/91 03/15/93			4 4	1999 1997
5	IL	Ottawa Radiation Areas	Ottawa	01	RI/FS	F	03/26/93	1	1997	2	1998
5	IL	Outboard Marine Corp.	Waukegan	02 03	RI/FS RA	PRP PRP	09/26/90 06/27/93	1 1	1997 1996	4 2	1997 1997
5	IL	Pagel's Pit	Rockford	02	RI/FS	PRP	08/13/91	4	1996	2	1997
5	IL	Parsons Casket Hardware Co.	Belvidere	02	RI/FS	S	09/01/96			1	1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	IL	Sangamo Electric Dump/Crab Orchard National Wildlife Refuge (USDOI)	Cartersville	01	RA	FF	06/30/93	4	1996	1	1997
				02	RA	PRP	09/27/95	1	1998	1	1998
				03	RI/FS	FF	09/13/91	3	1996	1	1997
				04	RI/FS	FF	09/13/91	4	1996	1	1998
5	IL	Savanna Army Depot Activity	Savanna	02	RI/FS	FF	09/29/89	1	1996	2	1997
5	IL	Southeast Rockford Ground Water Contamination	Rockford	03	RI/FS	S	02/07/96			3	1997
5	IL	Wauconda Sand & Gravel	Wauconda	02	RA	PRP	09/30/91	3	1996	2	1997
5	IL	Yeoman Creek Landfill	Waukegan	01	RI/FS	PRP	12/22/89	1	1996	4	1996
5	IN	American Chemical Service, Inc.	Griffith	01	RA	PRP	04/10/96			3	1997
				01	RA	PRP	06/06/96			2	1997
5	IN	Conrail Rail Yard (Elkhart)	Elkhart	01	RA	PRP	08/29/94	4	1996	1	1997
5	IN	Continental Steel Corp.	Kokomo	01	RI/FS	S	05/25/90	3	1997	3	1997
				02	RI/FS	S	08/26/91	3	1997	3	1997
				03	RI/FS	S	03/27/92	3	1997	3	1997
				04	RI/FS	S	03/27/92			3	1997
				05	RI/FS	S	03/27/92			3	1997
				06	RI/FS	S	03/27/92			3	1997
5	IN	Douglas Road/Uniroyal, Inc., Landfill	Mishawaka	01	RA	F	09/10/96			1	1999
				02	RA	F	09/27/96			1	1998
5	IN	Fisher-Calo	LaPorte	01	RA	PRP	09/30/95	2	1998	2	1998
5	IN	Fort Wayne Reduction Dump	Fort Wayne	01	RA	PRP	09/20/90	2	1996	2	1997
5	IN	Lemon Land Landfill	Bloomington	01	RI/FS	PRP	05/08/95	4	1996	4	1996
5	IN	MIDCO I Site	Gary	01	RA	PRP	07/22/93	4	1996	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	IN	MIDCO II Site	Gary	01	RA	PRP	08/23/93	2	1996	1	1997
5	IN	Marion (Bragg) Dump	Marion	02	RI	PRP	01/16/90			2	1997
5	IN	Neal's Landfill (Bloomington)	Bloomington	01	RA	PRP	07/07/88	2	1989	2	1989
				01	RI/FS	PRP	08/13/96			4	1998
5	IN	Ninth Avenue Dump	Gary	02	RA	PRP	02/14/94	1	1997	1	1997
5	IN	Northside Sanitary Landfill, Inc.	Zionsville	01	RA	PRP	09/30/94	2	1999	2	1999
5	IN	Reilly Tar & Chemical Corp. (Indianapolis Plant)	Indianapolis	01	RA	PRP	09/30/94			4	1998
5	IN	Seymour Recycling Corp.	Seymour	01	RA	PRP	08/17/87	3	1997	3	1997
5	IN	Tippecanoe Sanitary Landfill, Inc.	Lafayette	01	RI/FS	PRP	03/08/90	1	1997	3	1997
5	IN	Iri-State Plating	Columbus	01	RA	F	03/29/91	2	1999	2	1999
5	IN	Waste, Inc. Landfill	Michigan City	01	RA	PRP	09/12/96			3	1998
5	MI	Allied-Paper, Inc./Portage Creek/Kalamazoo River	Kalamazoo	02	RI/FS	PS	12/28/90	1	1998	3	1998
				03	RI/FS	PS	12/28/90	1	1997	1	1997
				04	RI/FS	PS	12/28/90	3	1997	4	1997
				05	RI/FS	PS	12/28/90	1	1999	1	1999
5	MI	Bendix Corp./Allied Automotive	St. Joseph	01	RI/FS	PRP	02/13/89	3	1996	4	1996
5	MI	Bofors Nobel, Inc.	Muskegon	01	RA	F	09/25/92	1	2000	1	2000
				02	RI/FS	S	03/31/90	2	1996	1	1997
5	MI	Carter Industrials, Inc.	Detroit	01	RA	PRP	06/09/95	3	1996	1	1997
5	MI	Chem Central	Wyoming Township	01	RA	PRP	08/18/94	4	1996	3	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
5	MI	Clare Water Supply	Clare	02	RA	PRP	10/03/95		1 1997
5	MI	Electrovoice	Buchanan	01	RA	PRP	11/08/95		3 1997
				01	RA	PRP	05/24/96		4 1997
				02	RI/FS	F	09/15/92	1 1997	3 1997
5	MI	Forest Waste Products	Otisville	02	RA	PRP	03/26/96		1 1997
5	MI	G&H Landfill	Utica	01	RA	PRP	06/02/95	1 1999	1 1999
5	MI	Ionia City Landfill	Ionia	02	RI/FS	PRP	01/29/86	4 1996	4 1997
5	MI	J & L Landfill	Rochester Hills	01	RA	PRP	05/19/96		1 1998
				02	RI/FS	F	07/12/94	2 1996	2 1997
5	MI	Kysor Industrial Corp.	Cadillac	01	RA	PRP	03/03/95	2 2020	2 2020
5	MI	Liquid Disposal, Inc.	Utica	01	RA	PRP	09/30/92	4 1996	4 1997
5	MI	Metal Working Shop	Lake Ann	01	RI/FS	EP	11/15/90	3 1992	3 1992
5	MI	North Bronson Industrial Area	Bronson	01	RI/FS	S	06/24/87	2 1996	3 1997
5	MI	Northernaire Plating	Cadillac	02	RA	PRP	03/03/95	2 2020	2 2020
5	MI	Novaco Industries	Temperance	01	RA	F	04/23/92	4 1997	4 1997
5	MI	OTT/Story/Cordova Chemical Co.	Dalton Township	01	RA	F	09/25/91	1 1996	3 1997
				02	RA	F	09/28/92	2 1996	3 1997
				03	RA	F	03/29/95	4 1997	4 1998
5	MI	Organic Chemicals, Inc.	Grandville	01	RA	PRP*	02/09/94	1 1996	1 1997
				02	RI/FS	F	04/22/88	3 1996	1 1997
5	MI	Parsons Chemical Works, Inc.	Grand Ledge	01	RI/FS	S	09/29/89	1 1996	1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
5	MI	Peerless Plating Co.	Muskegon	01	RA	F	09/23/96		1 1999
5	MI	Petoskey Municipal Well Field	Petoskey	01	RI/FS	S	10/05/90	3 1997	1 1998
5	MI	Rasmussen's Dump	Green Oak Township	01	RA	PRP	03/16/95	1 1996	1 1997
5	MI	Rockwell International Corp. (Allegan Plant)	Allegan	02	RI/FS	PRP*	03/31/88	1 1997	1 1998
5	MI	Roto-Finish Co., Inc.	Kalamazoo	01	RI/FS	PRP	12/18/87	3 1996	1 1997
5	MI	SCA Independent Landfill	Muskegon Heights	01	RI/FS	PS	10/20/93	1 1997	1 1997
5	MI	Shiawassee River	Howell	01	RI/FS	S	06/19/87	4 1996	1 1997
5	MI	Sparta Landfill	Sparta Township	01	RI/FS	PRP	09/23/93	1 1998	1 1998
5	MI	Spartan Chemical Co.	Wyoming	01	RI/FS	S	02/16/94	1 1998	1 1998
5	MI	Sturgis Municipal Wells	Sturgis	01	RA	PRP	05/12/93	1 2000	1 2000
5	MI	Tar Lake	Mancelona Township	01	RI/FS	PRP	01/29/86	3 1993	3 1993
5	MI	Thermo-Chem, Inc.	Muskegon	01	RA	PRP	10/16/95		1 1997
				01	RA	PRP	10/27/94		4 1998
				01	RA	PRP	10/27/94		4 1997
				02	RI/FS	PRP	09/21/87	2 1998	1 1998
5	MI	Verona Well Field	Battle Creek	02	RA	F	04/12/95	2 1996	1 1997
				02	RA	PRP	12/28/94	2 1996	2 1997
5	MI	Wurtsmith Air Force Base	Isoco	01	RI/FS	FF	01/03/95	2 1997	2 1997
				02	RI/FS	FF	09/26/94		4 1996
				03	RI/FS	FF	06/24/94		4 1996
				04	RI/FS	FF	01/03/95		2 1997
				05	RI/FS	FF	03/15/93		3 1997
				06	RI/FS	FF	12/14/94		2 1997
				07	RI/FS	FF	08/04/94		4 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	MN	Agate Lake Scrapyard	Fairview Township	01	RA	PS	07/08/94	1	2000	1	2000
5	MN	Arrowhead Refinery Co.	Hermantown	01	RA	S	08/15/90	4	2000	4	2000
				01	RA	PRP	04/20/95	2	1996	1	1997
				01	RA	F	01/24/96			1	1997
5	MN	Freeway Sanitary Landfill	Burnsville	01	RI/FS	PS	03/27/86	1	1996	1	1996
5	MN	Joslyn Manufacturing & Supply Co.	Brooklyn Center	03	RA	PS	07/31/95			1	1997
5	MN	Long Prairie Ground Water Contamination	Long Prairie	01	RA	S	04/11/91	3	1996	1	1997
				02	RA	S	04/11/91	3	1996	1	1997
				03	RA	S	12/09/93	2	1996	3	1997
5	MN	MacGillis & Gibbs Co./Bell Lumber & Pole Co.	New Brighton	01	RA	S	09/30/94	4	1998	4	1998
				02	RA	F	06/12/96			1	1998
				03	RA	F	09/23/96			4	1997
5	MN	Naval Industrial Reserve Ordnance Plant	Fridley	01	RA	FF	06/14/91	4	1999	4	1999
				02	RI/FS	FF	03/22/92	2	1996	1	1999
				03	RI/FS	FF	05/20/96			4	1998
5	MN	New Brighton/Arden Hills	New Brighton	07	RA	FF	09/21/95			2	1997
5	MN	Oak Grove Sanitary Landfill	Oak Grove Township	02	RA	PRP	08/05/92	4	1999	3	1996
5	MN	Perham Arsenic	Perham	01	RA	F	09/30/96			3	1998
5	MN	Reilly Tar & Chemical Corp.	St. Louis Park	04	RA	PRP	04/01/91	4	1999	4	1999
				05	RA	PRP	05/09/96			2	1997
5	MN	St. Regis Paper Co.	Cass Lake	01	RA	PRP	04/30/85			4	1997
				03	RA	PRP	04/30/85			3	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	MN	Waite Park Wells	Waite Park	02	RA	PS	08/12/94			2	1997
5	OH	Allied Chemical & Ironton Coke	Ironton	02	RA	PRP	03/03/95	1	2026	1	2026
				02	RA	PRP	03/03/95	4	1996	1	1997
5	OH	Alsco Anaconda	Gnadenhutten	01	RA	PRP	09/30/91	1	1996	1	1997
5	OH	Big D Campground	Kingsville	01	RA	PRP	05/11/94	1	2016	1	2016
5	OH	Buckeye Reclamation	St. Clairsville	01	RA	PRP	02/10/95	4	1998	1	1999
5	OH	Dover Chemical Corp.	Dover	01	RI/FS	PRP	08/24/88	3	1996	2	1997
5	OH	Feed Materials Production Center (USDOE)	Fernald	01	RA	FF	04/01/96			1	1998
				03	RI/FS	FF	04/09/90	2	1996	4	1996
				04	RA	FF	03/04/96			1	2001
				06	RA	FF	06/09/95			2	2006
5	OH	Fields Brook	Ashtabula	02	RI/FS	PRP	03/22/89	1	1996	1	1997
				03	RI/FS	PRP	09/26/89	4	1996	1	1999
				04	RI/FS	PRP	01/10/93	1	1996	3	1997
5	OH	Miami County Incinerator	Troy	01	RA	PRP	04/01/96			2	1997
5	OH	Mound Plant (USDOE)	Miamisburg	01	RA	FF	06/24/96			3	1998
				02	RI/FS	FF	06/21/93	3	2000	3	2000
				05	RI/FS	FF	02/04/93	4	1997	4	1997
				06	RI/FS	FF	07/17/92	1	2001	1	2001
				09	RI/FS	FF	05/22/92	1	2008	1	2008
5	OH	Nease Chemical	Salem	01	RI/FS	PRP	01/27/88	2	1996	1	1998
5	OH	Reilly Tar & Chemical Corp. (Dover Plant)	Dover	01	RI/FS	PRP	03/29/89	4	1996	1	1997
5	OH	Rickenbacker Air National Guard (USAF)	Lockbourne	01	RI/FS	FF	04/15/96			1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
5	OH	Sanitary Landfill Co. (Industrial Waste Disposal Co.Inc	Dayton	01	RA	PRP	04/16/96		4 1998
5	OH	Skinner Landfill	West Chester	02	RA	PRP	06/18/96		1 1998
5	OH	South Point Plant	South Point	01	RI/FS	PRP	03/31/87	1 1996	2 1997
5	OH	United Scrap Lead Co., Inc.	Troy	01	RA	F	09/17/92	1 1996	1 1997
5	OH	Wright-Patterson Air Force Base	Dayton	01	RA	FF	10/03/94	3 1996	2 1997
				02	RI/FS	FF	07/10/92	3 1996	4 1996
				03	RI/FS	FF	10/01/92	4 1996	4 1996
				04	RI/FS	FF	10/01/92	4 1996	4 1996
				05	RI/FS	FF	10/01/92	4 1996	4 1996
				06	RI/FS	FF	03/16/93	4 1997	4 1997
				07	RI/FS	FF	12/12/94	4 1997	4 1997
				08	RI/FS	FF	06/28/94	4 1997	4 1997
				09	RI/FS	FF	01/10/94	3 1998	3 1998
				10	RI/FS	FF	07/28/93	3 1996	4 1996
				11	RI/FS	FF	12/12/94	4 1997	4 1997
				12	RI/FS	FF	08/31/95	2 1998	2 1998
5	OH	Zanesville Well Field	Zanesville	01	RA	F	10/24/95		1 1997
5	WI	Better Brite Plating Co. Chrome and Zinc Shops	DePere	02	RA	F	08/05/91	3 1997	3 1997
5	WI	City Disposal Corp. Landfill	Dunn	01	RA	PRP	03/30/95	1 1998	1 1998
5	WI	Delavan Municipal Well #4	Delavan	01	RI/FS	PS	09/28/90	1 1996	2 1997
5	WI	Hunts Disposal	Caledonia	01	RA	PRP	07/06/95	2 1997	2 1997
5	WI	Janesville Ash Beds	Janesville	01	RA	PRP	06/17/96		3 1997
5	WI	Janesville Old Landfill	Janesville	01	RA	PRP	06/17/96		3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
5	WI	Madison Metropolitan Sewerage District	Bloomington Grove	01	RI/FS	PRP	09/24/92	2	1996	4	1996
5	WI	Master Disposal Service Landfill	Brookfield	01	RA	PRP	03/29/94	2	1996	1	1997
5	WI	Moss-American (Kerr-McGee Oil Co.)	Milwaukee	01	RA	F	05/19/95	1	2000	1	2000
5	WI	National Presto Industries, Inc.	Eau Claire	01	RA	PRP	11/12/93	2	1999	2	1999
5	WI	Oconomowoc Electroplating Co., Inc.	Ashippin	01	RA	F	09/30/91	4	1996	1	1997
				01	RA	F	05/12/94	3	1996	1	1999
				02	RI/FS	F	09/20/90	1	1997	1	1997
5	WI	Penta Wood Products	Daniels	01	RI/FS	F	03/01/94			2	1997
5	WI	Ripon City Landfill	Ripon	00	RA	PS	05/13/96			1	1997
5	WI	Scrap Processing Co., Inc.	Medford	01	RI/FS	F	05/11/92	1	1996	2	1997
5	WI	Sheboygan Harbor & River	Sheboygan	01	RI/FS	PRP	04/11/86	3	1996	3	1997
5	WI	Tomah Armory	Tomah	01	RI/FS	PRP*	05/27/93	4	1996	1	1997
5	WI	Tomah Municipal Sanitary Landfill	Tomah	01	RI/FS	PRP	01/11/94	1	1997	3	1997
5	WI	Wheeler Pit	La Prairie Township	01	RA	PRP	05/21/92	1	1998	1	1998
6	AR	Frit Industries	Walnut Ridge	01	RA	PRP	09/08/83	4	1995	1	1997
6	AR	Midland Products	Ola/Birta	01	RA	S	06/29/90	4	1998	4	1998
6	AR	Popple, Inc.	El Dorado	01	RA	F	09/27/94	1	1999	1	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
6	AR	South 8th Street Landfill	Jacksonville	02	RI/FS	F	06/29/92			4	1997
6	AR	Vertac, Inc.	Jacksonville	02	RA	F	09/26/94	2	1996	4	1997
6	LA	Agriculture Street Landfill	New Orleand	01 01	RI/FS FS	F F	03/14/95 08/15/96	2	1996	1 1	1997 1997
6	LA	American Cresote Works, Inc (Winnfield)	Winnfield	01	RA	F	09/28/93	1	1996	2	1999
6	LA	Bayou Bonfouca	Slidell	02	RA	F	02/04/91	4	1997	4	1997
6	LA	Bayou D'Inde	Sulphur	01	RI/FS	F	03/09/95			1	1999
6	LA	Cleve Reber	Sorrento	01	RA	PRP	04/10/92	1	1997	1	1997
6	LA	Combustion, Inc.	Denham Springs	01	RI/FS	PS	10/25/88	2	1996	3	1997
6	LA	Lincoln Creosote	Bossier City	01	RA	PRP	05/22/96			1	1997
6	LA	Louisiana Army Ammunition Plant	Doyline	02 03	RI/FS RI/FS	FF FF	01/31/89 09/30/93	2 4	1996 1996	4 4	1996 1997
6	LA	Old Citgo Refinery (Bossier City)	Bossier	01	RI/FS	F	09/22/94	4	1996	2	1997
6	LA	Old Inger Oil Refinery	Darrow	01	RA	S	04/25/86	2	1999	2	1999
6	LA	Petro-Processors of Louisiana, Inc.	Scotlandville	01	RA	PRP	06/30/87	4	1998	4	1998
6	LA	Southern Shipbuilding	Slidell	01	RA	F	09/14/95			2	1997
6	NM	AT & SF (Clovis)	Clovis	01 01	RA RI/FS	PRP PRP	08/07/89 06/06/94	4 2	1998 1996	4 2	1998 1997
6	NM	Cimarron Mining Corp.	Carrizozo	01 02	RA RA	EP EP	08/13/91 12/20/91	2 2	1996 1996	1 2	1998 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
6	NM	Espanola Wells.	Espanola	01	RI/FS	S	09/09/96		1 1998
6	NM	Fruit Avenue Plume	Albuquerque	01	RI/FS	S	09/09/96		1 1998
6	NM	Lee Acres Landfill (USDO1)	Farmington	01	RI/FS	FF	02/25/92	1 1996	1 1997
6	NM	Prewitt Abandoned Refinery	Prewitt	01	RA	PRP	01/16/95	4 1996	4 2002
				01	RA	PRP	05/07/96		1 1998
6	NM	Rinchem Co. Inc.	Albuquerque	01	RI/FS	PRP	10/01/95		4 1996
6	NM	South Valley	Albuquerque	06	RA	PRP	06/18/95	1 1997	2 1997
6	NM	United Nuclear Corp.	Church Rock	01	RA	PRP	09/12/89	2 1996	1 1998
6	OK	Double Eagle Refinery Co.	Oklahoma City	02	RA	F	07/17/95	4 1996	1 1998
6	OK	Fourth Street Abandoned Refinery	Oklahoma City	02	RA	F	07/17/95	4 1996	1 1997
6	OK	Hardage/Criner	Criner	02	RA	PRP	05/15/95		3 1997
6	OK	Mosley Road Sanitary Landfill	Oklahoma City	01	RA	PRP	03/16/95		4 1999
6	OK	National Zinc Corp.	Bartlesville	01	RA	PS	03/15/94	4 1997	4 1999
				02	RI/FS	PS	01/01/95		1 1997
6	OK	Rab Valley Wood Preserving	Panama	01	RI/FS	F	09/27/94	4 1996	1 1997
6	OK	Sand Springs Petrochemical Complex	Sand Springs	01	RA	PRP	09/16/94	4 1996	4 1997
6	OK	Tar Creek (Ottawa County)	Ottawa County	01	RA	S	05/24/96		1 1998
				02	RI/FS	F	08/25/94	4 1996	1 1997
				02	RI/FS	F	08/25/94	4 1997	1 1998
				02	RI	F	03/20/95		1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
6	OK	Tinker Air Force Base	Oklahoma City	03 04	RI/FS RI/FS	PRP PRP	10/16/95 10/16/95			4 2	1997 1997
6	TX	ALCOA (Point Comfort)/Lavaca Bay	Point Comfort	01	RI/FS	PRP	03/31/94	2	1997	4	1998
6	TX	Air Force Plant #4 (General Dynamics)	Fort Worth	01	RI/FS	FF	08/20/90	2	1996	4	1996
6	TX	Bailey Waste Disposal	Bridge City	01	RA	MR	02/19/92	3	1997	1	1998
6	TX	Brio Refining Co., Inc.	Friendswood	01	RA	PRP	06/29/89	4	1998	4	2002
6	TX	French, Ltd.	Crosby	02	RA	PRP	06/28/89	3	1998	3	1998
6	TX	Geneva Industries/Fuhrmann Energy	Houston	02	RA	S	03/31/89	4	1999	4	1999
6	TX	Koppers Co., Inc. (Texarkana Plant)	Texarkana	01	RA	PRP	04/29/96			2	1997
6	TX	Lone Star Army Ammunition Plant	Texarkana	01 02	RI/FS RI/FS	FF FF	06/18/90 06/18/90	1 1	1997 1997	1 1	1998 1998
6	TX	Longhorn Army Ammunition Plant	Karnack	01 02 04 05 06	RI/FS RI/FS RI/FS RI/FS RI/FS	FF FF FF FF FF	10/16/91 10/16/91 10/16/91 10/16/91 10/16/91	1 2 2 2 2	1996 1997 1997 1997 1997	1 2 2 2 2	1997 1997 1997 1997 1997
6	TX	MOTCO, Inc.	La Marque	01 02	RA RA	PRP PRP	12/31/88 12/13/93	1 1	1997 1997	1 1	1998 1998
6	TX	North Calvacade Street	Houston	01 02	RA RA	S S	09/12/91 09/03/93	4 1	1999 1998	4 1	1999 1998
6	TX	Odessa Chromium #1	Odessa	02	RA	S	09/27/89	2	1998	2	1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
6	TX	Odessa Chromium #2 (Andrews Highway)	Odessa	02	RA	S	03/30/90	2	1997	2	1997
				03	RA	PRP	04/18/93	2	1998	2	1998
6	TX	RSR Corp.	Dallas	03	RI/FS	F	07/17/93	2	1996	1	1997
				05	RI/FS	F	05/10/93	2	1996	1	1997
6	TX	Sikes Disposal Pits	Crosby	01	RA	S	05/04/89	4	1996	1	1997
6	TX	Sol Lynn/Industrial Transformers	Houston	02	RA	S	09/10/91	4	2004	4	2004
6	TX	South Cavalcade Street	Houston	01	RA	PRP	01/11/95	4	1999	4	1999
6	TX	Texarkana Wood Preserving Co.	Texarkana	01	RA	S	05/21/93	4	1999	4	1999
6	TX	United Creosoting Co.	Conroe	03	RA	S	09/17/93	4	2000	4	2000
				03	RA	S	09/17/93	1	1999	1	1999
7	IA	Des Moines TCE (once listed as DICO)	Des Moines	02	RI/FS	F	10/26/94	1	1996	1	1997
				02	RI/FS	F	10/26/94			1	1997
				04	RI/FS	F	10/26/94	4	1995	1	1997
7	IA	Fairfield Coal Gasification Plant	Fairfield	02	RA	PRP	07/20/92	4	2001	4	2001
7	IA	Iowa Army Ammunition Plant	Middletown	01	RI/FS	FF	09/20/90	4	1997	3	1998
				02	FS	FF	02/01/96			3	1997
7	IA	Mason City Coal Gasification Plant	Mason City	01	RI/FS	PRP	10/01/91	3	1997	4	1999
7	IA	Peoples Natural Gas Co.	Dubuque	01	RA	PRP	03/29/94	4	1997	4	1998
7	IA	Ralston Site	Cedar Rapids	01	RI/FS	PRP	11/27/91	3	1997	1	1998
7	IA	Vogel Paint & Wax	Orange City	01	RA	PS	05/20/91	2	1997	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
7	IA	Waterloo Coal Gasification Plant	Waterloo	01	RI/FS	PRP	05/30/95	1	1998	3	1999
7	KS	29th & Mead Ground Water Contamination	Wichita	01	RI/FS	PS	09/27/89	4	1997	1	1999
7	KS	57th and North Broadway Streets Site	Whichita	01	RI/FS	F	09/15/94	2	1999	2	1999
7	KS	Ace Services	Colby	01	RI/FS	F	07/23/96			4	1998
7	KS	Cherokee County (Tar Creek, Cherokee County)	Cherokee County	03 07	RI/FS RA	PRP F	05/07/90 08/02/96	4	1995	1 4	1997 1998
7	KS	Doepke Disposal (Holliday)	Johnson County	01	RA	PRP	03/06/95	4	1998	4	1998
7	KS	Fort Riley	Junction City	03	RI/FS	FF	07/01/93	4	1996	3	1997
7	KS	Obee Road	Hutchinson	02	RI	PS*	09/30/94	4	2000	2	1998
7	KS	Pester Refinery Co.	El Dorado	01 02	RA RI/FS	PS PS	11/01/94 12/16/93	2 4	1997 1996	2 2	1999 1997
7	KS	Sunflower Army Ammunition Plant	DeSoto	01	RI/FS	FF	10/01/95			4	1998
7	MO	Bee Cee Manufacturing Co.	Malden	01	FS	S	09/03/93	3	1995	1	1997
7	MO	Kem-Pest Laboratories	Cape Girardeau	02	RA	F	02/10/93	4	1996	1	1997
7	MO	Lake City Army Ammunition Plant (Northwest Lagoon)	Independence	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	08/01/87 04/21/92 06/27/90 09/30/92	1 4 1 3	1999 1996 1998 1999	1 1 3 3	1999 1997 1997 1999
7	MO	Lee Chemical	Liberty	01	RA	PS	12/31/92	4	1999	4	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
7	MO	Oronogo-Duenweg Mining Belt	Jasper County	01 02	RI/FS RA	MR F	08/02/91 08/02/96	3 1997	3 1997 4 2001
7	MO	Shenandoah Stables (once listed as Arena 1: Shenandoah Stables)	Moscow Mills	02	RA	MR	08/26/96		1 1997
7	MO	St. Louis Airport/Hazelwood Interim Storage/Futura Coat	St. Louis County	01	RI/FS	FF*	06/26/90	1 1997	1 1999
7	MO	Syntex Facility	Verona	01	RA	PRP	09/30/89	4 1996	3 1997
7	MO	Times Beach Site	Times Beach	02 02	RA RA	PRP PRP	09/30/94 03/15/96	1 1996	2 1997 1 1997
7	MO	Weldon Spring Quarry (USDOE/Army)	St. Charles County	01 01 02 05 06	RA RA RA RI/FS RI/FS	FF FF FF FF FF	04/08/96 09/04/95 01/01/96 10/24/91 05/18/95		4 1999 4 1999 4 1999 1 1998 4 1998
7	MO	Weldon Springs Ordnance Works	St. Charles County	02	RI/FS	FF	06/30/96		3 1997
7	MO	Westlake Landfill	Bridgeton	01 02	RI/FS RI/FS	PRP PRP	03/03/93 12/14/94	4 1996 3 1998	4 1997 3 1998
7	NE	Bruno Co-op Association/Associated Press Prop	Bruno	01	RI/FS	PRP	05/17/94	4 1996	4 1998
7	NE	Cornhusker Army Ammunition Plant	Hall County	02	RI/FS	FF	12/01/94	1 1996	2 1997
7	NE	Hastings Ground Water Contamination	Hastings	03 04 05 12 14 14 15 16	RA RA RI/FS RI/FS RI/FS RI/FS RI/FS RI/FS	PRP FF F F FF FF* PRP FF*	09/28/95 08/12/96 09/30/93 08/31/90 06/15/86 09/30/91 07/19/95 02/11/91		4 1998 4 1998 2 1998 2 1998 1 2001 1 2001 1 2011 2 2007

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
7	NE	Nebraska Ordnance Plant (Former)	Mead	01	RA	FF	06/12/96		3 1998
				02	RI/FS	FF*	08/18/92	4 1996	3 1997
				03	RI/FS	FF*	02/08/95	3 1998	1 1999
7	NE	Ogallala Ground Water Contamination	Ogallala	01	RI/FS	F	09/29/94	4 1997	4 1997
8	CO	ASARCO, Inc. (Globe Plant)	Denver	01	RA	PRP	05/01/94		2 2003
8	CO	Air Force Plant PJKS	Watertown	01	RI/FS	FF	02/07/89	4 1999	4 1999
8	CO	Broderick Wood Products	Denver	02	RA	PRP	05/01/95	4 1996	4 1996
8	CO	California Gulch	Leadville	00	RI	F	12/18/92		3 1996
				00	RI	PRP	06/04/92		3 1996
				02	RI/FS	PRP	04/07/87	1 1995	1 1995
				03	RI/FS	PRP	08/26/94	4 1995	4 1996
				04	FS	PRP	05/05/95		2 1997
				05	RI/FS	PRP	08/29/94	2 1996	4 1996
				06	RI/FS	F	08/26/94	3 1996	2 1997
				07	RI/FS	PRP	08/26/94	2 1996	2 1997
				08	RI/FS	PRP	08/26/94	4 1996	3 1997
				09	RI/FS	PRP	09/15/94	3 1996	4 1996
				10	RI/FS	PRP	08/28/94	2 1996	2 1997
				12	RI/FS	PRP	04/08/93	4 1996	4 1997
8	CO	Central City - Clear Creek	Idaho Springs	03	RA	F	09/30/92	4 1996	1 1997
				03	RA	S	09/29/93	3 1998	4 1999
				03	RA	S	09/29/93	2 1997	4 1998
				03	RA	S	09/29/93	2 1997	4 1999
8	CO	Denver Radium Site	Denver	08	RA	PRP	03/31/93	4 1996	1 1997
8	CO	Eagle Mine	Minturn/Redcliff	01	RA	PS	09/01/88	4 1996	2 1997
				02	FS	F	09/01/92	3 1996	4 1997
8	CO	Lincoln Park	Canon City	01	FS	F	03/11/92	4 1996	1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
8	CO	Lowry Landfill	Arapahoe County	01	RA	PRP	01/31/96		2 1997
				01	RA	PRP	08/22/96		4 1997
				01	RA	PRP	06/17/96		3 1997
8	CO	Rocky Flats Plant (USDOE)	Golden	01	RI	FF	02/06/90	2 1996	4 1996
				01	FS	FF	02/06/90		4 1996
				02	RI	FF	04/12/90	4 1995	4 1995
				03	RI	FF	07/10/91	4 1999	4 1996
				07	RI	FF	06/08/90	1 1996	4 1996
				11	RI	FF	06/08/90	1 1997	4 1994
				15	RI	FF	05/27/92	4 1999	1 1996
				16	RI	FF	09/24/91	4 1999	4 1999
8	CO	Rocky Mountain Arsenal	Adams County	04	RA	FF	03/13/96		2 1997
				15	RA	FF	01/01/90	2 1998	4 1999
				26	RA	FF	11/15/91	4 1996	1 1997
				26	RA	FF	04/14/94	2 1996	1 1998
				26	RA	FF	05/01/94	4 1995	4 1997
				28	RA	FF	02/05/93	3 1996	3 1996
8	CO	Smuggler Mountain	Pitkin County	02	RA	PRP	04/14/95	2 1996	2 1996
8	CO	Summitville	Summitville	01	RA	F	07/11/96		4 2003
8	CO	Summitville Mine	Rio Grande County	00	RI/FS	MR	05/11/93	4 1998	4 1998
				00	RA	F	06/07/95	2 1997	3 2001
				01	RA	F	06/07/95	4 1999	4 1999
				02	RA	F	06/07/95	4 2003	3 1997
				03	FS	F	09/21/94	1 1996	4 1997
8	MT	Anaconda Co. Smelter	Anaconda	04	RI/FS	F*	07/30/96		4 1997
				07	RA	PRP	05/19/94	3 1998	3 1998
				14	RI	PRP	09/28/88	3 1997	3 1996
8	MT	East Helena Site	East Helena	01	RA	PRP	03/31/92	3 1997	1 1998
				02	RI/FS	PRP	06/23/87	1 1998	4 1997
				03	RI/FS	PRP	06/27/87	1 1998	2 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
8	MT	Idaho Pole Co.	Bozeman	01	RA	PRP	06/29/95	1	1997	1	2002
				01	RA	PRP	08/22/96			1	2007
8	MT	Libby Ground Water Contamination	Libby	02	RA	PRP	10/18/89	4	1999	4	1999
8	MT	Milltown Reservoir Sediments	Milltown	02	FS	PRP	02/02/90	1	1997	3	1997
				02	RI	PRP	02/02/90	4	1996	3	1997
				03	RI/FS	PRP	07/07/95	2	1998	2	1998
8	MT	Montana Pole and Treating	Butte	01	RA	F	04/18/96			1	2014
8	MT	Silver Bow Creek/Butte Area	Silver Bow/Deer Lodge	03	RA	PRP	09/03/96			4	1998
				04	RA	PRP	06/30/92	2	1997	4	1998
				08	RI/FS	PRP	06/30/92	1	1998	1	1999
				12	RA	FE	05/18/94	1	1997	4	1998
8	ND	Arsenic Trioxide Site	Southeastern ND	01	RA	F	06/25/93			1	1997
8	ND	Minot Landfill	Minot	01	RA	PRP	01/23/96			4	1996
8	SD	Ellsworth Air Force Base	Rapid City	02	RA	FF	05/14/96			4	1997
				03	RA	FF	08/19/96			4	1997
				05	RA	FF	06/11/96			4	1997
				07	RA	FF	06/07/96			4	1997
				08	RI/FS	FF	04/05/93	2	1997	2	1997
				08	RA	FF	08/19/96			4	1997
				11	RI/FS	FF	02/03/94	1	1998	1	1998
				12	RA	FF	06/05/96			4	1997
8	UT	Hill Air Force Base	Ogden	01	RI/FS	FF	06/28/91	2	1997	3	1998
				02	RA	FF	09/30/96			4	1997
				04	RA	FF	09/14/95	3	1998	3	1998
				05	RI/FS	FF	08/13/91	3	1996	4	1997
				06	RI/FS	FF	09/10/92	1	1997	3	1997
				08	RI/FS	FF	05/03/95	1	1999	1	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
8	UT	Kennecott (South Zone)	Copperton	00	RI/FS	PRP	09/22/93	3 1996	1 1998
				01	RI/FS	PRP	09/22/93	4 1996	4 1996
				02	RI/FS	PRP	07/29/94	3 1997	2 1998
8	UT	Midvale Slag	Midvale	01	RA	S	09/07/95	4 1996	2 1997
8	UT	Monticello Mill Tailings (USDOE)	Monticello	01	RA	FF	06/22/92	1 1994	1 1994
				01	RA	FF	08/04/95		4 1996
				01	RA	FF	09/08/95		1 1997
				02	RA	FF	06/02/95		4 1997
				02	RA	FF	05/13/94		3 1998
				02	RA	FF	07/28/96		1 1998
				02	RA	FF	09/20/96		1 1998
				03	RI/FS	FF	05/31/91	1 1998	1 1998
8	UT	Monticello Radioactively Contaminated Properties	Monticello	01	RA	PRP	09/06/84	1 1997	1 1997
				02	RA	FF	11/09/90	4 1997	4 1997
				03	RA	PRP	11/23/93	4 1997	4 1997
				05	RA	FF	01/07/94	1 1999	1 1999
8	UT	Petrochem Recycling Corp./Ekotek Plant	Salt Lake City	01	RI/FS	PRP	07/10/92	1 1996	3 1996
8	UT	Portland Cement (Kiln Dust 2 & 3)	Salt Lake City	01	RA	S	04/03/95	1 1997	1 1997
				03	RI/FS	F	10/24/94	2 1996	4 1997
8	UT	Richardson Flat Tailings	Summit County	01	RI/FS	PRP	09/29/89	1 1997	1 1997
8	UT	Sandy Smelter Site	Sandy	00	RI/FS	F	11/15/93	4 1995	4 1995
				01	FS	F	11/15/93	4 1995	4 1995
8	UT	Sharon Steel Corp. (Midvale Tailings/Smelters)	Midvale	01	RA	S	05/18/95	4 1997	4 1997
				02	RA	S	09/20/94	2 1996	4 1996
				02	RA	S	09/29/95	2 1997	2 1997
8	UT	Tooele Army Depot (North Area)	Tooele	01	RI/FS	FF	08/16/90	1 1995	1 1995
				01	RI/FS	FF	12/31/91	1 1998	1 1998
				02	RI/FS	FF	12/31/91	2 1998	3 1998
				03	RI/FS	FF	11/01/94	3 1998	3 1998
				04	RI/FS	FF	07/15/93	1 1998	3 1998
				07	RA	FF	07/25/96		1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				08	RI/FS	FF	03/19/93	1 1998	1 1997
				09	RI/FS	FF	01/02/92	1 2001	3 1998
8	UT	Utah Power & Light/American Barrel Co.	Salt Lake City	01	RA	PRP	07/23/94	2 1996	4 1996
				01	RA	PRP	09/18/95	2 1996	4 1996
8	UT	Wasatch Chemical Co.	Salt Lake City	01	RA	PRP	10/11/94	1 1996	2 1997
8	WY	F.E. Warren Air Force Base	Cheyenne	02	RI/FS	FF	01/06/94	3 1997	3 1997
				06	RI/FS	FF	03/09/94	1 1997	2 1998
				07	RI/FS	FF	03/23/94	2 1997	2 2000
				08	RI/FS	FF	01/01/94	2 1996	4 1997
				09	RI/FS	FF	01/01/94	3 1996	3 1997
				10	RI/FS	FF	01/01/94	1 1997	2 1997
9	AZ	Hassayampa Landfill	Hassayampa	01	RA	PRP	01/22/96		2 1997
9	AZ	Indian Bend Wash Area	Scottsdale/Tmpe/Phnx	03	RI/FS	F	03/14/88	3 1996	3 1997
				05	RA	PRP	03/29/96		2 1997
				06	RA	PRP	02/08/94	1 1997	1 1997
				06	RA	PRP	07/11/94	1 1997	1 1998
				07	RA	F	05/31/95	4 1995	1 1997
				07	RI	F	09/26/90	4 1997	2 1998
9	AZ	Luke Air Force Base	Glendale	01	RI/FS	FF	09/27/90	3 1997	3 1997
				02	RA	FF	04/10/95	4 1999	4 1999
9	AZ	Nineteenth Avenue Landfill	Phoenix	01	RA	PS	05/11/95	3 1997	3 1997
9	AZ	Tucson International Airport Area	Tucson	01	RA	FF	06/12/96		4 1997
				02	RI/FS	PRP	12/11/90	1 1997	3 1997
9	AZ	Williams Air Force Base	Chandler	02	RA	FF	12/31/92	4 1996	1 1997
				04	RI/FS	FF	07/31/95	1 1998	1 1998
				05	RI/FS	FF	09/01/93	3 1996	3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
9	AZ	Yuma Marine Corps Air Station	Yuma	01	RI/FS	FF	09/30/91	3	1997	1	1999
				02	RI/FS	FF	09/30/91	2	1997	2	1997
9	CA	Aerojet General Corp.	Rancho Cordova	01	RI/FS	PRP	09/08/88	4	1999	4	1999
9	CA	Atlas Asbestos Mine	Fresno County	01	RA	PRP	06/22/94	2	1996	2	1997
9	CA	Barstow Marine Corps Logistics Base (Nebo Area)	Barstow	01	RI/FS	FF	09/28/90	1	1997	4	1997
				02	RI/FS	FF	09/28/90	1	1997	2	1997
				03	RI/FS	FF	09/28/90	1	1998	4	1997
9	CA	Brown & Bryant, Inc. (Arvin Plant)	Arvin	01	RA	F	09/27/96			1	1999
				02	RI/FS	F	09/30/92	3	1998	3	1998
9	CA	Camp Pendleton Marine Corps Base	San Diego County	02	RI/FS	FF	09/28/90	1	1997	3	1997
				03	RI/FS	FF	09/28/90	1	1998	1	1998
9	CA	Castle Air Force Base	Merced	01	RI/FS	FF	07/21/89	2	1996	2	1998
				03	RA	FF	11/12/93	4	1999	4	1999
				04	RI/FS	FF	12/16/92	2	1996	1	1998
				05	RI/FS	FF	07/21/89			1	1997
9	CA	Concord Naval Weapons Station	Concord	01	RI/FS	FF	02/02/95			4	1998
				02	RI/FS	FF	11/21/94			4	1998
				03	RI/FS	FF	02/14/95			1	1999
9	CA	Cooper Drum Co.	South Gate	01	RI/FS	F	08/12/93	1	1997	1	1999
9	CA	Crazy Horse Sanitary Landfill	Salinas	01	RI/FS	EP	09/18/93	1	1996	2	1998
9	CA	Del Amo Facility	Los Angeles	01	RI/FS	MR	05/07/92	2	1997	4	1998
				02	RI/FS	PRP	05/07/92	1	1997	2	1997
9	CA	Edwards Air Force Base	Kern County	01	RI/FS	FF	09/26/90	4	2004	4	2004
				02	RI/FS	FF	09/26/90	2	1997	2	1997
				03	RI/FS	FF	12/18/92	1	1999	1	1999
				05	RI/FS	FF	06/21/94	2	2001	2	2001
				07	RI/FS	FF	06/03/94	4	1999	4	1999
				08	RI/FS	FF	07/16/96			3	2003
				09	RI/FS	FF	07/16/96			1	2002
				10	RI/FS	FF	07/16/96			2	2002

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				11	RI/FS	FF	07/16/96		1 2003
9	CA	El Toro Marine Corps Air Station	El Toro	01	RI/FS	FF	09/28/90	3 1997	4 1997
				02	RI/FS	FF	09/28/90	4 1997	4 1997
				03	RI/FS	FF	09/28/90	2 1999	2 1999
				04	RI/FS	FF	09/28/90	4 1997	1 1998
				05	RI/FS	FF	09/28/90	4 1997	1 1998
9	CA	Fairchild Semiconductor/Camera & (South San Jose Plant)	South San Jose	02	RA	PRP	04/04/95	3 1997	1 1998
9	CA	Fort Ord	Marina ..	01	RI/FS	FF	07/23/90	3 1997	3 1997
				02	RA	FF	09/29/95	4 1999	1 1997
				04	RA	FF	09/02/94	1 1996	1 1997
				04	RA	FF	06/26/95	4 1996	1 1997
				04	RA	FF	06/26/95	4 1996	4 1997
				04	RA	FF	07/05/95	4 1996	1 1997
				04	RA	FF	07/26/95	4 1996	1 1997
				06	RA	FF	08/01/95	4 1996	1 1997
9	CA	Frontier Fertilizer	Davis	00	RI/FS	F	08/02/93	3 1997	3 1998
				01	RI/FS	F	08/02/93		3 1998
9	CA	GBF, Inc., Dump	Antioch	01	RI/FS	PS	07/28/93	1 1996	2 1997
9	CA	George Air Force Base	Victorville	01	RA	FF	04/30/96		3 1998
				02	RI/FS	FF	09/21/90	4 1999	4 1999
				03	RI/FS	FF	08/27/91	2 1996	3 1997
9	CA	Hewlett Packard (620-640 Page Mill Rd.)	Palo Alto	01	RA	PS	01/23/95		1 1997
9	CA	Hunter's Point Annex	San Francisco	02	RI/FS	FF	09/28/90	3 1997	3 1997
				03	RI/FS	FF	09/28/90	1 1998	1 1998
				04	RI/FS	FF	10/01/90	4 1997	1 1998
				05	RI/FS	FF	01/22/91	3 1998	3 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
9	CA	Industrial Waste Processing	Fresno	01	RI/FS	PRP	05/12/93	1	1997	1	1998
9	CA	Intel Corp. (Mountain View Plant)	Mountain View	02	RA	PRP	04/17/95	2	1998	2	1998
9	CA	Iron Mountain Mine	Redding	03	RA	F	08/23/94	1	1996	2	1997
				04	RI/FS	F	04/21/94	3	1996	1	1997
9	CA	J.H. Baxter & Co.	Weed	01	FS	F	08/04/95	4	1996	1	1997
				01	RA	PRP	07/16/92	1	1997	2	1998
9	CA	Jasco Chemical Corp.	Mountain View	01	RA	PRP	07/31/96			2	1998
9	CA	Jet Propulsion Laboratory (NASA)	Pasadena	01	RI/FS	FF	12/23/92	3	1996	1	2000
				02	RI/FS	FF	07/07/93	3	1996	4	1999
				03	RI/FS	FF	04/29/94	4	1996	1	2000
9	CA	Koppers Co., Inc. (Oroville Plant)	Oroville	01	RA	PRP	09/17/96			1	1998
9	CA	LEHR/Old Campus Landfill (USDOE)	Davis	01	RI/FS	FF	09/30/94	4	1997	4	1997
9	CA	Lawrence Livermore National Laboratory	Livermore	01	RI/FS	FF	06/29/92	1	1997	1	1997
				04	RI/FS	FF	06/29/92	1	1998	1	1998
				05	RI/FS	FF	06/29/92	4	1997	4	1997
				06	RI/FS	FF	06/29/92	2	1997	2	1997
9	CA	Lawrence Livermore National Laboratory (USDOE)	Livermore	01	RA	FF	08/05/92	1	2000	1	2000
9	CA	Lorentz Barrel & Drum Co.	San Jose	01	RA	F	07/04/96			1	1998
9	CA	March Air Force Base	Riverside	01	RI/FS	FF	09/27/90	1	1997	1	1997
				04	RI/FS	FF	01/24/92	3	1997	3	1997
9	CA	Mather Air Force Base (AC & W Disposal Site)	Sacramento	02	RA	FF	06/17/96			4	1998
				03	RA	FF	06/21/94	1	1996	3	1997
				04	RI/FS	FF	09/19/95	1	1998	1	1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
9	CA	McClellan Air Force Base (Ground Water Contamination)	Sacramento	01	RA	FF	05/11/95	2	1998	2	1998
				04	RI/FS	FF	07/21/89	1	2001	1	2001
				05	RI/FS	FF	08/21/90	1	2001	1	2001
				06	RI/FS	FF	11/23/92	3	1996	1	1999
				08	RI/FS	FF	01/13/93	2	1997	1	1999
				09	RI/FS	FF	07/21/89	2	1997	1	1999
9	CA	McColl	Fullerton	01	RA	S	06/11/84	4	1991	4	1991
				04	RI/FS	PRP	02/04/94	2	1996	1	1997
9	CA	McCormic and Baxter Creosoting Co.	Stockton	01	RI/FS	F	06/30/92	2	1997	2	1997
				03	RI/FS	F	09/28/94	2	1997	2	1997
9	CA	Modesto Ground Water Contamination	Modesto	01	RI/FS	F	03/21/91	3	1996	1	1997
9	CA	Moffett Naval Air Station	Sunnyvale	01	RI/FS	FF	08/08/89	4	1996	1	1997
				06	RI/FS	FF	08/08/89	2	1997	1	1998
9	CA	Montrose Chemical Corp.	Torrance	01	RI/FS	PRP	10/10/86	4	1996	1	1998
				03	FS	PRP	10/28/85			3	1997
9	CA	National Semiconductor Corp.	Santa Clara	01	RA	PS	09/11/91	2	1996	1	1998
9	CA	Newmark Ground Water Contamination	San Bernadino	01	RA	F	09/18/95	4	1997	2	1998
				02	RA	F	09/05/96			2	1999
				03	RI/FS	F	02/09/94	1	1997	3	1998
9	CA	Operating Industries, Inc., Landfill	Monterey Park	01	RI/FS	F	09/15/89	1	1997	1	1997
				04	RA	PRP	05/11/89	1	1997	1	1997
9	CA	Ralph Gray Trucking Co.	Westminster	02	RI/FS	F	06/19/93	1	1997	4	1997
9	CA	Raytheon Corp.	Mountain View	02	RA	PRP	02/28/95	1	1998	1	1998
9	CA	Riverbank Army Ammunition Plant	Riverbank	01	RA	FF	10/13/95			4	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
9	CA	Sacramento Army Depot	Sacramento	02 05	RA RA	FF FF	02/16/90 04/08/94	4 3	2005 1996	4 1	1999 1997
9	CA	San Fernando Valley (Area 1)	Los Angeles	01 03	RI RA	PRP PRP	02/18/94 11/22/93	1 2	1996 1997	1 2	1997 1997
9	CA	San Fernando Valley (Area 4)	Los Angeles	02	RI/FS	F	09/28/92	4	1996	4	1997
9	CA	San Gabriel Valley (Area 1)	El Monte	00 01 05	RI/FS RI/FS RI/FS	F PRP PRP	06/13/84 03/16/95 07/25/95	1 3 4	1997 1997 1997	4 4 4	2000 1998 1998
9	CA	Selma Treating Co.	Selma	01	RA	F	07/22/92	4	1996	1	1998
9	CA	Sharpe Army Depot	Lathrop	01	RA	FF	05/30/95	3	1996	4	1997
9	CA	South Bay Asbestos Area (Alviso Dumping Area)	Alviso	01	RA	PRP	10/15/93	1	1997	1	1998
9	CA	South Bay Basin	Silicon Valley	01	RI/FS	F	01/28/87	4	1991	4	1991
9	CA	Stoker Company	Imperial	01	RI/FS	F	05/01/92	4	1996	4	2000
9	CA	Stringfellow	Glen Avon Heights	05	RI/FS	S	10/01/90	1	1997	1	1998
9	CA	Sulphur Bank Mercury Mine	Clear Lake	01 02 03	RI/FS RI/FS RI/FS	EP F EP	09/28/90 11/18/91 09/28/90	4 1 4	1996 1998 1996	3 3 3	1998 1998 1998
9	CA	T.H. Agriculture & Nutrition Co. (Thompson-Haywood Chem)	Fresno	01	RI/FS	PS	02/06/87	1	1996	4	1997
9	CA	Tracy Defense Depot	Tracy	01 02	RI/FS RA	FF FF	06/27/91 08/12/93	1 4	1997 1997	1 4	1997 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
9	CA	Travis Air Force Base	Solano County	01	RI/FS	FF	09/28/90	2	1997	3	1997
				02	RI/FS	FF	04/01/94	4	1996	3	1997
				03	RI/FS	FF	06/10/95	1	1998	2	1998
9	CA	Watkins-Johnson Co. (Stewart Division)	Scotts Valley	01	RA	PRP	07/16/91	1	1996	1	1997
9	CA	Western Pacific Railroad Co.	Oroville	01	RI/FS	PRP	03/15/94	3	1997	2	1997
9	HI	Del Monte Corp. (Oahu Plantation)	Honolulu County	01	RI/FS	PRP	09/28/95	4	1997	1	1998
9	HI	Pearl Harbor Naval Complex	Pearl Harbor	01	RI/FS	FF	09/30/93	1	1999	1	1999
				01	RI/FS	FF	04/26/95			4	1999
				02	RI/FS	FF	09/30/93	1	1997	4	2000
				03	RI/FS	FF	09/30/93	1	1998	4	2000
				04	RI/FS	FF	09/30/93	1	1999	1	1999
				05	RI/FS	FF	09/30/93	1	1999	1	1999
				06	RI/FS	FF	09/30/93	1	1999	1	1999
				07	RI/FS	FF	09/30/93	1	1999	1	1999
				08	RI/FS	FF	09/30/93	2	1999	2	1999
				09	RI/FS	FF	09/30/93			2	1999
				10	RI/FS	FF	08/23/94	2	1999	2	1999
				11	RI/FS	FF	08/01/95			2	1999
9	HI	Schofield Barracks	Oahu	02	RI/FS	FF	09/27/91	3	1997	1	1997
				03	RI/FS	FF	09/27/91	3	1996	1	1997
				04	RI/FS	FF	09/27/91	1	1997	1	1997
9	NV	Carson River Mercury Site (Trust Territories PC)	Lyon/Churchill County	01	RA	F	09/30/96			3	1998
				02	RI/FS	F	09/28/90	1	1997	4	1998
10	AK	Adak Naval Air Station	Adak	01	RA	FF	04/29/96			1	1997
				02	RI/FS	FF	05/06/96			4	1998
10	AK	Eielson Air Force Base	Fairbanks N Star Borough	01	RA	FF	11/07/95			2	1997
				02	RA	FF	10/22/95			4	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
10	AK	Elmendorf Air Force Base	Greater Anchorage Borough	01	RA	FF	04/17/96		4 1997
				02	RA	FF	06/28/96		4 1997
				03	RI/FS	FF	04/06/93	1 1996	1 1997
				04	RA	FF	11/16/95		4 1997
				05	RA	FF	07/08/96		4 1997
				06	RI/FS	FF	01/18/94	4 1996	1 1997
				08	RA	FF	08/05/93	1 1996	4 1997
10	AK	Fort Richardson (USARMY)	Anchorage	01	RI/FS	FF	11/29/94	2 1997	2 1997
				02	RI/FS	FF	08/03/95		2 1997
				03	RI/FS	FF	03/06/96		2 1998
10	AK	Fort Wainright	Fairbanks N Star Borough	01	RI/FS	FF	08/10/94	2 1997	3 1997
				02	RI/FS	FF	11/01/93	2 1996	1 1997
				05	RI/FS	FF	01/17/95	3 1997	1 1998
10	ID	Blackbird Mine	Lemhi County	01	RI/FS	PRP	11/18/94	3 1998	3 2000
10	ID	Bunker Hill Mining & Metallurgical	Smelterville	01	RA	PRP	09/27/94	1 2002	1 2000
				02	RA	F	04/13/95	1 2000	1 2002
10	ID	Eastern Michaud Flats Contamination	Pocatello	01	RI/FS	PRP	05/30/91	4 1996	2 1997
10	ID	Idaho National Engineering Lab (USDOE)	Idaho Falls	03	RI/FS	FF	10/10/95		4 1998
				06	RI/FS	FF	04/01/95	1 1997	4 1997
				07	RI/FS	FF	03/17/95	1 1998	4 1997
				08	RA	FF	07/15/96		4 1997
				15	RA	FF	11/15/95		2 1998
				16	RI/FS	FF	11/06/95		1 1999
				17	RI/FS	FF	11/06/95		1 1999
				18	RA	FF	12/07/94	1 1997	1 1998
				19	RA	FF	02/26/96		2 1998
				20	RI/FS	FF	08/15/95	1 1999	1 1999
				21	RI/FS	FF	03/22/96		4 1999
				24	RA	FF	07/15/96		4 1997
				25	RI/FS	FF	12/01/93	2 1996	2 2001
				26	RA	FF	06/13/96		4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
10	ID	Monsanto Chemical Co. (Soda Springs Plant)	Soda Springs	01	RI/FS	PRP	03/19/91	2	1996	1	1997
10	ID	Mountain Home Airforce Base	Mountain Home	03	RA	FF	06/18/96			1	1998
10	ID	Pacific Hide & Fur Recycling Co.	Pocatello	02	RA	PRP	08/23/96			2	1999
10	OR	Fremont Nat. Forest Uranium Mines (USDA)	Lakeview	02	RI/FS	FF	10/17/94	2	1997	4	1997
10	OR	Gould, Inc.	Portland	01	RA	PRP	03/02/92	4	1998	4	1998
10	OR	McCormick & Baxter Creos. Co. (Portland)	Portland	01	RA	S	06/01/96			4	1998
				01	RI/FS	PRP	09/29/95			1	1998
				01	RI/FS	F	08/08/96			1	1998
10	OR	Umatilla Army Depot (Lagoons)	Hermiston	01	RA	FF	02/15/94	1	1997	2	1997
				02	RA	FF	06/20/94	3	1998	2	1997
				03	RA	FF	09/14/95			1	1999
				04	RA	FF	11/06/95			1	1999
				06	RA	FF	11/06/95			2	1997
				07	RA	FF	06/21/96			2	1997
10	WA	Bangor Naval Submarine Base	Silverdale	01	RA	FF	06/17/96			1	1997
				02	RA	FF	09/13/94	4	1999	4	1999
				05	RA	FF	12/01/95			1	1998
				07	RA	FF	02/04/93	4	1995	1	1997
10	WA	Bangor Ordnance Disposal	Bremerton	01	RA	FF	03/05/93	2	1996	2	1997
10	WA	Boomsnub/Airco	Vancouver	01	RI/FS	F	03/27/95	1	1997	1	1998
				02	RI/FS	F	03/27/95			1	1997
10	WA	Colbert Landfill	Colbert	01	RA	MR	08/28/89	4	1998	4	1998
10	WA	Commencement Bay, Near Shore/Tide Flats	Pierce County	04	RA	PS	11/12/91	1	1997	1	1998
				05	RA	PS	01/16/90	2	1997	1	1998
				06	RA	PS	12/17/93	2	1997	1	1998
				07	RA	PS	04/11/91	2	1997	1	1998
				08	RA	PS	09/30/89	4	1996	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE	PRESENT COMPLETION SCHEDULE
				09	RA	PS	07/31/92	1 1997	4 1997
				11	RA	PRP	06/25/93	4 1996	2 1998
				19	FS	PRP	10/04/94	4 1996	2 1997
				22	RA	PRP	12/21/93	4 1997	4 2001
10	WA	Fairchild Air Force Base (4 Waste Area)	Spokane County	02	RA	FF	03/07/94	1 1997	3 1997
				03	RA	FF	09/17/96		1 1997
10	WA	Fort Lewis Logistics Center	Tillicum	01	RA	FF	01/15/92	3 1996	1 1998
				02	RA	FF	02/01/96		2 1999
				03	RA	FF	01/11/96		2 1997
10	WA	Hanford 100-Area (USDOE)	Benton County	04	RA	FF	07/15/96		2 1999
				08	RI/FS	FF	10/12/90	3 1997	3 1997
				09	RI/FS	FF	10/12/90	3 1997	3 1997
				11	RI/FS	FF	05/24/93	2 1996	2 1997
				12	RI/FS	FF	10/28/93	2 1996	2 1997
				13	RI/FS	FF	06/30/93	2 1996	2 1997
10	WA	Hanford 200-Area (USDOE)	Benton County	01	RI/FS	FF	05/15/89	2 1997	4 1999
				02	RI/FS	FF	08/31/92	2 1997	2 1997
				11	RI/FS	FF	01/31/94	2 1997	2 1997
				12	RI/FS	FF	04/28/93	3 1996	2 1997
				13	RA	FF	08/26/96		4 2001
10	WA	Harbor Island (Lead)	Seattle	07	RI/FS	F	09/07/88	2 1996	1 1997
				08	RI/FS	F	09/07/88		4 1997
10	WA	Jackson Park Housing Complex (USNAVY)	Kitsap County	01	RI/FS	FF	07/01/95		2 1997
				02	RI/FS	FF	07/01/95		3 1997
10	WA	Naval Air Station, Whidbey Island (Ault Field)	Whidbey Island	01	RA	FF	08/15/94	1 1996	1 1997
				02	RA	FF	01/10/95	2 1997	1 1997
				03	RA	FF	04/14/95	4 1996	1 1997
				05	RA	FF	08/26/96		4 1998
10	WA	Naval Undersea Warfare Engineering Stn. (4 Waste Area)	Keyport	01	RI/FS	FF	07/17/90	1 1996	4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX A

STATUS OF REMEDIAL INVESTIGATIONS, FEASIBILITY STUDIES,
AND REMEDIAL ACTIONS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	ACTIVITY	LEAD	FUNDING START	PREVIOUS COMPLETION SCHEDULE		PRESENT COMPLETION SCHEDULE	
10	WA	Northwest Transformer (South Harkness St.)	Everson	01	RA	PRP	09/30/92	1	1997	1	1997
10	WA	Old Navy Domp/Manchester Lab (USEPA/NOAA)	Manchester	01	RI/FS	FF	10/18/94	2	1997	3	1997
10	WA	Pacific Sound Resources	Seattle	01 02	RI/FS RI/FS	PRP F	09/29/94 05/18/95	2 2	1998 1998	2 2	1998 1999
10	WA	Port Hadlock Detachment (USNAVY)	Indial Island	01	RA	FF	06/12/96			1	1998
10	WA	Puget Sound Naval Shipyard Complex (USNAVY)	Bremerton	01 02 03 04	RI/FS RI/FS RI/FS RI/FS	FF FF FF FF	10/31/92 01/26/94 07/31/94 10/09/92	3 3 4 3	1996 1997 1996 1996	1 1 3 1	1997 1998 1997 1997
10	WA	Queen City Farms	Maple Valley	01	RA	PRP	07/27/95			3	1999
10	WA	Spokane Junkyard/Associated Properties	Spokane	01	RI/FS	PRP	06/30/95			4	1997
10	WA	Tulalip Landfill	Marysville	01	RI/FS	PRP	08/12/93	2	1997	3	1997
10	WA	Vancouver Water Station #4 Contamination	Vancouver	01	RI/FS	F	04/02/92	4	1997	4	1998
10	WA	Wycoff Co./Eagle Harbor	Bainbridge Island	01 02 04	RA RI/FS RA	F F F	07/07/95 09/16/92 12/15/94			1 1 1	1999 1998 2000

This page intentionally left blank

Appendix B

Remedial Designs in Progress on September 30, 1996

This appendix lists the remedial designs in progress at the end of FY96 and their estimated completion schedule. Activities at multiple operable units, as well as first and subsequent activities, are listed.

- **RG**— EPA region in which the site is located.
- **ST** — State in which the site is located.
- **Site Name** — Name of the site, as listed on the National Priorities List (NPL).
- **Location** — Location of the site, as listed on the NPL.
- **Operable Unit** — Operable unit at which the corresponding remedial activity is occurring; a single site may include more than one operable unit.
- **Lead** — The entity leading the activity, as follows:

EP: Fund-financed with EPA employees performing the project, not contractors;

F: Fund-financed and federal-lead by the Superfund remedial program;

FE: EPA enforcement program-lead;

FF: Federal facility-lead;

MR: Mixed funding; monies from both the Fund and potentially responsible parties (PRPs);

PRP: PRP-financed and conducted;

PS: PRP-financed work performed by the PRP under a state order (may include federal financing or federal oversight under an enforcement document);

S: State-lead and Fund-financed; and

SE: State enforcement-lead (may include federal financing).

Remaining terms used in the CERCLA Information System (CERCLIS) database, **O** (other), **SN** (state-lead and financed, no Fund money), and **SR** (state-ordered PRP response activities), are excluded from this status report because they do not include federal financing.

- **Funding Start** — The date on which funds were allocated for the activity.
- **Present Completion Schedule** — The quarter and fiscal year of the planned completion date for the activity, as of 9/30/96. This information was compiled from CERCLIS on 11/15/96.

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
1	CT	Linemaster Switch Corp.	Woodstock	01	PRP	11/03/94	4 1997
1	CT	New London Submarine Base	New London	01	FF	09/26/95	1 1997
1	MA	Nyanza Chemical Waste Dump	Ashland	02 03	F F	04/08/92 07/27/93	2 1998 4 1997
1	MA	Otis Air National Guard Base/Camp Edwards	Falmouth	01	FF	09/25/95	2 1997
1	MA	Sullivan's Ledge	New Bedford	01 02	PRP PRP	03/15/91 04/05/93	3 1997 3 1997
1	MA	Wells G&H	Woburn	01	PRP	04/27/90	4 1998
1	ME	Loring Air Force Base	Limestone	03	FF	09/27/96	4 1997
1	NH	Auburn Road Landfill	Londonderry	02	PRP	09/30/90	2 1997
1	NH	Dover Municipal Landfill	Dover	01	PRP	01/22/92	2 1997
1	NH	Pease Air Force Base	Portsmouth/Newington	04 05 06 07 10	FF FF FF FF FF	09/26/95 06/26/95 09/18/95 09/26/95 08/09/95	1 1997 1 1997 1 1997 1 1997 1 1997
1	NH	Savage Municipal Water Supply	Milford	01 02	S PRP	09/30/93 04/28/94	1 1997 1 1998
1	NH	Somersworth Sanitary Landfill	Somersworth	01	PRP	11/08/95	1 1998
1	RI	Central Landfill	Johnston	01	PRP	05/23/96	4 1997
1	RI	Picillo Farm	Coventry	02	PRP*	01/25/95	4 1997
2	NJ	A. O. Polymer	Sparta Township	02	PRP	04/20/92	4 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
2	NJ	Asbestos Dump	Millington	01	F	09/30/92	4 1996
2	NJ	Chemical Insecticide Corp.	Edison Township	03	F	05/30/95	3 1996
2	NJ	Chemical Leaman Tank Lines, Inc.	Bridgeport	01	PRP	01/03/91	1 1997
2	NJ	Combe Fill South Landfill	Chester Township	01	S	06/26/87	4 1994
2	NJ	Cosden Chemical Coatings Corp.	Beverly	02 03	F F	09/27/94 04/28/95	2 1997 4 1997
2	NJ	DeRenewal Chemical Co.	Kingwood Township	01 01	F F	09/30/89 09/30/89	4 1995 4 1998
2	NJ	Diamond Alkali Co.	Newark	01	PRP	12/14/89	3 1996
2	NJ	Dover Municipal Well 4	Dover Township	01	F	07/06/93	1 1997
2	NJ	Ellis Property	Evesham Township	01 02	S S	06/30/93 09/30/93	3 1996 1 1997
2	NJ	Evor Philleps Leasing	Old Bridge Township	01	SE	05/02/94	2 1995
2	NJ	Ewan Property	Shamong Township	02	PRP	06/09/95	2 1997
2	NJ	Fried Industries	East Brunswick Township	01	F	09/30/94	3 1997
2	NJ	GEMS Landfill	Gloucester Township	01	S	05/22/86	2 1997
2	NJ	Glen Ridge Radium Site	Glen Ridge	03	F	09/26/90	1 1998
2	NJ	Global Sanitary Landfill	Old Bridge Township	01	PS	11/15/93	4 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
2	NJ	Imperial Oil Co., Inc./Champion Chemicals	Morganville	01	S	09/30/91	3	1996
				02	S	03/31/93	4	1995
2	NJ	Metaltec/Aerosystems	Franklin Borough	02	F	03/29/91	3	1997
2	NJ	Montclair/West Orange Radium Site	Montclair/West Orange	03	F	09/26/90	1	1998
2	NJ	Montgomery Township Housing Development	Montgomery Township	02	S	03/24/89	1	1997
2	NJ	Myers Property	Franklin Township	01	PRP	05/12/92	2	1998
2	NJ	Radiation Technology Inc.	Rockaway Township	01	S	08/31/94	2	1997
2	NJ	Reich Farms	Pleasant Plains	02	PRP	04/05/90	2	1997
2	NJ	Rockaway Borough Well Field	Rockaway Township	02	PRP	07/14/94	1	1997
2	NJ	Rockaway Township Wells	Rockaway	01	PS	04/20/94	4	1994
2	NJ	Rocky Hill Municipal Well	Rocky Hill Borough	01	S	03/24/89	1	1997
2	NJ	Roebbing Steel Co.	Florence	03	F	09/25/91	4	1996
2	NJ	Sharkey Landfill	Parsippany/Troy Hills	01	PRP	10/18/94	2	1997
2	NJ	U.S. Radium Corp.	Orange	01	F	09/30/93	4	1998
				02	F	09/29/95	2	1997
2	NJ	Vineland Chemical Co., Inc.	Vineland	01	F	09/30/89	4	1996
				02	F	10/02/89	1	1997
2	NJ	Waldick Aerospace Devices, Inc.	Wall Township	02	F	06/28/91	1	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
2	NJ	Woodland Route 532 Dump	Woodland Township	02	PS	08/30/90	3 1997
2	NJ	Woodland Route 72 Dump	Woodland Township	02	PS	08/31/91	3 1997
2	NY	Batavia Landfill	Batavia	01	PRP	10/27/95	3 1997
2	NY	Byron Barrel & Drum	Byron	01	PRP	09/25/90	1 1997
2	NY	Carrol & Dubies Sewage Disposal	Port Jervis	01	PRP	02/05/96	3 1997
2	NY	Circuitron Corp.	East Farmingdale	02	F	02/01/95	1 1997
2	NY	Claremont Polychemical	Old Bethpage	01	F	09/30/92	4 1997
2	NY	Colesville Municipal Landfill	Town of Colesville	02	PS	04/01/91	1 1997
2	NY	Cortese Landfill	Vil. of Narrowsburg	01	PRP	09/29/95	1 1997
2	NY	GCL Tie & Treating Inc.	Village of Sidney	01 02	F F	05/17/95 05/17/95	3 1997 2 1997
2	NY	Genzale Plating Co.	Franklin Square	03	F	09/25/91	4 1994
2	NY	Haviland Complex	Town of Hyde Park	01	F	09/30/93	1 1997
2	NY	Hertel Landfill	Plattekill	01	PRP	11/23/92	4 1996
2	NY	Hooker (South Area)	Niagara Falls	01	PRP	12/15/94	4 1997
2	NY	Hooker Chemical/Ruco Polymer Corp.	Hicksville	01	PRP	12/28/94	4 1996
2	NY	Kentucky Avenue Well Field	Horseheads	02	PRP	08/29/91	3 1996
2	NY	Ludlow Sand & Gravel	Clayville	01	PS	11/12/89	3 1996
2	NY	Mattiace Petrochemical Co., Inc.	Glen Cove	04	F	09/30/92	1 1997
2	NY	Niagara County Refuse	Wheatfield	01	PRP	01/17/95	1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
2	NY	Pfol Brothers Landfill	Cheektowaga	01	PS	10/17/94	3 1996
2	NY	Port Washington Landfill	Port Washington	01	PRP	09/28/90	1 1997
2	NY	Robintech, Inc./National Pipe Co.	Town of Vestal	01	PRP	11/25/92	4 1996
2	NY	Rowe Industries Ground Water Contamination	Noyack/Sag Harbor	01	PRP	01/26/94	2 1997
2	NY	Solvent Savers	Lincklaen	01	PRP	07/02/91	1 1998
2	NY	Syosset Landfill	Oyster Bay	01	PRP	04/03/91	3 1996
2	NY	York Oil Co.	Oyster Bay	01	PRP	03/29/95	1 1999
2	PR	GE Wiring Devices	Juana Diaz	02	PRP	09/14/94	3 1996
2	PR	Juncos Landfill	Juncos	01	PRP	12/21/92	4 1995
3	DE	Dover Air Force Base	Dover	05 07	FF FF	09/26/95 09/24/96	2 1997 3 1998
3	DE	Dover Gas Light Co.	Dover	01	PRP	06/16/95	1 1998
3	DE	E.I. Du Pont de Nemours & Co.(Newport Pigment plant LdF	Newport	03 04 05 06 07 08	PRP PRP PRP PRP PRP PRP	05/31/94 05/31/94 05/31/94 05/31/94 05/31/94 05/31/94	3 1997 2 2000 1 1998 4 1999 1 1998 1 1998
3	DE	Halby Chemical Co.	New Castle	01	PRP	03/16/92	3 1997
3	DE	Standard Chlorine of Delaware, Inc.	Delaware City	01	PRP	07/01/96	3 1998
3	MD	Southern Maryland Wood Treating	Hollywood	03	F	09/29/95	2 1997
3	MD	Woodlawn County Landfill	Woodlawn	01	PRP	01/03/95	2 1998
3	PA	AIW Frank/Mid-County Mustang	Exton	01	F	08/12/96	3 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
				02	F	08/22/96	3 1997
3	PA	Berkley Products Co. Dump	Denver	01	F	09/11/96	4 1997
3	PA	Blosenski Landfill	West Caln Township	03	PRP	02/23/94	2 1997
3	PA	Brown's Battery Breaking	Shoemakersville	02	PRP	06/03/96	1 1998
3	PA	Butz Landfill	Stroudsburg	01	F	09/29/92	3 1997
3	PA	C & D Recycling	Foster Township	01	PRP	11/10/94	4 1997
3	PA	Commodore Semiconductor Group	Lower Providence Townsh	02	PRP	10/01/93	3 1997
3	PA	CryoChem, Inc.	Worman	03	F	12/31/91	1 1997
3	PA	Douglassville Disposal	Douglassville	05	F	06/28/96	3 1997
3	PA	Eastern Diversified Metals	Hometown	03	PRP	08/31/93	2 1997
3	PA	Havertown PCP	Haverford	02	F	04/10/92	1 1997
3	PA	Heleva Landfill	North Whitehall	03	PRP	06/21/94	3 1997
3	PA	Hunterstown Road	Straban Township	01	F	09/12/94	4 1998
3	PA	Keystone Sanitation Landfill	Union Township	03 04	PRP PRP	03/11/92 03/11/92	1 1997 1 1997
3	PA	Lindane Dump	Lindane	01	PRP	09/24/93	1 1997
3	PA	MW Manufacturing	Valley Township	01	PRP	06/01/93	4 1999
3	PA	North Penn-Area 6 (J.W. Rex/Allied Paint/Keystone hydra	Lansdale	01	F	09/19/96	4 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
3	PA	Novak Sanitary Landfill	South Whitehall Twp	01	PRP	07/30/95	4	1997
3	PA	Occidental Chemical Corp./Firestone Co.	Lower Pottsgrove Twp.	01	PRP	06/23/94	2	1997
3	PA	Recticon/Allied Steel Corp.	East Coventry Twp.	01 02 03	PRP PRP PRP	05/11/94 05/11/94 05/11/94	2 1 1	1997 1998 1997
3	PA	Revere Chemical Co.	Nockamixon Township	02 04	PRP PRP	01/13/95 01/13/95	2 3	1997 1997
3	PA	Saegerton Industrial Area	Saegertown	01	PRP	10/18/93	4	1997
3	PA	Stanley Kessler	King of Prussia	01	PRP	10/31/95	2	1997
3	PA	Tonolli Corp.	Nesquehoning	01	PRP	12/21/93	1	1998
3	PA	Tysons Dump	Upper Merion Township	04	PRP	08/15/96	1	1997
3	PA	Westinghouse Elevator Co. Plant	Gettysburg	01	PRP	03/16/93	4	1997
3	PA	Whitmoyer Laboratories	Jackson Township	03 05	PRP PRP	03/05/92 03/05/92	1 3	1998 1997
3	PA	William Dick Lagoons	West Caln Township	01 02 03	F PRP PRP	09/17/92 07/10/95 07/10/95	2 1 3	1997 1999 1997
3	VA	Abex Corporation	Portsmouth	01	PRP	01/04/96	4	1998
3	VA	Arrowhead Associates/Scovill Corp.	Montross	01	PRP	09/07/94	4	1998
3	VA	Buckingham County Landfill	Buckingham	01	PRP	10/30/95	4	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
3	VA	Defense General Supply Center	Chesterfield County	03	FF	12/30/95	4 1996
3	VA	Greenwood Chemical Co.	Newton	02	F	02/20/92	2 1997
3	VA	L.A. Clarke & Son	Spotsylvania County	04	PRP	03/03/90	2 1997
3	VA	Rentokil, Inc. (Virginia Wood Preservation Division)	Richmond	01	PRP	05/02/94	4 1997
3	WV	Ordnance Works Disposal Areas	Morgantown	01	PRP	08/06/90	1 1998
3	WV	West Virginia Ordnance	Point Pleasant	06	FF	01/11/94	3 1996
4	AL	Ciba-Geigy Corp. (McIntosh Plant)	McIntosh	03	PRP	05/31/96	4 1997
4	AL	Interstate Lead Co. (ILCO)	Leeds	01 02 03	PRP* PRP PRP	09/30/96 09/30/96 09/30/96	4 1997 4 1997 4 1997
4	AL	Olin Corp. (McIntosh Plant)	McIntosh	01	PRP	08/30/95	4 1997
4	AL	Redwing Carriers, Inc. (Saraland)	Saraland	01	PRP	11/16/93	4 1997
4	AL	Stauffer Chemical Co. (Clemoyne Plant)	Axis	01 03	PRP F	11/20/92 03/08/94	1 1997 1 1998
4	AL	Stauffer Chemical Co. (Cold Creek Plant)	Bucks	02 03	PRP F	09/25/96 03/08/94	1 1998 3 1997
4	FL	American Creosote Works, Inc. (Pensacola Plant)	Pensacola	02	F	04/18/94	1 1997
4	FL	Anodyne, Inc.	North Miami Beach	01	F	08/12/94	1 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
4	FL	Homestead Air Force Base	Homestead	04 06	FF FF	09/28/95 06/27/95	1	1997
4	FL	Peak Oil Co./Bay Drum Co.	Tampa	01 02 03	PRP PRP PRP	12/07/95 12/07/95 12/07/95	3 4 4	1997 1997 1997
4	FL	Piper Aircraft/Vero Beach Water & Sewer	Vero Beach	01	PRP*	12/11/95	3	1997
4	FL	Reeves Southeast Galvanizing Corp.	Tampa	02 03	PRP PRP	11/30/94 11/30/94	2 4	1997 1999
4	FL	Stauffer Chemical Co. (Tampa Plant)	Tampa	01	PRP	05/17/96	3	1997
4	FL	Zellwood Ground Water Contamination	Zellwood	02	F	07/26/96	4	1997
4	GA	Hercules 009 Landfill	Brunswick	01	PRP	10/07/93	2	1997
4	GA	Marzone Inc./Chevron Chemical Co.	Tifton	01	PRP	08/14/96	2	1997
4	GA	Mathis Brothers Landfill (South Marble Top Road)	Kensington	01	PRP	10/14/93	2	1997
4	GA	Robins Air Force Base (Landfill #4/ Sludge Lagoon)	Houston County	01 03	FF FF	08/01/91 03/14/96	2 2	1997 1997
4	GA	Woolfolk Chemical Works, Inc.	Fort Valley	01	PRP	06/28/94	3	1997
4	KY	Brantley Landfill	Calvert City	01	PRP	05/08/95	2	1997
4	KY	Fort Hartford Coal Co. Stone Quarry	Olaton	01	PRP	10/19/95	1	1997
4	KY	Maxey Flats Nuclear Disposal	Hillsboro	01	PRP	04/18/96	1	1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
4	KY	National Electric Coil/Cooper Industries	Dayhoit	01	PRP	06/04/96	2	1997
4	KY	Paducah Gaseous Diffusion Plant (USDOE)	Paducah	03	FF	12/28/95	3	1996
4	NC	Aberdeen Pesticide Dumps	Aberdeen	01	PRP	08/24/93	1	1997
				01	PRP	08/24/93	1	1997
				01	PRP	08/24/93	1	1997
				01	PRP	08/24/93	1	1997
				01	PRP	08/24/93	1	1997
				03	PRP	08/25/94	2	1997
				04	PRP	08/24/93	1	1997
4	NC	Bypass 601 Ground Water Contamination	Concord	02	PRP	10/06/94	4	1997
4	NC	FCX, Inc. (Washington Plant)	Washington	01	F	02/23/94	3	1997
4	NC	General Electric Co/Shepherd Farm	East Flat Rock	01	PRP	09/30/96	4	1998
4	NC	National Starch & Chemical Corp.	Salisbury	03	PRP	09/29/95	3	1997
				04	PRP	09/29/95	4	1998
4	NC	Potter's Septic Tank Service Pits	Macon	01	F	06/21/96	1	1998
4	SC	Beaunit Corp. (Circular Knit and Dye)	Fountain Inn	01	PRP	09/20/96	1	1998
4	SC	Helena Chemical Co. Landfill	Fairfax	01	PRP	06/23/94	4	1996
4	SC	Kalama Specialty Chemicals	Beaufort	01	PRP	08/09/94	4	1996
4	SC	Palmetto Recycling, Inc.	Columbia	01	PRP	09/30/96	3	1998
4	SC	Sangamo Weston, Inc./Twelve-Mile Creek/Lake Hartwel PCB	Pickens	01	PRP	06/30/92	4	1996
4	SC	Savannah River Site (USDOE)	Aiken	29	FF	02/16/95	4	1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
4	TN	Memphis Defense Depot (DLA)	Memphis	01	FF	05/02/96	4	1997
4	TN	Milan Army Ammunition Plant	Milan	05	FF	07/22/96	2	1997
				06	FF	07/22/96	2	1997
				07	FF	07/22/96	2	1997
				08	FF	07/22/96	2	1997
4	TN	Oak Ridge Reservation (USDOE)	Oak Ridge	26	FF	02/21/96	3	1997
4	TN	Velsicol Chemical Corp. (Hardeman County)	Toone	02	PRP	01/16/96	2	1997
5	IL	Acme Solvent Reclaiming, Inc.	Morristown	04	PRP	11/18/91	2	1997
				08	PRP	11/18/91	2	1997
5	IL	Adams County Quincy Landfills 2 & 3	Quincy	01	PS	03/31/96	2	1997
5	IL	NL Industries/Taracorp Lead Smelter	Granite City	01	F	12/31/95	1	1997
5	IL	Pagel's Pit	Rockford	01	PRP	12/14/92	1	1998
5	IL	Tri-County Landfill Co./Waste Management of Illinois, Inc.	South Elgin	01	PRP	02/02/94	2	1997
5	IL	Woodstock Municipal Landfill	Woodstock	01	PRP	09/02/94	1	1997
5	IN	American Chemical Service, Inc.	Griffith	01	PRP	09/30/94	1	1999
5	IN	Conrail Rail Yard (Elkhart)	Elkhart	02	PRP*	06/14/95	3	1997
5	IN	Continental Steel Corp.	Kokomo	05	S	09/03/96	2	1997
5	IN	Himco, Inc., Dump	Elkhart	01	F	04/13/95	1	1997
5	IN	Lakeland Disposal Service, Inc.	Claypool	01	PRP	05/25/94	2	1997
5	IN	Neal's Dump (Spencer)	Spencer	01	PRP	08/22/85	2	1999

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
5	MI	Albion-Sheridan Township Landfill	Albion	01	PRP	12/11/95	3 1997
5	MI	Butterworth #2 Landfill	Grand Rapids	01	PRP	02/23/93	3 1997
5	MI	Cannelton Industries, Inc.	Sault Sainte Marie	01	PRP	05/10/93	3 1997
5	MI	Chem Central	Wyoming Township	01	PRP	04/07/92	3 1997
5	MI	Duell & Gardner Landfill	Dalton Township	01	PRP	07/29/94	3 1997
5	MI	Ionia City Landfill	Ionia	01	PRP	09/13/90	1 1998
5	MI	K & L Avenue Landfill	Oshtemo Township	01	PRP	09/18/92	1 1999
5	MI	Metamora Landfill	Metamora	02 03	PRP PRP	04/26/91 08/19/95	3 1997 3 1997
5	MI	Motor Wheel, Inc.	Lansing	01	PRP	05/16/92	2 1997
5	MI	OTT/Story/Cordova Chemical Co.	Dalton Township	01	F	06/05/90	4 1991
5	MI	Spartan Chemical Co.	Wyoming	02	S	09/28/93	3 1999
5	MI	Sturgis Municipal Wells	Sturgis	01	S	09/21/93	1 1997
5	MI	Tar Lake	Mancelona Township	01	PRP	03/09/93	4 1997
5	MI	Thermo-Chem, Inc.	Muskegon	01 01	F PRP	09/30/92 10/27/94	4 1997 4 1997
5	MI	Torch Lake	Houghton County	01	F	09/01/94	1 1998
5	MN	MacGillis & Gibbs Co./Bell Lumber & Pole Co.	New Brighton	03	F	03/31/95	3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
5	MN	New Brighton/Arden Hills	New Brighton	07	FF	09/30/93	1	1997
5	MN	Ritari Post & Pole	Sebeka	01	S	11/14/94	1	1997
				01	S	11/14/94	4	1997
5	MN	St. Regis Paper Co.	Cass Lake	01	PRP	04/28/95	1	1997
5	OH	Allied Chemical & Ironton Coke	Ironton	02	PRP	07/23/93	1	1997
5	OH	Feed Materials Production Center (USDOE)	Fernald	01	FF	04/25/95	3	1997
				02	FF	08/07/95	1	1997
				04	FF	02/07/95	1	1998
				05	FF	03/29/96	2	1998
				06	FF	09/19/94	4	2005
5	OH	Fields Brook	Ashtabula	01	PRP	03/22/89	4	1997
5	OH	Fultz Landfill	Jackson Township	01	F	06/24/92	1	1997
5	OH	Industrial Excess Landfill	Uniontown	01	F	09/29/89	1	1997
				01	F	09/29/89	1	1997
5	OH	Ormet Corp.	Hannibal	01	PRP	12/20/95	2	1997
5	OH	Powell Road Landfill	Dayton	01	PRP	06/21/94	1	1997
5	OH	Pristine, Inc.	Reading	05	PRP	10/29/91	1	1997
				05	PRP	12/10/94	2	1997
5	OH	Van Dale Junkyard	Marietta	01	PRP	09/23/94	2	1997
5	WI	Better Brite Plating Co. Chrome and Zinc Shops	DePere	01	S	09/30/96	4	1997
5	WI	City Disposal Corp. Landfill	Dunn	01	PRP	04/23/93	3	1997
5	WI	Lauer I Sanitary Landfill	Menomonee Falls	01	PS	04/04/96	2	1997
5	WI	Moss-American (Kerr-McGee Oil Co.)	Milwaukee	01	PRP	07/15/91	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
5	WI	Muskego Sanitary Landfill	Muskego	02	PRP	06/26/95	1 1997
5	WI	Stoughton City Landfill	Stoughton	01	F	09/28/92	2 1997
6	AR	Popile, Inc.	El Dorado	01	F	02/19/92	4 1997
6	AR	South 8th Street Landfill	Jacksonville	01	PRP*	01/26/96	1 1998
6	AR	Vertac, Inc.	Jacksonville	05	PRP	04/19/94	1 1997
6	LA	American Cresote Works, Inc (Winnfield)	Winnfield	01	F	02/19/92	4 1995
6	LA	Gulf Coast Vacuum Services	Abbeville	01	PRP	05/24/94	1 1997
6	LA	Old Citgo Refinery (Bossier City)	Bossier	01	PRP	09/22/94	1 1998
6	LA	PAB Oil & Chemical Service, Inc.	Abbeville	01	F	11/17/94	1 1997
6	NM	Cleveland Mill	Silver City	01	PRP*	01/19/95	2 1997
6	OK	Double Eagle Refinery Co.	Oklahoma City	01	F	06/21/93	1 1997
6	OK	Tar Creek (Ottawa County)	Ottawa County	02	F	03/14/96	1 1998
6	TX	Crystal Chemical Co.	Houston	01	PRP	03/31/92	1 1997
6	TX	Koppers Co., Inc. (Texarkana Plant)	Texarkana	01	PRP	03/31/93	4 1997
6	TX	Longhorn Army Ammunition Plant	Karnack	02	FF	03/31/95	1 1997
6	TX	Petro-Chemical Systems, Inc. (Turtle Bayou)	Liberty County	02 03	PRP PRP	09/25/92 09/25/92	3 1997 3 1997
6	TX	RSR Corp.	Dallas	03 04 05	F F F	07/15/93 05/10/93 05/10/93	1 1998 2 1997 3 1997
6	TX	Sheridan Disposal Service	Hempstead	01	PRP	12/29/89	1 1998

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
				02	PRP	03/29/90	1 1998
6	TX	Texarkana Wood Preserving Co.	Texarkana	01	S	03/06/91	1 1999
				02	S	01/21/93	3 1997
7	KS	29th & Mead Ground Water Contaminat ion	Wichita	02	PRP	05/18/94	3 1997
7	KS	Cherokee County (Tar Creek, Cherokee County)	Cherokee County	07	F	08/01/96	1 1997
7	KS	Fort Riley	Junction City	01	FF	04/01/95	3 1997
7	KS	Strother Field Industrial Park	Cowley County	01	PS	12/18/94	1 1998
7	MO	Oronogo-Duenweg Mining Belt	Jasper County	02	F	08/03/96	1 1997
7	MO	Quality Plating	Sikeston	01	S	08/02/96	4 1997
7	MO	Valley Park TCE	Valley Park	01	PS	05/16/96	1 1998
7	MO	Weldon Spring Quarry (USDOE/Army)	St. Charles County	01	FF	05/15/95	3 1998
				02	FF	09/30/94	2 1997
7	MO	Weldon Springs Ordnance Works	St. Charles County	01	FF	04/04/94	4 1997
7	NE	Cornhusker Army Ammunition Plant	Hall County	01	FF	12/01/94	2 1997
7	NE	Hastings Ground Water Contamination	Hastings	01	PRP	04/27/93	1 1998
				02	PRP	10/01/92	2 2000
8	CO	ASARCO, Inc. (Globe Plant)	Denver	01	PRP	07/01/93	4 2002
8	CO	Chemical Sales Co.	Commerce City	01	F	04/08/94	4 1996
				04	F	05/09/94	3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE	
8	CO	Eagle Mine	Minturn/Redcliff	01	PRP	06/08/94	2	1996
8	CO	Lowry Landfill	Arapahoe County	01	PRP	11/17/95	1	1997
				01	PRP	06/10/96	2	1997
				01	PRP	06/24/96	3	1997
8	CO	Rocky Mountain Arsenal	Adams County	27	FF	09/24/93	1	1994
				28	FF	02/05/93	3	1996
8	CO	Summitville	Summitville	01	F	08/29/96	3	1998
8	CO	Summitville Mine	Rio Grande County	04	F	03/15/95	3	1997
8	MT	Silver Bow Creek/Butte Area	Silver Bow/Deer Lodge	01	PRP	05/06/96	4	1997
				07	PRP	04/22/96	2	1997
8	UT	Hill Air Force Base	Ogden	03	FF	03/14/96	3	1997
8	UT	Monticello Mill Tailings (USDOE)	Monticello	01	FF	01/12/93	3	1998
				02	FF	05/12/92	4	1997
8	UT	Monticello Radioactively Contaminat ed Properties	Monticello	04	PRP-	03/17/95	3	1997
8	UT	Ogden Defense Depot	Ogden	04	FF	03/29/96	4	1997
8	UT	Utah Power & Light/American Barrel Co.	Salt Lake City	01	PRP	09/18/95	3	1996
8	WY	Baxter/Union Pacific Tie Treating	Laramie	01	PRP	02/15/87	1	1993
8	WY	F.E. Warren Air Force Base	Cheyenne	01	FF	08/15/96	2	1997
				03	FF	02/21/96	2	1998
				03	FF	04/29/96	2	1998
9	AZ	Apache Powder Co.	St. David	01	PRP	03/22/95	2	1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
9	AZ	Phoenix-Goodyear Airport Area	Goodyear	01	PRP	01/04/91	1 1997
9	AZ	Williams Air Force Base	Chandler	03	FF	06/18/96	2 1997
9	CA	Brown & Bryant, Inc. (Arvin Plant)	Arvin	01	F	04/19/94	4 1997
9	CA	Fairchild Semiconductor/Camera & (South San Jose Plant)	South San Jose	01	PRP	01/02/91	3 1997
9	CA	Fort Ord	Marina	02	FF	09/29/95	1 1997
				03	FF	09/15/94	1 1997
				03	FF	09/15/94	1 1997
9	CA	Fresno Municipal Sanitary Landfill	Fresno	01	PRP	12/17/93	3 1997
9	CA	Intel Corp. (Mountain View Plant)	Mountain View	01	PRP	05/14/91	3 1997
9	CA	Iron Mountain Mine	Redding	01	F	09/21/92	1 1997
				02	PRP	01/27/93	1 1997
				03	PRP	09/21/94	1 1997
9	CA	J.H. Baxter & Co.	Weed	01	PRP	08/19/91	2 1997
				01	PRP	08/19/91	1 1998
9	CA	Lawrence Livermore National Laboratory	Livermore	02	FF	09/26/95	1 1997
9	CA	Lawrence Livermore National Laboratory (USDOE)	Livermore	01	FF	08/05/92	1 1998
9	CA	Lorentz Barrel & Drum Co.	San Jose	01	F	03/25/95	3 1997
9	CA	March Air Force Base	Riverside	02	FF	06/20/96	2 1997
9	CA	Mather Air Force Base (AC & W Disposal Site)	Sacramento	01	FF	06/21/96	3 1997
9	CA	McColl	Fullerton	02	PRP	08/31/93	1 1997
9	CA	Newmark Ground Water Contamination	San Bernadino	01	F	09/24/93	3 1997

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
				02	F	04/17/95	1 1998
9	CA	Operating Industries, Inc., Landfill	Monterey Park	03	PRP	04/01/92	3 1997
9	CA	Raytheon Corp.	Mountain View	01	PRP	05/14/91	3 1997
9	CA	Riverbank Army Ammunition Plant	Riverbank	01	FF	03/23/94	1 1997
9	CA	Sacramento Army Depot	Sacramento	01	FF	03/13/95	3 1997
9	CA	San Fernando Valley (Area 2)	Los Angeles/Glendale	03	PRP	05/01/94	1 1997
9	CA	Sharpe Army Depot	Lathrop	02	FF	03/05/96	4 1997
9	CA	Valley Wood Preserving, Inc.	Turlock	01	F	06/25/92	1 1998
				01	PRP	03/29/95	3 1997
9	CA	Waste Disposal, Inc.	Santa Fe Springs	01	PRP	09/27/94	3 1997
10	AK	Eielson Air Force Base	Fairbanks N Star Borough	03	FF	10/20/95	2 1997
				04	FF	10/20/95	2 1997
				05	FF	10/20/95	2 1997
				07	FF	09/30/96	2 1997
10	AK	Fort Wainright	Fairbanks N Star Borough	03	FF	05/06/96	1 1999
				04	FF	09/24/96	3 1997
10	ID	Bunker Hill Mining & Metallurgical	Smelterville	02	F	03/29/93	4 1999
10	ID	Idaho National Engineering Lab (USDOE)	Idaho Falls	01	FF	12/22/95	4 1997
				18	FF	09/24/93	1 1998
10	OR	McCormick & Baxter Creos. Co. (Portland)	Portland	01	S	06/01/96	4 1997
10	WA	Bangor Naval Submarine Base	Silverdale	01	FF	09/28/94	2 1996

Progress Toward Implementing Superfund: Fiscal Year 1996

APPENDIX B

STATUS OF REMEDIAL DESIGNS IN PROGRESS ON SEPTEMBER 30, 1996

RG	ST	SITE NAME	LOCATION	OPER- ABLE UNIT	LEAD	FUNDING START	PRESENT COMPLETION SCHEDULE
10	WA	Commencement Bay, Near Shore/Tide Flats	Pierce County	12 13 20	PRP PRP PRP	05/18/94 06/22/94 07/11/96	1 2001 3 1999 3 1998
10	WA	Frontier Hard Chrome, Inc.	Vancouver	01	F	03/23/88	1 1998
10	WA	Hanford 300-Area (USDOE)	Benton County	01 02	FF FF	07/17/96 07/17/96	1 1997 1 1997
10	WA	Harbor Island (Lead)	Seattle	01	PRP	08/06/96	3 1997
10	WA	Naval Air Station, Whidbey Island (Ault Field)	Whidbey Island	05	FF	07/31/96	1 1997
10	WA	Naval Undersea Warfare Engineering Stn. (4 Waste Area)	Keyport	02	FF	03/31/95	4 1997

Appendix C

List of Records of Decision

This appendix provides a specific list of FY96 records of decision (RODs) signed from October 1, 1995 through September 30, 1996. Detailed descriptions of the feasibility studies, as required by CERCLA Section 301(h)(1)(a), are available from the National Technology Information Services (NTIS) at 703-605-6000. EPA's Superfund Docket Center will assist in providing the publication number or answer any questions about the availability of specific RODs and can be reached at 703-603-9232. RODs can also be ordered through NTIS over the internet at <http://www.fedworld.gov/ntis/ntishome.html>.

<u>REGION</u>	<u>SITE</u>	<u>STATE</u>	<u>DATE</u>
1	Fort Devens - Sudbury Training Annex	MA	9/30/96
	Fort Devens South Post Impact	MA	7/15/96
	Loring Air Force Base OU14	ME	3/31/96
	Loring Air Force Base OU3	ME	9/27/96
	Loring Air Force Base OU4	ME	9/30/96
	Loring Air Force Base OUs 9&11	ME	9/27/96
	Material Technology Laboratory (U.S. Army), Area 1	MA	6/28/96
	Material Technology Laboratory Site	MA	9/26/96
	Norwood PCBS	MA	5/17/96
2	American Cyanamid Company OU2	NJ	7/12/96
	American Cyanamid Company OU6	NJ	7/12/96
	Barceloneta Landfill Site	PR	7/5/96
	Brookhaven National Laboratory	NY	3/25/96
	Carroll and Dubies Sewage Disposal	NY	9/30/96
	Federal Aviation Administration Technical Center OU6	NJ	9/20/96
	Federal Aviation Administration Technical Center OU8	NJ	9/20/96
	Hercules, Inc. (Gibbstown Plant)	NJ	1/22/96
	Hopkins Farm Site	NJ	9/27/96
	Kauffman and Minter, Inc.	NJ	9/27/96
	Kentucky Avenue Wellfield	NY	9/30/96
	Little Valley Site	NY	9/30/96
	Malta Rocket Fuel Area Site	NY	7/13/96
	Naval Air Engineering Station, Area C OU18	NJ	2/20/96
	Naval Air Engineering Station, Area H OU19	NJ	2/20/96
	Naval Security Group Activity (Site 6- Former Pest Control Shop)	PR	9/20/96

<u>REGION</u>	<u>SITE</u>	<u>STATE</u>	<u>DATE</u>
	Olean Well Field Site	NY	9/30/96
	Roebbing Steel Company	NJ	9/30/96
	Shieldalloy Corporation	NJ	9/17/96
	Syosset Landfill	NY	3/28/96
	Tutu Wellfield Site	VI	8/5/96
3	Aberdeen Proving Ground OU3	MD	4/1/96
	Aberdeen Proving Ground OU7	MD	9/27/96
	Aberdeen Proving Ground OU11	MD	9/27/96
	Aberdeen Proving Ground, Carroll Island Edgewood Area OU9	MD	9/30/96
	Austin Avenue Radiation Site	PA	9/27/96
	Berkley Products Company	PA	6/28/96
	Butler Mine Tunnel Site	PA	7/15/96
	Dover Air Force Base, (Landfill D-10 Golfcourse) (Site LF-18) Area 9	DE	9/24/96
	Limestone Road	MD	6/28/96
	Middletown Airfield Site	PA	9/17/96
	Ohio River Park	PA	9/27/96
	Patuxent River Naval Air Station	MD	7/29/96
	Publicker Industries, Inc.	PA	12/28/95
	Rentokil, Inc. (VA Wood Preserving Division)	VA	8/27/96
	Revere Chemical Site	PA	6/20/96
	River Road Landfill/Waste Management	PA	12/29/95
	Saunders Supply Company	VA	9/27/97
	Tobyhanna Army Depot OU3	PA	7/12/96
	Tobyhanna Army Depot OU2	PA	9/27/96
	Tyler Refrigeration Pit	DE	5/10/96
	Tyson Dump	PA	7/20/96
4	American Creosote Works (Jackson Plant)	TN	9/30/96
	Chevron Chemical Co. (Ortho Division)	FL	5/22/96
	FCX, Inc.	NC	9/30/96
	Helena Chemical Company	FL	5/7/96
	Marine Corps Logistics Base	GA	9/27/96
	Memphis Defense Depot	TN	5/1/96
	Milan Army Ammunition Plant	TN	10/2/95
	National Electric Coil Co./Coopers Industries	KY	4/26/96
	NC State University	NC	9/30/96
	Oak Ridge Reservation (USDOE) OU27	TN	12/28/95
	Oak Ridge Reservation (USDOE) OU26	TN	2/21/96
	Savannah River Site (USDOE) OU18	SC	6/18/96
	Savannah River Site (USDOE), Burma Rd Rubble Pit OU32	SC	6/18/96
	Stauffer Chemical Company	FL	12/1/95
	T.H. Agricultural and Nutrition Site	GA	4/26/96
	Tri-City Disposal Company	KY	3/29/96
	USMC Camp Lejeune OU5	NC	12/5/95
	USMC Camp Lejeune OU9	NC	8/23/96
	USN Naval Air Station Cecil Field OU1	FL	10/2/95
	USN Naval Air Station Cecil Field OU2	FL	6/24/96

<u>REGION</u>	<u>SITE</u>	<u>STATE</u>	<u>DATE</u>
	USN Naval Air Station Cecil Field OU7	FL	7/17/96
	Wingate Road Municipal Incinerator Dump and Landfill Site	FL	5/14/96
5	Better Brite Chrome and Zinc Shops	WI	9/24/96
	Cannelton Industries, Inc.	MI	9/27/96
	Continental Steel Corp.	IN	8/16/96
	Douglas Road/Uniroyal, Inc.	IN	5/3/96
	Feed Materials Production Center (USDOE) OU5	OH	1/31/96
	Feed Materials Production Center (USDOE) OU3	OH	9/24/96
	Kohler Company Landfill	WI	6/26/96
	Kummer Sanitary Landfill	MN	11/21/95
	Lauer 1 Sanitary Landfill (Boundary Road)	WI	3/11/96
	Lower Ecorse Creek Dump	MI	7/17/96
	Metamora Landfill Site	MI	8/28/96
	National Presto Industries, Inc.	WI	5/15/96
	Parson's Casket Hardware Co.	IL	9/30/96
	Reilly Tar and Chemical	IN	9/27/96
	Ripon City Landfill	WI	3/27/96
	Sturgis Municipal Well Field	MI	9/10/96
	Tomah Fairgrounds Landfill Site	WI	9/26/96
	Wright-Patterson Air Force Base	OH	9/30/96
	Yeoman Creek Landfill	IL	9/30/96
6	Air Force Plant # 4 (General Dynamics)	TX	8/26/96
	Longhorn Army Ammunition Plant	TX	2/14/96
	Monroe Auto Pit (Finch Road Landfill)	AR	9/30/96
	RSR Corporation	TX	2/28/96
	Vertac	AR	9/17/96
7	Cherokee County	KS	7/29/96
	Cleburn Street Well Site	NE	6/7/96
	Fort Riley (Southwest Funston Landfill)	KS	1/19/96
	Mid-America Tanning Company	IA	7/29/96
	Oronogo-Duenweg Mining Belt Site	MO	8/1/96
	Weldon Springs Former Ordnance Works	MO	9/26/96
8	Anaconda Company Smelter	MT	9/30/96
	Ellsworth Air Force Base OU10	SD	5/10/96
	Ellsworth Air Force Base OU12	SD	5/10/96
	Ellsworth Air Force Base OU1	SD	5/10/96
	Ellsworth Air Force Base OU2	SD	5/10/96
	Ellsworth Air Force Base OU3	SD	6/7/96
	Ellsworth Air Force Base OU4	SD	5/10/96
	Ellsworth Air Force Base OU5	SD	6/7/96
	Ellsworth Air Force Base OU6	SD	10/18/95
	Ellsworth Air Force Base OU7	SD	6/7/96
	Ellsworth Air Force Base OU8	SD	6/7/96

<u>REGION</u>	<u>SITE</u>	<u>STATE</u>	<u>DATE</u>
	Ellsworth Air Force Base OU9	SD	5/10/96
	F.E. Warren Air Force Base OU3	WY	1/22/96
	F.E. Warren Air Force Base OU3	WY	3/13/96
	Hill Air Force Base	UT	9/30/96
	Petrochem/Ekoteck Inc.	UT	9/27/96
	Rocky Mountain Arsenal OU3	CO	6/11/96
	Rocky Mountain Arsenal OU4	CO	12/19/95
	Silver Bow/Butte Creek OU1	MT	11/29/96
	Silver Bow/Butte Creek OU7	MT	12/22/95
9	Camp Pendleton Marine	CA	12/7/95
	Fresno Municipal Sanitary	CA	9/30/96
	Koppers Company, Inc.	CA	8/29/96
	March Air Force Base	CA	6/20/96
	March Air Force Base	CA	6/21/96
	McColl	CA	5/15/96
	Moffett Naval Air Station	CA	6/28/96
	Operating Industries, Inc., Landfill	CA	9/30/96
	Schofield Army Barracks OU1	HI	1/24/96
	Schofield Army Barracks OU4	HI	9/26/96
	Sharpe Army Depot	CA	3/5/96
	Treasure Island Naval Station	CA	11/28/95
	United Heckathorn OU1	CA	10/26/95
	Williams Air Force Base OU2	AZ	8/16/96
	Williams Air Force Base OU3	AZ	6/18/96
10	Bangor Naval Submarine Base	WA	4/16/96
	Bunker Hill Mining & Metallurgical Complex	ID	9/9/96
	Eielson Air Force Base	AK	9/30/96
	Fairchild Air Force Base	WA	12/20/95
	Fort Wainwright OU3	AK	4/9/96
	Fort Wainwright OU 4	AK	9/24/96
	Hanford 100 Area (USDOE) OU21	WA	2/2/96
	Hanford 100 Area (USDOE) OUs 2&7	WA	3/26/96
	Hanford 300 Area (USDOE) OUs 1&2	WA	7/17/96
	Harbor Island (LEAD)	WA	1/25/96
	McCormick and Baxter Creosoting Company	OR	3/29/96
	Naval Air Station. Whidbey Island - Ault Field	WA	7/10/96
	Standard Steel and Metal Salvage Yard	AK	7/16/96
	Tulalip Landfill Site	WA	3/1/96
	Union Pacific Railroad Tie Treatment	OR	3/27/96
	USDOE Idaho National Engineering Laboratory OU24	ID	12/1/95
	USDOE Idaho National Engineering Laboratory OU26	ID	1/9/96
	Wyckoff/Eagle Harbor	WA	12/8/95

Appendix D

Report of the

Inspector General



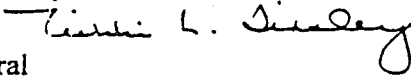
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 22 1998

OFFICE OF
THE INSPECTOR GENERAL

MEMORANDUM

SUBJECT: Review of the Superfund Annual Reports to Congress
for Fiscal Years 1995 and 1996
Audit Report EISFF7-11-0022-9100024

FROM: Nikki L. Tinsley 
Acting Inspector General

TO: Carol M. Browner
Administrator

Background and Summary of Results

Section 301 (h)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986, requires EPA (the Agency) to submit to Congress, by January 1st of each year, a report on its progress in implementing Superfund during the prior fiscal year.

We have completed our mandated review of two of the Agency's Annual Reports to Congress (Annual Reports), Progress Toward Implementing Superfund. This review covers the Annual Reports for fiscal years 1995 and 1996. In accordance with Section 301 (h)(2), we reviewed these Annual Reports for reasonableness and accuracy. This report becomes part of the Annual Reports.

After conducting a limited scope review, we determined that the fiscal years 1995 and 1996 Annual Reports were generally reasonable and accurate, though we observed that the two reports are being issued late. This led us to question their usefulness since, in their absence, Congress had to obtain needed information through means other than the Annual Reports. We believe the Agency should consider alternative reporting methods like the Internet to transmit accomplishment data and the SARC faster to Congress and the public with less administrative costs.

We are closing this report on issuance. Accordingly, no written response to the report is necessary.

Purpose, Scope and Methodology

We conducted our review at EPA Headquarters' Office of Emergency and Remedial Response (OERR) in the Office of Solid Waste and Emergency Response (OSWER), and in Regions 1 and 5. For purposes of this review, we defined "reasonableness" as information that was rationally grounded and not excessive in nature. We defined "accuracy" as consistent with supporting documentation and not contradicting past or similar information. See the attachment to this report for a complete discussion of the scope and methodology of our review.

Objectives

The overall objective of our review was to determine whether the Agency's fiscal years 1995 and 1996 Annual Reports were reasonable and accurate, as required by the statute. Sub-objectives we pursued in order to meet our overall objective were to determine whether:

- 1) the Annual Reports presented consistent accomplishment information within each report, between the two reports and with supporting documentation.
- 2) the necessary statutory requirements were met.
- 3) internal controls over data entry and reporting were adequate.
- 4) construction completion accomplishments, one of the Agency's main indicators of site progress, were supported by source documentation.

We also inquired into the causes for significant delays in issuing the Annual Reports.

Results of the Review

Based on our review, we believe the Annual Reports for fiscal years 1995 and 1996 were generally accurate and reasonable. Below are the review results individually addressing each of our four specific sub-objectives.

To answer our first sub-objective, we selected a judgmental sample of the majority of data relating to accomplishment results. We identified inconsistencies, most of which were minor, within and between the Annual Reports and with supporting documentation. We communicated our concerns to OERR staff who made the necessary corrections.

Concerning our second sub-objective, we noted that the draft Annual Reports did not include statutorily required information for a detailed description of each feasibility study at each facility. We notified OERR which added a reference to an alternative source for a detailed description of the feasibility studies (a CD-ROM provided by National Technology-Information Services). Additionally, Record of Decision abstracts, another source for detailed information on a site, can be found at <http://www.epa.gov/superfund>. Therefore, the statutory information requirements were reasonably met.

For sub-objective three, we conducted a partial review of internal controls over data entry procedures for the data system supporting compilation of the accomplishment information and observed that in EPA Regions 1 and 5 the controls appeared adequate. (We last looked at CERCLIS data internal controls in depth in our report entitled "Reliability of CERCLIS Data: Superfund Performance Measures for Fiscal 1993," audit report number 4100229, March 30, 1994.)

Under sub-objective four, we determined that source documentation supported 100 percent of the construction completion accomplishments, one of the Agency's main indicators of site progress. (See our report entitled "Superfund Construction Completion Reporting," audit report number 8100030, December 30, 1997, which further details our work in this area.)

In addition to our four sub-objectives, we also examined the causes of significant delays in the issuance of the Annual Reports. Even though the Agency streamlined content information included in the fiscal years 1995 and 1996 Annual Reports, the reports significantly exceeded their January 1996 and January 1997 deadline dates. The fiscal year 1995 report is over two and a half years late and the fiscal year 1996 report is over a year and a half late. Part of the delay in preparing the two reports originated in the untimeliness of prior reports spanning back to the fiscal 1992 Annual Report. (For background information concerning delays in earlier Annual Reports, see our special report entitled "Superfund Reports to Congress Were Not Timely," audit report number 2400033, March 31, 1992.) Additional reasons given by the Agency for delays in preparation of the fiscal years 1995 and 1996 Annual Reports were:

- A reorganization in the report preparation office in early 1996;
- Expiration of the contract to support the fiscal 1992 through 1994 Annual Reports' preparation and a delay in awarding the subsequent support contract; and
- Subsequent in-house preparation and printing of the fiscal 1992 through 1994 Annual Reports.

Conclusions

The Agency took the necessary actions to correct and clarify information during our review of these Annual Reports; therefore, as of the date of this report, we believe the fiscal years 1995 and 1996 Annual Reports are generally reasonable and accurate. However, we observed that the two reports are being issued late, despite streamlining efforts. This led us to question their usefulness since, in their absence, Congress obtains needed information through other means. We believe the Annual Reports will continue to be late unless OSWER adopts additional corrective actions to improve the report production process. We suggest the Agency should consider alternative reporting methods like the Internet to transmit accomplishment data and the SARC faster to Congress and the public with less administrative costs. This suggestion is provided for Agency consideration, but we are not making a formal recommendation at this time.

Scope and Methodology

With respect to the first sub-objective discussed on page 2, we compared Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) printouts and other supporting documents to the data included in the Annual Reports. We reviewed key accomplishment data in each of the Annual Reports' executive summary exhibits ("Summary of Fiscal Year 1995 [or 1996] Superfund Activities" and "Summary of Program Activity by Fiscal Year") and compared the data in the exhibits to the data within the texts of the Annual Reports themselves. We also compared the consistency between the two Annual Reports, and reviewed accomplishment numbers from past fiscal years to detect any significant increases or decreases. Additionally, we reviewed accomplishment definitions to identify any changes that would cause significant increases or decreases in accomplishment numbers.

For the second sub-objective, we reviewed the Annual Reports' content to determine whether information required by statute was included. We examined the exhibit "Statutory Requirements for the Report" to determine what information the Agency used to meet the conditions of the statute. We communicated with various Headquarters officials to discuss the text and the Agency's interpretation of the requirements using January 1998 drafts of the Annual Reports. On July 23, 1998, we received and consequently reviewed the latest versions of the two Annual Reports.

Next, we addressed the third sub-objective by performing a partial review of internal controls over data entry procedures for the CERCLIS data system which supports compilation of the accomplishment information. We interviewed staff at Headquarters and in Regions 1 and 5 regarding controls over data entry. We performed reviews of policy documentation for entering and verifying data. We reviewed documentation discussing CERCLIS and its related systems which the Agency uses to capture Superfund information. Also, we discussed issues such as employee training and the coding of Superfund information for data entry.

Fourth, we determined whether EPA met its criteria for reporting Superfund site construction completions for fiscal years 1995 and 1996. Properly supported construction completions would be an indicator that the accomplishments under this category were reasonable and accurate. For this review, acceptable support consisted of preliminary or final close-out reports, no-further-action Records of Decision, or deletion notices. These are documents the Agency would sign to confirm that the criteria for a construction completion has been met. We reviewed earlier work performed in this area by Office of Inspector General staff. We then compared our listing of construction completions to related source documents and an Agency listing.

Finally, concerning the timeliness of the Annual Reports, we obtained documents regarding requests for data to prepare the Annual Reports, who the contributors were, and progress toward finalizing the reports. We also spoke with various Headquarters staff concerning methods for ensuring accuracy and timeliness of the Annual Reports.

We began our review on October 30, 1997, and completed field work on August 28, 1998.

Appendix E

Summary of the Superfund Program [1995-1997]

The U.S. Environmental Protection Agency (EPA) is committed to accelerating the pace of hazardous waste site cleanup. As part of this commitment, EPA has placed 220 National Priorities List (NPL) sites into the construction completion category during FY95-FY97 for a total of 498 NPL sites in this category.

Throughout FY95-FY97, EPA successfully encouraged potentially responsible parties (PRPs) to undertake and finance cleanup efforts at Superfund sites. By the end of FY97, PRPs led more than 69 percent of remedial designs (RDs) and remedial actions (RAs) started during the fiscal year. During FY95-FY97, EPA continually improved the effectiveness of the Superfund program through the continuation of SACM, the implementation of administrative reforms and the brownfields initiative, reorganizing the Superfund program, and supporting reauthorization efforts with Congress.

Superfund Accelerated Cleanup Model

EPA's continued implementation of the Superfund Accelerated Cleanup Model (SACM) resulted in streamlining the cleanup process and changed the paradigm of doing business in Superfund. SACM allows for rapid reduction of risks at Superfund sites and long-term restoration of the environment. SACM introduced significant improvements to the existing cleanup process by:

- eliminating sequential and duplicative studies by combining site assessment and investigation activities;
- removing the existing overlap between the types of cleanup actions done under the Superfund removal program and those done under the remedial program, to save time and money; and
- redefining Superfund cleanup actions as early and long-term actions.

Administrative Reforms

EPA improved the effectiveness of the Superfund program by further refining initiatives and identifying administrative changes to be made within the existing statutory and regulatory framework. Three rounds of reforms have been launched, including the second round and third rounds, in FY95 and FY96, respectively. Each round of reforms brought about a number of new or enhanced initiatives and continued ongoing initiatives. Collectively, the initiatives involve diverse activities such as promotion of economic redevelopment, enforcement reform, environmental justice, enhancement of community involvement, improvement of cleanup effectiveness and consistency, and expansion of the roles of states and Indian tribes. Examples of specific initiatives include:

Round 2

- testing the allocation process under which neutral parties allocate shares among responsible parties;
- providing relief to lenders by clarifying application of liability exemption;

- promoting economic redevelopment by archiving sites from CERCLIS determined to be of no further federal Superfund interest and awarding Brownfields pilots;
- reducing the cost and duration of cleanup through additional groundwater and land use guidances; and
- initiating a voluntary cleanup program to speed the cleanup of non-NPL sites.

Round 3

- compensating settlers for a portion of orphan shares, thereby reducing the responsibility of cooperative parties for shares attributable to insolvent parties;
- increasing the number of protected small contributors;
- reducing oversight of cooperative parties performing remedies and decreasing transaction costs;
- establishing a National Remedy Review Board to review proposed cleanup actions and help reduce cleanup costs;
- initiating remedy "Rules of Thumb" to produce time and cost savings;
- allowing economic redevelopment with the partial deletion of some sites; and
- fostering consistency among Regions for faster, fairer cleanups, reasonable risk assessments, and reduced PRP oversight.

Brownfields Initiative

EPA also promoted the redevelopment of abandoned and contaminated properties once used for industrial and commercial purposes ("brownfields"). EPA believes that environmental cleanup is a building block to economic redevelopment and must go hand-in-hand with bringing life and economic vitality back to communities.

The FY95 Brownfields Economic Redevelopment Initiative is a comprehensive approach to empower state and local governments, communities, and other stakeholders interested in economic redevelopment to work together in a timely manner to prevent, assess, safely cleanup, and sustainably reuse brownfields. In 1995, the General Accounting Office (GAO) estimated that there are 450,000 brownfields sites in the United States.

EPA addressed implementation of the initiative through the Brownfields Action Agenda and the subsequently established Brownfields National Partnership Action Agenda. The Agendas comprise a collection of bold strategies:

- implementing Brownfields pilot programs in cities, counties, towns, and Tribes across the country;
- clarifying liability and other issues of concern for lending institutions, municipalities, prospective purchasers, developers, property owners, and others;
- establishing partnerships with other EPA programs, federal agencies, states, cities, stockholders, and organizations;
- promoting community involvement by supporting job development and training activities linked to brownfield assessment, cleanup, and redevelopment; and
- linking environmental protection with economic redevelopment and community revitalization.

By the end of FY97, EPA had announced the selection of 121 Brownfields Pilots to be funded through cooperative agreements worth up to \$200,000 each for a two-year period. These pilots are either funded through Headquarters or the 10 Regional offices. The pilots are intended to provide redevelopment models, direct efforts toward removing regulatory barriers, and coordinate public and private efforts at the federal, state, and local levels.

Superfund Program Reorganization

EPA's Office of Emergency and Remedial Response (OERR) was reorganized in FY96 from a hierarchical, four division structure to a matrix organization with 14 centers of expertise. The reorganization had several distinct purposes:

- to accelerate site cleanup;
- promote teamwork;
- empower states; and
- provide better customer service.

Reauthorization Activities

EPA continued to work with Congress on reauthorization issues. CERCLA was last amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA).

The major Superfund program areas include: Site Evaluation, Emergency Response, Remedial Progress, Enforcement Progress, Federal Facility Cleanups, Resource Estimates, and Superfund Program Support Activities.

Site Evaluation

Over FY95-FY97, EPA's progress in identifying and assessing newly discovered sites has resulted in a total of over 40,100 sites identified in the CERCLA Information System (CERCLIS). CERCLIS is Superfund's inventory of potentially threatening hazardous waste sites that require further federal Superfund program attention.

Through FY97, the Agency had begun work at over 98 percent of the 1,405 sites proposed to, listed on, or deleted from the NPL. Through the end of FY97, a total of 156 sites have been deleted from the NPL.

EPA carried on the implementation of SACM that encourages EPA Regions to reduce repetitive tasks and cost by combining certain site assessment, long-term remediation program, and removal program activities.

The NCP was modified so that CERCLIS sites needing no further EPA-financed response actions could be placed in a separate "archived" database. During FY95-FY97, EPA also proceeded with ongoing efforts to address technical complexities and improve site evaluation guidance.

During the 1995-1997 time period, EPA has undertaken projects to address brownfields issues by establishing the Brownfields Economic Redevelopment Initiative in FY95. This initiative is directed toward empowering states, local governments, communities, and others to work together to assess and safely cleanup brownfields sites.

Emergency Response

To protect human health and the environment from immediate or near-term threats, EPA and potentially responsible parties (PRPs) started nearly 830 removal actions and completed more than 889 removal actions during FY95-FY97. Through the end of FY97, more than 4,490 removal actions have been started and nearly 3,939 have been completed since the inception of the Superfund program.

The removal authority for "early actions," has been expanded to reduce immediate risks and expedite cleanup at NPL sites. The expansion was a key element of SACM. Early actions may include emergency, time-critical, or non-time critical removal responses or quick remedial responses.

Under the reportable quantities (RQ) regulatory requirements, EPA proposed an expanded exemptions rule (60 FR 40042) under which exemptions may be granted for releases of naturally occurring radionuclides associated with land disturbance due to certain mining activities.

EPA also issued guidance during FY96 that provides answers to common removals/RQ adjustment questions and concerns of the regulated community and general public. Additional guidance was completed on the removal response to radiation sites.

Remedial Progress

Accomplishments during FY95-FY97 reflect EPA's continued efforts to accelerate the overall pace of cleanup and complete cleanup activities at an increasing number of sites. During the period, cleanup activities resulted in the placement of 220 additional NPL sites in the construction completion category for an overall total of 498 NPL sites in this category. Also started by EPA or PRPs were nearly 107 remedial investigation/feasibility studies (RI/FSs), more than 230 remedial designs (RDs), and more than 328 remedial actions (RAs). EPA signed 492 records of decision (RODs) at Fund-financed or PRP-financed sites.

Two components of the remedial program with significant activity during FY95-FY97 were the five-year review program and the Superfund Innovative Technology Evaluation (SITE) Program. A total of 146 five-year reviews, required by CERCLA Section 121(c), were carried out during this period. These reviews assure that human health and the environment are being protected by the selected remedial action. The SITE Program demonstrates and evaluates full-scale, innovative hazardous waste treatment technologies. In FY96, the program shifted from a technology-driven focus to one that was more integrated, driven by the needs of the waste remediation community. EPA's technology transfer and interagency coordination efforts have long been recognized leaders in the technology innovation arena, and are continually enhanced through conferences, demonstrations, and reference publications.

Enforcement Progress

Accomplishments during 1995-1997 reflect EPA's continuing commitment to maximizing PRP involvement in financing and conducting cleanup and recovery of Superfund monies expended for response actions. Over the three-year period, EPA has achieved enforcement agreements worth approximately \$2.2 billion in PRP response work. Through its cost recovery effort, EPA achieved approximately \$769 million in cost recovery settlements and collected more than \$822 million for reimbursement of Superfund expenditures in FY95-FY97. By the end of FY97, EPA had collected a

total of over \$1.7 billion in cost recovery settlements, bankruptcy settlements, fines and penalties.

EPA has been working toward improving the efficiency and fairness of Superfund enforcement. Transaction costs have been reduced through SACM, three rounds of administrative reforms, and promotion of an "enforcement first" initiative to secure increased PRP financial involvement. The reforms of FY95 encouraged *de minimis* settlements and *de micromis* settlements. Other approaches to promote fairness and flexibility in settlements were continued, and guidance documents were issued in FY95, detailing specific approaches to enforcement fairness.

Federal Facility Cleanups

Federal departments and agencies are largely responsible for implementing CERCLA at federal facility sites. To ensure federal facility compliance with CERCLA requirements, EPA provides advice and assistance, oversees activities, and takes enforcement action where appropriate. For sites that are on the NPL, EPA must concur with the selected remedy. The June 27, 1997 Federal Agency Hazardous Waste Compliance Docket listed a total of 2,104 federal facilities sites. Of the sites on the docket, 157 were proposed to or listed on the NPL, including 151 final and six proposed sites.

Throughout 1995-1997, the closure of military bases was an important issue. Major achievements in FY95 led EPA and the Department of Defense (DoD) to determine which installations to include in the Fast Track Cleanup Program of the Base Realignment and Closure Act (BRAC) in FY96. These actions allow for expedited cleanup and reuse of bases scheduled for closure. Several interagency forums were also held during this time span, allowing EPA to make significant progress in addressing further concerns associated with federal facility cleanup.

Resource Estimates

Under Executive Order 12580, EPA is required to estimate the resources needed to carry out Superfund program responsibilities assigned to EPA and other federal departments and agencies. Since

the enactment of CERCLA in 1980, Congress has provided Superfund with \$17.7 million in budget authority (FY81 through FY97).

Estimates of the long-term resources required to implement Superfund are based on the Outyear Liability Model (OLM). The OLM provides long-range forecasts, with flexibility to refine these forecasts, and can be adjusted to accommodate many program-related variables. To calculate a cost estimate, the OLM reviews active NPL sites, sites yet to begin the remedial process, non-site costs, and factors related to remedial action costs. The OLM cost estimate of completing cleanup of current NPL sites is more than \$13.6 billion for FY97 and beyond, bringing the total estimated cost of the program to \$31.3 billion.

Superfund Program Support

Throughout 1995-1997, EPA has taken measures to enhance support activities in the Superfund program. These steps include efforts to improve community relations, enhance public access to information, strengthen EPA's partnership with states and Indian tribes, and increase minority contractor utilization.

In its community involvement efforts, EPA tailors activities to the specific needs of individual communities and identifies ways to enhance community involvement efforts. EPA emphasized the importance of effective community involvement with guidance that encourages the Regions to establish community advisory groups (CAGs) in FY96. EPA also continued to provide technical outreach to communities, hold national conferences on community involvement, offer training and workshops, and facilitate community access to technical assistance grants (TAGs). To aid communities in obtaining technical assistance, EPA awarded 46 TAGs during FY95-FY97, bringing the total number of TAGs awarded since FY88 to 198, for a total value of more than \$13 million.

To enhance public access to Superfund information, EPA continued its partnership with the National Technical Information Service (NTIS), to provide Superfund document distribution services. EPA has fulfilled requests for more than two million

documents free of charge through NTIS, aided by a broadened use of electronic tools (e.g. the Internet and multimedia computers) initiated in FY96. A Superfund Order Desk is also maintained where single copies of documents or customized subscriptions may be purchased.

Performance Partnership Grants (PPGs) or Cooperative Agreements (CAs) may be awarded to states or tribes by EPA to support state and tribal involvement in the Superfund response activities. More than \$20 million is awarded annually in Core Program Cooperative Agreements (CPCAs). These agreements make it easier for Regions to assist states and tribes in developing comprehensive Superfund programs.

To promote small and disadvantaged business participation in Superfund contracting, EPA directly and indirectly awards Superfund work contracts to minority contractors. Direct procurement involves any procurement activity where EPA is a direct party to a contractual arrangement for supplies, services or construction. Financial assistance programs utilize indirect procurement methods. Awards and/or CAs are granted to eligible states, local municipalities, universities, non-profit and commercial institutions, hospitals and individuals. Direct procurement contracts totaled nearly \$151.5 million during FY95-FY97, while cooperative and interagency agreements with minority contractors totaling more than \$3.1 million and nearly \$104 million, respectively. In addition, EPA's Office of Small and Disadvantaged Business Utilization (OSDBU) conducted a number of outreach activities during FY95-97, including seminars, conferences, and training sessions.

