

# Chapter 3

## Removal Progress

Throughout the 13-year history of Superfund, removal actions have successfully prevented, minimized, or mitigated threats. EPA and potentially responsible parties (PRPs) have initiated more than 3,350 removal actions to address threats posed by the release or threatened release of hazardous substances, including nearly 310 undertaken in FY93. The expanded use of removals, a key element of the Superfund Accelerated Clean-Up Model (SACM), was a priority during FY93.

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

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### 3.1 REMOVAL ACTION PROCESS

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Removal actions are taken in response to a release or threat of release of a hazardous substance, 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). Exhibit 3.1-1 presents examples of the kinds of threats that may be posed by these situations and of the typical corresponding removal actions that may be taken. Managed by a federal On-Scene Coordinator (OSC), a removal action is generally short-term,

addresses the most immediate threats, and complies with applicable or relevant and appropriate requirements (ARARs) to the extent practicable, given the exigencies of the situation.

When notified of a release or threat of release that may require a removal action, the 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. The Agency reviews the results of the removal site evaluation, among other factors, to determine the appropriate extent of the 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 the Agency concludes that a removal action is required, an appropriate response is implemented 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 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 action.

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.

Acronyms Referenced in Chapter 3	
ARARs	Applicable or Relevant and Appropriate Requirements
ERRS	Emergency and Rapid Response Services
ERT	Environmental Response Team
MIC	Methyl Isocyanate
NPL	National Priorities List
OSC	On-Scene Coordinator
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
RA	Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
RQ	Reportable Quantity
SACM	Superfund Accelerated Clean-Up Model
SRP	Superfund Removal Procedures

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

The removal process provides many opportunities for community involvement. 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 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 and on-scene monitoring, and overseeing the removal action. The OSC is also responsible for preparing 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.

### Removal Action Statutory Limits

Removal actions are generally short-term, relatively inexpensive responses to releases or threats 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 limits for specific circumstances. A removal action may exceed the 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 to be taken.

During FY93, EPA granted 11 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.

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## 3.2 FISCAL YEAR 1993 PROGRESS

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Since the inception of Superfund, the Agency and PRPs have begun more than 3,350 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. Under SACM, the Agency will expand its use of removal actions to further expedite response, especially at NPL sites.

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### 3.2.1 Status Report on Removal Progress

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Of the more than 3,350 removal actions undertaken by EPA and PRPs under the Superfund program, 310 were started in FY93. (See Exhibit 3.2-1). Of these 310 removal actions, PRPs financed

**Exhibit 3.1-1  
Typical Removal Actions**

Threat Posed	Typical Removal Action Taken
Humans or animals have access to released hazardous substances, fire, or explosion	Installing fences, warning signs, or other security and site control precautions Removal of waste materials posing the threat Temporarily relocating residents in extreme situations
Precipitation or run-off from other sources (e.g., flooding) may enter the release area	Constructing drainage controls, such as run-off or run-on diversions
Failure of a structure such as a lagoon is likely	Stabilizing berms, dikes, or impoundments
Migration of hazardous substances into soil, ground water, or air is likely	Containing hazardous substances, such as capping contaminated soil or sludge Treating hazardous substances, including incineration Excavating highly contaminated soil Removing drums, barrels, tanks, or other bulk containers containing hazardous substances
Drinking water supply is contaminated	Providing alternate water supplies

Source: Office of Emergency and Remedial Response/Emergency Response Division.

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60 and EPA financed 250. The removal actions started by PRPs included approximately 20 removal actions at NPL sites and 40 removal actions at non-NPL sites. EPA started nearly 30 removal actions at NPL sites and 220 removal actions at non-NPL sites. The 310 removal actions begun by EPA and PRPs in FY93 compare to approximately 380 started in FY92.

As shown in Exhibit 3.2-2, EPA and PRPs have completed approximately 2,810 removal actions under the Superfund program, including nearly 290 in FY93. Of the 290 removal actions completed during the fiscal year, PRPs financed 80, including 20 at NPL sites and 60 at non-NPL sites. EPA financed approximately 210 of the completed removal actions, including 20 at NPL sites and 190 at non-NPL sites. The 290 removal actions completed by EPA and PRPs in FY93 compare to approximately 340 completed by EPA and PRPs in FY92.

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 and removal actions that have

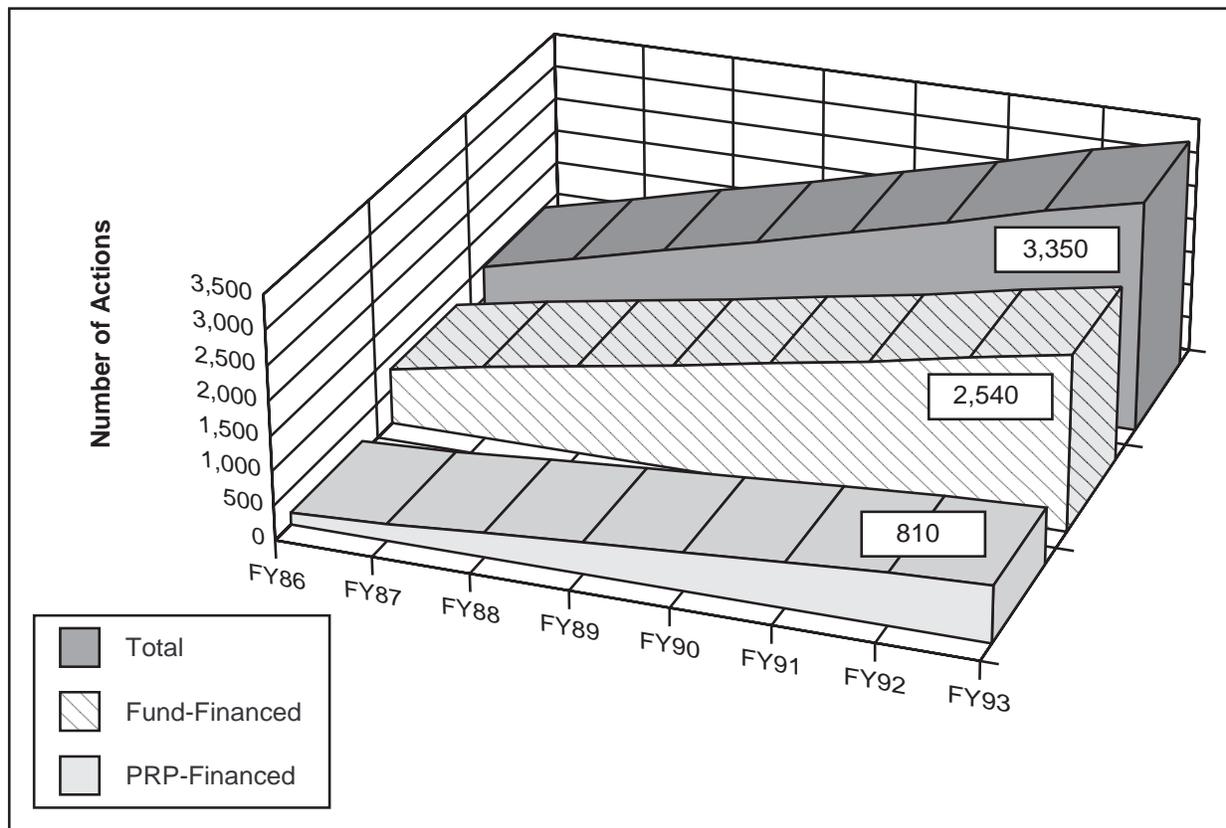
been granted exemptions from the statutory one-year duration limit. Sites where a removal action has taken place but the contaminants have not yet been transported to a disposal facility are also defined as having ongoing removals.

**3.2.2 Expanding the Use of Removal Actions Through the Superfund Accelerated Clean-Up Model**

One of the key elements of SACM is the expanded use of removal authority to perform “early actions” that reduce immediate risk rapidly and expedite NPL site cleanups. Early actions can be emergency, time-critical, or non-time-critical removal responses or rapid remedial responses.

To support early actions, the Agency created a \$50 million set-aside fund from the remedial action budget in FY92. Over \$37 million of the set-aside funding was allocated for early actions at 13 sites in seven Regions in FY92. In FY93, all of the remaining

**Exhibit 3.2-1  
Cumulative Removal Action Starts**



Source: CERCLIS.

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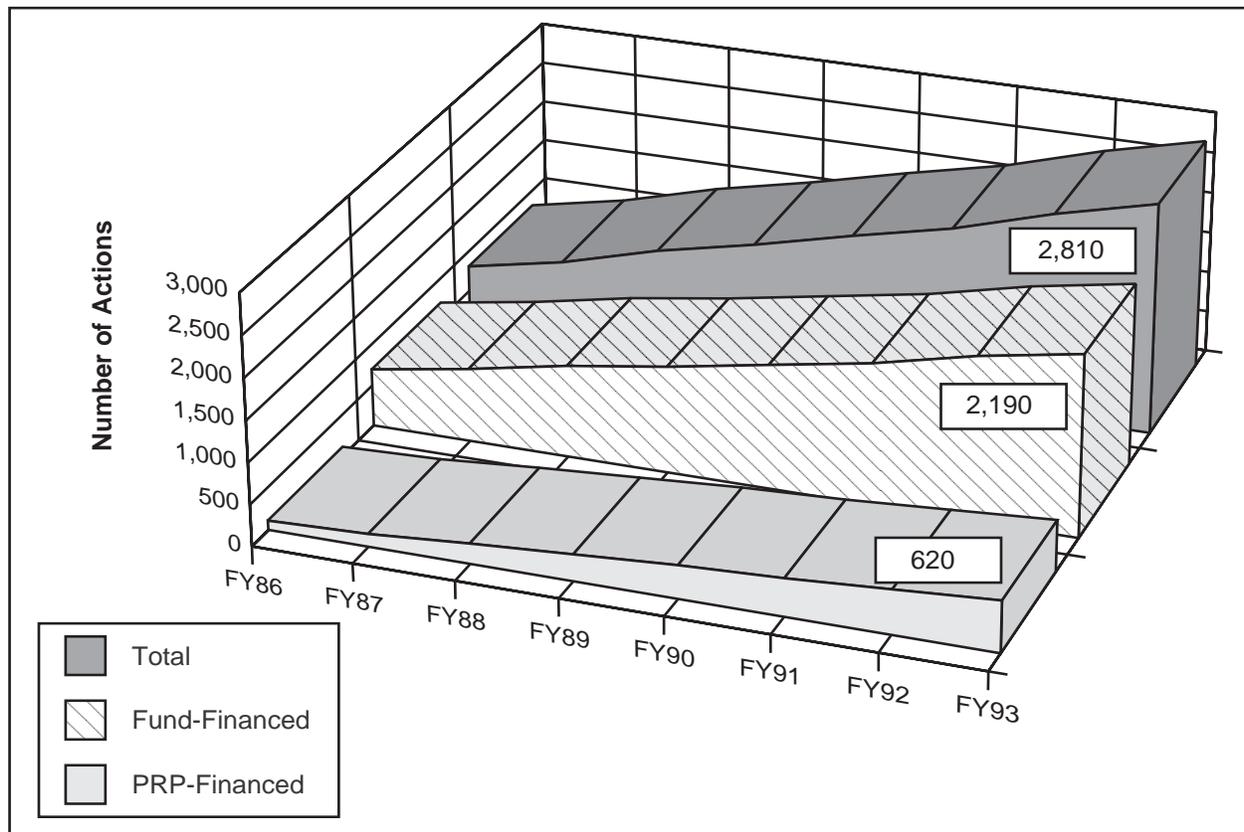
set-aside funds plus an additional \$7.6 million were distributed to 16 sites in seven Regions. An extra \$9 million was requested for seven sites but could not be provided because funding was allocated on a first-come, first-served basis, and all available funds had been distributed. Set-aside funds are not intended to replace the funds that Regions have historically used for response actions at NPL sites, but to supplement them. The additional funding, plus the remedial funding available directly from Emergency and Rapid Response Services (ERRS) contracts, has significantly enhanced EPA's capacity to expedite responses at key NPL sites. (Further information on SACM and the use of removal authority to conduct early actions is provided in Chapter 1.)

Due to the success of the early action approach, the Agency will continue to allocate funds in the

remedial action budget for early actions. EPA is also making progress toward awarding more ERRS contracts, which are the primary vehicle for implementing early actions. Regions 1 through 5 currently have ERRS contracts in place; Regions 6 through 10 plan to have ERRS contracts awarded by 1996. The only obstacle to implementing early actions has been the limited capacity of these contracts. This situation improved in FY93, and EPA is continuing to work with the Regions and the Office of Acquisition Management to expand the Agency's capability to implement early actions.

An example of an early action at an NPL site is the SACM pilot at the Better Brite Site in DePere, Wisconsin. The pilot combined a time-critical removal response and a remedial investigation/feasibility study (RI/FS). The action, which included

**Exhibit 3.2-2  
Cumulative Removal Action Completions**



Source: CERCLIS.

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removing contaminated soil, demolishing buildings, and containing the spread of contaminants in the ground-water plume, reduced immediate risk at the site. The subsequent remedial action (RA) will consist of construction and implementation of a pump-and-treat system to clean up the ground-water contamination. Under this pilot, the early action reduced immediate risk and expedited the implementation of an overall remedy at the site.

### 3.3 ENVIRONMENTAL RESPONSE TEAM ACTIVITIES

Under the National Oil and Hazardous Substances Pollution Contingency Plan, EPA manages the ERT. Over its 15 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, clean-up contractor management, and oil and chemical spill control.

During FY93, ERT conducted approximately 100 removal actions and 70 RAs, and responded to 10 oil spills and 2 international incidents. ERT also offered 241 training courses nationwide.

## 3.4 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 during the fiscal year. In addition, the Agency continued updating the Superfund Removal Procedures Manual.

### 3.4.1 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.

#### Reportable Quantity Adjustments

EPA finalized RQ adjustments for 30 hazardous substances in a June 30, 1993, rule (58 *FR* 35314). The substances are

- Lead metal;
- Twelve lead compounds;
- Fifteen lead-containing hazardous wastes listed under the Resources Conservation and Recovery Act (RCRA);

- RCRA characteristic wastes that show levels of lead constituents exceeding minimum levels established for the Toxicity Characteristic Leaching Procedure; and
- Methyl isocyanate (MIC).

The RQ adjustments for lead and lead compounds were based on the neurotoxic effects of lead in children. The potential adverse reproductive and respiratory effects of MIC are the basis of its RQ adjustment.

#### Reportable Quantity Exemptions

The Agency also proposed a rule to codify four administrative reporting exemptions from the requirements of CERCLA Section 103 for naturally occurring radionuclide releases. The November 30, 1992 proposal would exempt such releases from

- Large, generally undisturbed landholdings such as golf courses and parks;
- Disturbances of land for purposes other than mining, such as farming or building construction;
- The dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers; and
- Coal and coal ash piles at utility and industrial facilities with coal-fired boilers.

The Agency has determined that administrative reporting requirements related to these releases serve no purpose. The rule is in accordance with the decision of the court in *Fertilizer Institute vs. United States Environmental Protection Agency* (935 F.2d 1303 (1991)), which specified that the original promulgation of the exemptions in a final rule (54 *FR* 22524, May 24, 1989) did not provide sufficient notice and opportunity for public comment. The purpose of the November 30, 1992 proposal was to provide such notice and opportunity for comment. On March 5, 1993, at the request of several parties, the Agency reopened the comment period for an additional 60 days to provide greater opportunity for the public to evaluate the issues. During the year, the Agency evaluated the public comments received on the proposed rule.

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### 3.4.2 Removal Guidance

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The Superfund Removal Procedures (SRP) Manual covers all procedural and administrative requirements for removal actions. It is used by OSCs; removal, remedial, and enforcement personnel; and staff from other federal and state agencies. In FY90, EPA began restructuring the manual into a series of 10 stand-alone volumes, each address-

ing distinct aspects of Superfund removal actions. EPA previously completed four volumes of the series: *Consideration of ARARs During Removal Actions*, *Removal Enforcement Guidance for On-Scene Coordinators*, *Public Participation Guidance for On-Scene Coordinators*, and *Action Memorandum Guidance*. During FY93, the Agency continued working on the remaining six SRP volumes and an overview volume.

