

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.

FY98 accomplishments illustrate the continuing success of EPA's Superfund enforcement efforts.

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 under CERCLA, and seeks to initiate negotiations aimed at an agreement with the PRPs 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 then take over the site, and conduct the cleanup itself using Superfund monies. The Agency later may pursue PRPs to recover costs incurred. These steps are important 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 form of a judicial consent decree (CD) that is lodged by the Department of Justice (DOJ). For other types of response actions, the agreement will usually be in the form of an administrative order on consent (AOC) negotiated and signed by the EPA. 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. The Agency can then seek cost recovery and treble damages. Where the PRP notifies EPA in writing of its intent to comply with a UAO, EPA considers the PRP in compliance, and may allow them to perform the cleanup. Although UAOs in compliance are technically not legal settlements, they are counted as such programmatically because they result in PRPs performing cleanup 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.

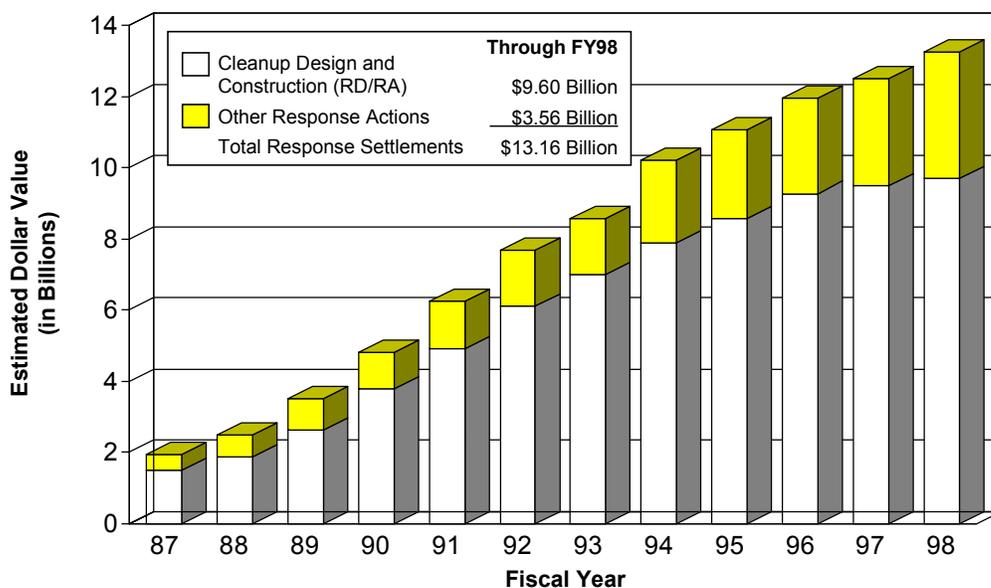
4.2 Fiscal Year 1998 Superfund Enforcement Progress

FY98 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 FY98, the Agency reached 203 settlements (CDs, AOCs, CAs, or UAOs in compliance) with PRPs for response activities worth

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



Source: CERCLIS (as of September 30, 1998).

over \$806 million. As shown in Exhibit 4.2-1, the cumulative value of PRP response settlements achieved under the Superfund program is approximately \$13.1 billion.

Of the 203 response settlements achieved in FY98, 71 settlements worth approximately \$618 million were for RD/RA. These RD/RA settlements included 37 CDs referred to DOJ, 8 AOCs/consent agreements, and 26 UAOs in compliance. There were 34 RD/RA negotiations started and 54 RD/RA negotiations completed by EPA during the fiscal year.

In FY98, the Agency signed a total of 125 administrative orders on consent, and issued 88 unilateral administrative orders. The issued UAOs and AOCs include agreements for removal actions, RD/RAs, RDs, and RI/FSs.

4.2.2 PRP Participation in Cleanup Activities

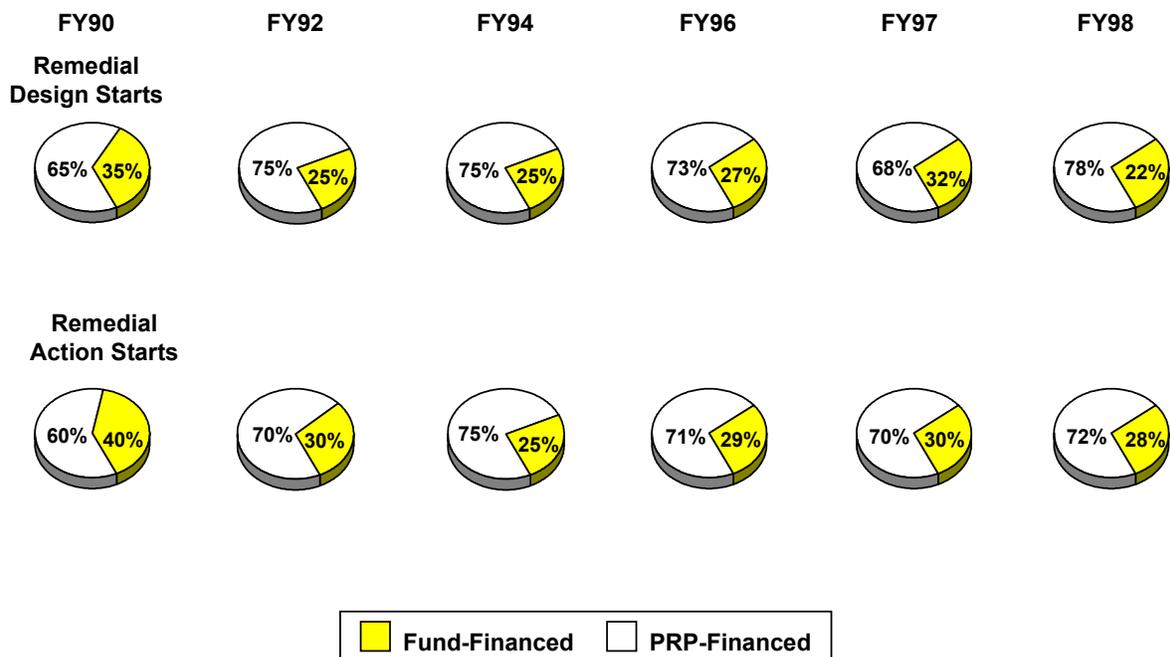
Exhibit 4.2-2 illustrates the continuing high level of PRP participation in undertaking and financing RDs and RAs since the implementation of the “Enforcement First” initiative in 1989.

In FY98, PRPs continued to finance and conduct a high percentage of the remedial work undertaken at Superfund sites: 72 percent of new RAs, 78 percent of new RDs, and 23 percent of new RI/FSs.

4.2.3 Cost Recovery Achievements

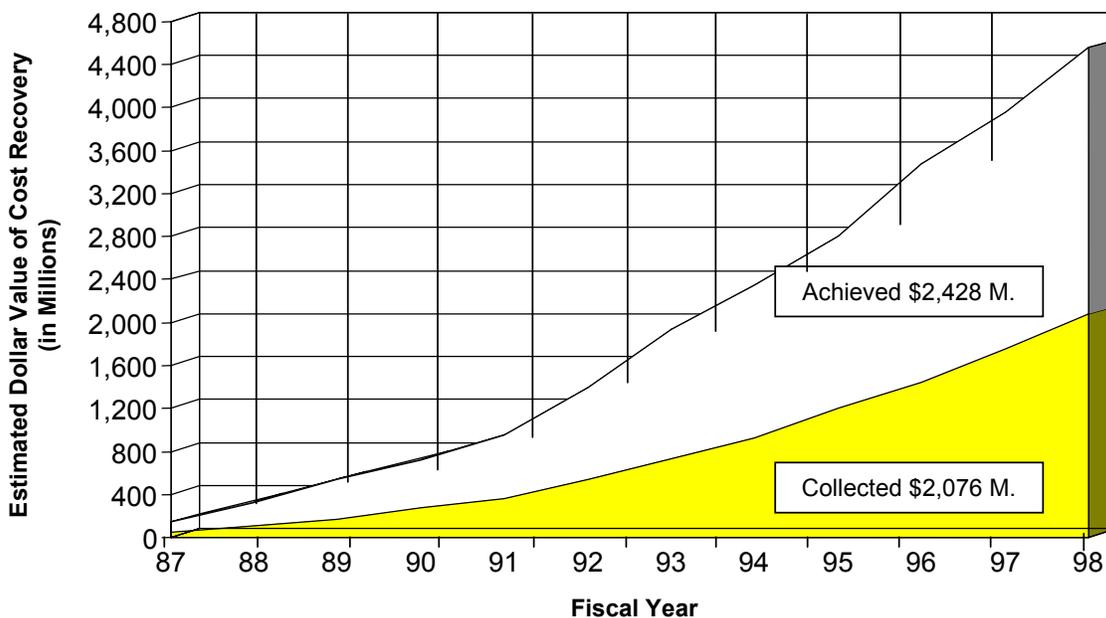
EPA and DOJ achieved 187 cost recovery settlements valued at approximately \$230 million. These included addressing past costs, valued at \$200,000 or more, at 160 sites. The cost recovery program has achieved approximately \$2.4 billion in cost recovery settlements since the inception of Superfund. Exhibit 4.2-3 illustrates cost recovery settlements achieved and collected to date.

**Exhibit 4.2-2
Increase in the Percentage of Remedial Designs
and Remedial Actions Started by PRPs**



Source: Office of Enforcement Compliance Assurance.

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



Source: Office of Enforcement Compliance Assurance.

EPA collected approximately \$320 million from cost recovery settlements, bankruptcy settlements, and fines and penalties during the fiscal year. Over \$2.1 billion in past costs have been collected by EPA to date.

4.3 Enforcement Initiatives

Many of the enforcement initiatives undertaken in FY98 were designed to encourage redevelopment of contaminated sites. EPA also continued to build upon prior Administrative Reform successes, particularly in the unilateral administrative order (UAO), Allocation, PRP Oversight, Special Interest Bearing Account, *De Minimis* Settlement, and Orphan Share Compensation reforms. These reforms are designed to make Superfund a fairer program, while reducing transaction costs to promote effective and efficient settlements. Ongoing reforms follow in sections 4.3.1 to 4.3.6. Finally, the Agency issued a number of new policies intended to increase program fairness and establish greater consistency across

settlements. The new policies and guidelines appear in sections 4.3.7 to 4.3.11.

Redevelopment. Encouraging redevelopment of contaminated sites was a main objective of many of the reforms and activities undertaken in FY98. EPA’s enforcement and compliance assurance program has been a partner in EPA’s Brownfields Initiative since its inception. As part of the Brownfields Action Agenda, EPA has developed a broad array of tools to encourage the cleanup and reuse of contaminated property (such as brownfields) and address Superfund environmental liability.

One of these tools is the Prospective Purchaser Agreement (PPA). EPA’s “Guidance on Agreements with Prospective Purchasers of Contaminated Property,” issued in 1995, has stimulated the development of sites where parties otherwise may have been reluctant to take action. With PPAs, bona fide prospective purchasers are not held responsible for cleaning up sites where they did not contribute

to or worsen contamination. In FY98, 24 PPAs were signed, bringing the total to over 90 agreements reached program-to-date. A PPA survey is being conducted to obtain responses to the program from participants. OSRE is using the data collected through the PPA survey effort to determine: how instrumental PPAs have been in facilitating cleanup and reuse of properties; how effective PPAs have been in meeting the needs of the purchasers and developers; the types of property cleanups and reuse situations in which PPAs have been most useful; and how to improve the PPA process.

Another effort in the redevelopment initiative is the issuance of comfort/status letters. The "Policy on the Issuance of Comfort/Status Letters" was issued in FY97 and has since been used as an administrative tool for facilitating brownfield redevelopment projects. This effort continued in FY98, and preliminary results indicate that since the outset of the effort approximately 300 comfort/status letters have been issued.

4.3.1 Unilateral Administrative Orders Reform

During FY98, EPA continued to implement its reforms relating to the issuance of UAOs. EPA issued 88 UAOs in FY98, an increase of over 30 percent from last year's issuance. The FY96 policy on "Documentation of Reason(s) for Not Issuing CERCLA Section 106 UAOs to All Identified PRPs" provides five acceptable reasons for excluding PRPs from a UAO. These include: 1) lack of evidence of the party's liability; 2) financial non-viability; 3) minor contribution of waste toward the site conditions (e.g., sent a *de minimis* amount of waste to the site); 4) consideration of work that a PRP has already conducted at the site (or has agreed to conduct), especially where such work is equivalent to that PRP's "fair share"; and 5) manageability concerns, particularly where the UAO was already being issued to a large number of PRPs. These reasons must be identified, documented, and made available to those PRPs that comply with the UAO.

4.3.2 Allocation Pilots

Many sites participating in the Allocation Pilot Program that was commenced in May 1995

continued negotiations with neutral allocators in FY98. The Pilot Program allows parties at participating sites to work with a neutral allocator to achieve a non-binding, out of court allocation report, upon which the parties can opt to settle with EPA. An incentive for participation is that EPA is responsible for 100 percent of the orphan share for these sites. Of the nine sites that went forward with the pilot program, five produced allocation reports and the other four are in various stages of the process. Two of the five sites that produced allocation reports have reached settlements directly based on the reports.

4.3.3 Improving PRP Oversight Administration

Under Superfund, EPA is required to monitor the cleanup of hazardous waste sites by responsible parties. Any oversight costs incurred by EPA are recoverable from the responsible parties. In FY98, EPA made oversight billing a priority. EPA implemented actions to improve the management and timeliness of oversight billings and to become current in oversight billings by the end of the fiscal year. The Office of Site Remediation Enforcement (OSRE) and the Office of the Comptroller (OC) developed a methodology, concurred on by the Office of the Inspector General (OIG), to resolve this issue and to improve oversight billing efficiency.

4.3.4 Special Interest Bearing Accounts

In FY96, 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 benefits parties who enter into settlements with EPA at Superfund sites because settlement payments designated for future work will both earn and retain interest. In FY97, EPA updated and supplemented its special accounts guidance with additional documentation requirements to make it easier for Regional Finance Offices to more accurately apply special account monies to past and future response costs. EPA routinely makes use of this reform to facilitate PRP settlement.

In FY98, Regions established 21 special accounts with an aggregate balance of approximately

\$62 million. As of the end of FY98, EPA had opened a total of 115 accounts with an aggregate balance of approximately \$468 million, including over \$399 million in principal and over \$69 million in interest.

4.3.5 De Minimis Settlements

CERCLA defines *de minimis* PRPs as 1) those who have contributed amounts of hazardous waste to a Superfund site that are minimal in volume and toxicity, and 2) innocent owners of hazardous waste facilities. Settlements with such parties must involve only a minor portion of the response costs incurred at the facility.

Since Congress granted EPA express authority to enter into *de minimis* settlements through the Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499), more than 400 *de minimis* settlements have been signed to resolve the potential liability of over 18,000 small party waste contributors. In FY98, EPA concluded 34 *de minimis* settlements at 26 sites with over 2,200 settlers.

4.3.6 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 the past, many incentives have been provided to help PRPs settle claims and cleanup contaminated sites. This reform continues to follow the 1996 Interim Guidance that examined alternative means of orphan share compensation. In FY97, the "Addendum to the 'Interim CERCLA Settlement Policy' issued on December 5, 1994" was enacted to supplement the reform.

The guidance establishes factors addressing potential compromises of CERCLA cost recovery claims based on the existence of a significant orphan share. The size of the orphan share, the PRP's cooperation with the government and other PRPs, and the fairness to all parties must be considered to compromise a claim. An orphan share may be considered as an "inequity" or an "aggravating factor" at sites with an insolvent or defunct party.

Regions will continue to use the "Interim CERCLA Settlement Policy" when cost recovery settlements are less than 100 percent of the response.

EPA made orphan share offers at all eligible RD/RA and removal sites in FY98. The reform was expanded to provide EPA with the opportunity to make orphan share compensation offers during cost recovery negotiations. During the past 3 fiscal years (FY96-98), EPA has offered approximately \$145 million in orphan share compensation at 72 sites.

4.3.7 Municipal Solid Waste (MSW) CERCLA Settlements

In FY98, EPA issued the "Policy for Municipality and Municipal Solid Waste CERCLA Settlements at NPL Co-Disposal Sites." This document states EPA's continued policy of not generally identifying generators and transporters of MSW as potentially responsible parties at NPL sites. In recognition of the strong public interest in reducing contribution litigation, however, the policy identifies a settlement methodology for MSW generators and transporters who seek to resolve their CERCLA liability with the U.S., thereby protecting themselves from third party litigation. In addition, the MSW policy identifies a presumptive settlement range for municipal owners and operators of co-disposal sites on the NPL who desire to settle their Superfund liability. This policy is intended to reduce transaction costs, including those associated with third party litigation, and to encourage global settlements at sites.

4.3.8 Response to Hazardous Substance Release

In FY98, EPA entered into a Memorandum of Understanding (MOU) with Federal Resource Management Agencies – including the Departments of Agriculture, Commerce, Defense, Energy, and Interior – to ensure effective interagency coordination on CERCLA response actions. In addition to EPA and the Coast Guard, these other federal agencies have significant responsibilities and substantial programs for responding, or requiring others to respond, to releases and threatened releases of hazardous substances. Such agencies are known as Federal Resource Managers and have been

delegated the authority under Section 106 of CERCLA to issue administrative orders or seek judicial relief with respect to a release or threatened release of a hazardous substance affecting either natural resources under a Federal Resource Manager's trusteeship, or a vessel or facility subject to the Federal Resource Manager's jurisdiction, custody, or control. Federal Resource Managers are required to obtain EPA or Coast Guard concurrence before each use of Section 106 authority. Federal Resource Managers also are prohibited from using this authority at any vessel or facility where EPA or the Coast Guard is the lead federal agency for the conduct or oversight of a response action. This MOU is intended to ensure that the signatories exercise their authority in a cooperative and integrated fashion, and in a manner to ensure interagency coordination that enhances efficiency and effectiveness.

4.3.9 CERCLA Administrative Settlements

In March 1998, EPA and DOJ jointly issued CERCLA §122(h) guidance and five model settlement documents regarding administrative response cost settlements. The guidance announces a new type of expedited "cashout" settlement for "peripheral parties." The guidance and model agreements offer the possibility of increasing the efficacy and consistency of CERCLA administrative settlements nationally.

4.3.10 Revisions to Model CERCLA RD/RA Consent Decree

In FY98, EPA issued a revised RD/RA Consent Decree. The Model provides new language dealing principally with the subjects of access to Superfund site property and "institutional controls" designed to restrict land and water use on such properties. It is essential to ensure that necessary restrictions on usage of contaminated areas and water sources will remain valid and enforceable even after subsequent purchasers have obtained the property in question. The revisions in this model provide an effective means by which owners can convey the rights of access and enforcement to the United States or other responsible entities.

4.3.11 Risk Sharing

Estimates of the eventual cost of cleaning up the nation's hazardous waste sites highlight the need to support the development of more cost-effective cleanup technologies. Yet potentially responsible parties are sometimes reluctant to implement new technologies due to concerns about having to "pay twice" if the innovative approach fails to achieve the required levels of cleanup. On March 24, 1998, EPA issued the "Guidance for Implementing Superfund Reform Initiative 9A: Risk Sharing," that describes a program designed to share the risk of using selected innovative technologies. The purposes of this initiative are: 1) to encourage the demonstration and use of innovative technologies with the potential to lower costs and/or improve performance at a particular site and at other Superfund sites, and to document these early applications to assist future selection of response actions; 2) to support developers of promising technologies, especially small businesses, by enhancing contracting opportunities with PRPs; and 3) to encourage PRPs to assume a more active role in the development of new technologies for site remediation.

4.3.12 Successful Enforcement and Settlement Accomplishments

Highlights of 14 selected FY98 accomplishments throughout the enforcement program are summarized in Exhibit 4.3-1. Exhibit 4.3-2 presents the successful redevelopment of two Superfund sites.

**Exhibit 4.3-1
Highlights of Successful Enforcement Accomplishments**

<p>Beacon Heights Landfill</p> <p>Connecticut (Region 1)</p> <p>Settlement: Consent Decree (CD003) for PRP-lead Remedial Action (RA) at Operable Units (OUs) 1 & 2 and for cost recovery. The CD was lodged on May 13, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$41,225,000</p>	<p>EPA reached a CD for RA at the Beacon Heights Landfill in Beacon Falls, Connecticut. The CD (CD003) was lodged on May 5, 1998. RA costs are estimated at \$41,225,000. The remedy selected by EPA to address contaminated soils, surface waters, and groundwater included excavation, installation of a perimeter leachate collection system, collection of leachate and both on-site and off-site treatment, and installation of a more extensive groundwater monitoring system.</p> <p>Wastes disposed of at the landfill consist of industrial and municipal waste, including oils, chemical liquids, sludges, solvents, rubber, and plastics. The landfill was added to the NPL in 1983. In 1984, EPA conducted an investigation that revealed two private wells contaminated with benzene and several other solvents, at concentrations exceeding drinking water standards. Groundwater underlying the site, on-site leachate, soils, and surface water were found to be contaminated with volatile organic compounds (VOCs) and lead. In 1985, EPA selected the cleanup plan for OU 1. In 1987, 32 of the more than 70 companies identified by EPA as PRPs agreed to pay for a substantial portion of the cleanup. The landfill cap design was completed in 1992 and construction began in 1993. The Beacon Heights Coalition will continue to monitor and maintain the site for the next 30 years.</p>
<p>GE-Housatonic River</p> <p>Massachusetts (Region 1)</p> <p>Settlement: UAO002 for PRP-lead RA issued June 3, 1998.</p> <p>Estimated Response Value: \$20,000,000</p>	<p>EPA issued a UAO for RA at the GE-Housatonic River site in Pittsfield, Massachusetts. The UAO (UAO002) was issued on June 3, 1998. PRPs gave notice of their intent to comply on August 26, 1998. The estimated cost of the cleanup is \$20,000,000.</p> <p>For over two decades, the presence of polychlorinated biphenyls (PCBs) contamination in river sediments, soils, and groundwater has been documented through a series of investigations conducted by GE, the Massachusetts Department of Environmental Protection (MA DEP), and EPA. Upon discovery of PCB contamination in river sediments and fish tissues in 1982, the MA DEP closed the Housatonic River from Dalton, Massachusetts to the Connecticut border to all but catch-and-release fishing. In 1997, EPA issued an order to conduct source control, and a comprehensive cleanup plan and schedule is in negotiations with all related parties.</p>

<p>Laurel Park, Inc.</p> <p>Connecticut (Region 1)</p> <p>Settlement: CD005 for PRP-lead RA and cost recovery at OU 1. This CD was lodged on May 13, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$21,225,000</p>	<p>EPA reached a CD for remedial activities at the Laurel Park site in Naugatuck, Connecticut. The CD (CD005) was lodged on May 13, 1998. The Estimated Response Value of these actions is \$21,225,000. Under the CD, PRPs will implement RAs that include capping the landfill, implementing a leachate collection system, and installing a groundwater extraction system to remove highly contaminated shallow groundwater. Treatment of the contaminated materials will be conducted at the Naugatuck Water Pollution Control Facility.</p> <p>This site was contaminated with various organic and inorganic industrial waste, leading to contamination of on-site soil and leachate with chemicals, including dichloroethane and benzene. Groundwater and surface water are also contaminated with heavy metals and VOCs. One of the PRPs entered into an Administrative Order on Consent (AOC001) with EPA in 1985 to conduct an investigation into the type and extent of contamination at the site. In 1987, EPA issued an AOC (AOC002) to PRPs for construction of a water line. In 1989, the state and a PRP agreed to equally fund the installation of a sewer line to convey leachate from the landfill. In 1991, 19 PRPs signed a CD (CD002) and the accompanying AOC (AOC004) to conduct the technical design of the remedy.</p>
<p>Nyanza Chemical Waste</p> <p>Massachusetts (Region 1)</p> <p>Settlement: CD003 for RD/RA at OUs 3 and 4 and for cost recovery. The CD was lodged on April 30, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$43,500,000</p>	<p>EPA reached a CD for remedial activities at multiple OUs at the Nyanza Chemical Waste site in Ashland, Massachusetts. The CD (CD003) was lodged on April 30, 1998 and entered by the court on June 22, 1998. The Estimated Response Value of these actions is \$43,500,000. Excavation, treatment, and disposal of the mercury-laden sediment at OU 3 shall occur as a result of the CD. OU 3 also covers the treatment of water resulting from the de-watering of contaminated sediments. OU 4 consists of an investigation into contamination of the nearby Sudbury River. Any remedial work that may occur regarding the Sudbury River will be done under OU 4.</p> <p>PRPs generated large volumes of industrial wastewater containing high levels of acids and numerous organic and inorganic chemicals, including mercury. Some of the wastes were partially treated and discharged into the Sudbury River through a small stream, and over 45,000 tons of chemical sludges generated by Nyanza's wastewater treatment processes, along with other chemical wastes, were buried on site. Contamination affects soil, groundwater, and surface water. Mercury-laden particulates may have been dissipated into the air from exposed sludge waste. EPA named the site to the NPL in 1983.</p>

<p>Old Southington Landfill</p> <p>Connecticut (Region 1)</p> <p>Settlement: CD001 for PRP-lead RA at OU 1 lodged on March 12, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$19,700,000</p>	<p>EPA reached a CD with 250 settling parties to perform RA at the Old Southington Landfill site in Southington, Connecticut. The CD (CD001) was lodged on March 12, 1998 and entered by the court on June 12, 1998. The estimated cost of these actions is \$19,700,000. Under this settlement, PRPs will address the source of contamination by removing all of the residential and commercial structures from the site. In addition, PRPs will conduct the excavation and consolidation of contaminated materials into lined cell beneath a newly-built capping system. OU 1 includes a gas collection system throughout the entire area.</p> <p>This site operated as a municipal and industrial landfill, accepting mixed residential, commercial, and industrial solid and liquid wastes. Significant concentrations of VOCs have been measured at the site. VOCs were also detected in the groundwater, soil, and surface water. In 1987, EPA issued an AOC to three parties responsible for site contamination to perform a study into the nature and extent of contamination at the site, to determine potential risks to the public and the environment, and to evaluate feasible cleanup alternatives. In early 1993, 320 new parties were named as potentially responsible.</p>
<p>Helen Kramer Landfill</p> <p>New Jersey (Region 2)</p> <p>Settlement: CD001 for cost recovery for both combined Remedial RI/FS and RA at OU 1 lodged on May 8, 1998 at Federal District Court.</p> <p>Estimated Response Value: \$95,000,000</p>	<p>EPA reached a CD for recovery of past cleanup costs at the Helen Kramer Landfill site in Mantua Township, New Jersey. The CD (CD001) was lodged on May 8, 1998. Past costs recovered by the settlement are estimated at \$95,000,000. Actions under the settlement include remediation of on-site lagoons, pretreatment of leachate from the collection trench prior to discharge to the local utilities authority, and implementation of surface water controls.</p> <p>This 90-acre site was once considered one the nation's worst hazardous waste sites. Several types of wastes were deposited at the landfill during its 18 years of use, including municipal wastes, septage, industrial wastes, and hospital wastes. Industrial wastes included sludges, waste oils, solvents, chemical intermediates, pesticides, plastics, acids and bases, heavy metals, catalysts, and paints and pigments. The landfill ceased operation in 1981 through court-ordered closure, and the site was placed on the NPL in September 1983. Construction of the RA began in February 1990 and was completed in 1994. Operation and Maintenance activities are ongoing.</p>

<p>NL Industries</p> <p>New Jersey (Region 2)</p> <p>Settlement: CD001 for cost recovery and for PRP-lead RD/RA at OUs 1 and 2. The CD was referred on September 29, 1998.</p> <p>Estimated Response Value: \$22,515,064</p>	<p>EPA reached a CD for RD/RA and for cost recovery for removal actions at the NL Industries site in Pedricktown, New Jersey. The CD (CD001) was referred on September 29, 1998. The Estimated Response Value of the actions is \$22,515,064. Under this settlement, RAs at OU 1 consist of excavating all lead-contaminated soils, treating these soils via solidification/stabilization, and placing the treated soils into an on-site landfill. OU 2 is to address piles of slag and lead oxide, as well as debris and contaminated surfaces, standing waters, and sediments.</p> <p>NL Industries recycled lead from spent automotive batteries. The plastic and rubber waste materials that are byproducts of the battery-crushing operation were placed in an on-site membrane-lined landfill. The landfill also contains slag and contaminated soils. In 1982, the state reached an agreement with NL Industries to clean up the site, conduct groundwater monitoring, and install a groundwater abatement system. In 1986, NL Industries signed an AOC (AOC001) with EPA under which the company agreed to investigate the site. In June 1996, a group of PRPs signed an AOC (AOC003) with EPA, requiring that they design the remedy selected in the 1994 Record of Decision (ROD).</p>
<p>Tonolli Corp.</p> <p>Pennsylvania (Region 3)</p> <p>Settlement: CD002 for PRP-lead RA at OU 1 lodged on March 4, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$24,000,000</p>	<p>EPA reached a CD for RA at the Tonolli Corp. site in Nesquehoning, Pennsylvania. The CD (CD002) was lodged on March 4, 1998. The estimated cost for the action is \$24,000,000. The selected RA addresses the contaminated media present on-site, including battery piles, on-site structures, soil, sediment, groundwater, and surface water. The RA includes transporting and treating battery wastes off-site, excavation of contaminated soils, disposal of stabilized wastes into the on-site landfill, backfilling both on-site and off-site excavated areas with clean soil, monitoring groundwater, and implementing institutional controls to prevent exposure to landfill materials.</p> <p>This site operated as a secondary lead smelter and lead-acid battery recycling facility. Contaminants such as lead, arsenic, cadmium, and chromium from the former smelter and recycling operations were found in on-site soils and monitoring wells. The RI/FS was initiated in 1989 by a group of PRPs. In 1993, EPA issued a ROD and the RD commenced in 1996. In 1997, under a Consent Order with EPA, PRPs excavated and removed more than 3.5 million pounds of recyclable materials from the site.</p>

<p>Buckeye Reclamation</p> <p>Ohio (Region 5)</p> <p>Settlement: CD002 for PRP-lead RA at OU 1 lodged on March 12, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$23,000,000</p>	<p>EPA reached a CD for RA at the Buckeye Reclamation site in St. Clairsville, Ohio. The CD (CD002) was lodged on March 12, 1998 and entered by the court on July 24, 1998. The action is estimated to cost \$23,000,000. CD002 requires the settlers to design and implement remedies selected at OU 1. These remedies focus on the treatment of contaminated surface and groundwaters, and elimination of exposure pathways to the contaminated surface soils. A solid waste landfill cap will be constructed, along with the collection and treatment of groundwater and surface leachate.</p> <p>Originally, the site was used to dispose of coal mine refuse that was generated by deep mining operations. Subsequently, the site operated as a sanitary landfill and accepted municipal commercial waste for disposal. Industrial wastes, including sludges and liquids, were also accepted at the site. Leachate, groundwater, and soil in the site vicinity contain elevated levels of heavy metals, low levels of polyaromatic hydrocarbons (PAHs), and low levels of VOCs. The RI/FS was completed in 1990, leading to a 1991 ROD for the cleanup. Fourteen PRPs signed an AOC (AOC002) in 1992 to conduct the RD.</p>
<p>Fields Brook</p> <p>Ohio (Region 5)</p> <p>Settlement: UAO002 issued on December 17, 1997 for PRP-lead RD/RA at OUs 1 and 4, and for a five-year remedy assessment.</p> <p>Estimated Response Value: \$25,000,000</p>	<p>EPA issued a UAO for RD/RA at the Fields Brook site in Ashtabula, Ohio, on December 17, 1997. PRPs gave notice of their intent to comply with the UAO (UAO002) on February 11, 1998. The cost of this action is estimated at \$25,000,000. The selected remedy includes excavation of contaminated sediment from Fields Brook, temporary storage and de-watering as well as thermal treatment of a portion of the sediments, and the solidification and landfilling of the remainder of the sediments. Subsequent water treatment is also included as part of the remedy.</p> <p>Multiple facilities operated at this site and have yielded contaminants affecting sediments and soils. The contaminants are highly varied and include PCBs, VOCs, PAHs, heavy metals, and phthalates. The initial Remedial Investigation was completed in 1985. A ROD was issued in 1986 for OU 1. In 1989, the PRPs agreed to design a remedy, complete the RI, and assess cleanup alternatives for the site. When the Feasibility Study was finalized in early 1997, EPA issued seven UAOs to PRPs to design and implement the site cleanup. This order encompasses activities to be performed at OUs 1 and 4.</p>

<p>Stickney Avenue Landfill</p> <p>Ohio (Region 5)</p> <p>Settlement: AOC001 for PRP-lead removal signed February 27, 1998.</p> <p>Estimated Response Value: \$26,000,000</p>	<p>EPA signed an AOC at the Stickney Avenue Landfill in Toledo, Ohio. The AOC (AOC001) was signed on February 27, 1998. Under the order, PRPs will address site contamination through a removal action. Estimated costs for this action are \$26,000,000. AOC001 requires the PRPs to install a multi-layer cover system that includes landfill gas collection and groundwater monitoring, and to undertake an extensive monitoring program to evaluate the long-term effectiveness of the cover system.</p> <p>The Stickney site was used for the disposal of municipal, commercial, and industrial waste. Site contaminants include significant volumes of heavy metals, solvents, and oily wastes. These contaminants, sewer overflows, agricultural pollution, and runoff from other area dump sites have in totality contributed to severe pollution of the Ottawa River, Maumee Bay, and Lake Erie.</p>
<p>Hayford Bridge Road Groundwater Site 1</p> <p>Missouri (Region 7)</p> <p>Settlement: CD002 for recovery of oversight costs and cost recovery for combined RI/FS at OU 1 lodged on February 27, 1998 at Federal District Court.</p> <p>Estimated Response Value: \$2,500,000</p>	<p>EPA reached a CD (CD002) with 22 settling parties for recovery of oversight costs and cost recovery at the Hayford Bridge Road Groundwater site in St. Charles, Missouri, on February 27, 1998. The estimated costs for the action are \$2,500,000.</p> <p>This site is contaminated with organics, PCBs, and VOCs. EPA issued an Administrative Order under the Clean Water Act in 1980 requiring excavation of a pond area that was contaminated with PCBs. EPA issued an AOC (AOC002) in September 1982, requiring the PRP to design and implement a monitoring, sampling, and analysis plan to characterize the nature and extent of PCB contamination of the soil and groundwater. In 1985, an RI/FS was begun to determine the nature and extent of contamination and identify alternatives for RA. The ROD was issued in 1988, and in 1990, EPA and one of the PRPs signed a CD (CD001) to initiate remedial activities.</p>

<p>Fresno Municipal Sanitary Landfill</p> <p>California (Region 9)</p> <p>Settlement: CD001 for PRP-lead RI/FS and RD/RA and cost recovery at OU 1 lodged on February 25, 1998 at the Federal District Court.</p> <p>Estimated Response Value: \$37,454,599</p>	<p>EPA reached a CD for remedial activities at Fresno Municipal Sanitary Landfill in Fresno, California. The CD (CD001) was lodged on February 25, 1998. The cost of these actions is estimated at \$37,454,599. The RAs covered by the settlement will address OU 1, which focuses on the collection and treatment of landfill gases and leachates. PRPs will conduct response activities including capping, venting, treating landfill gas on-site, collecting gas condensate for off-site treatment, and providing a contingent remedy, including a leachate collection system.</p> <p>This site was used as a landfill for over 50 years by the City of Fresno, and has both air and groundwater contamination. Air at the site contains variable concentrations of methane, vinyl chloride, and VOCs, and the groundwater is also contaminated with VOCs. After a 1983 investigation by the California Department of Environmental Quality revealed the contamination, the City of Fresno installed wells around the perimeter of the landfill to monitor methane and groundwater. The city also built barriers on two sides of the landfill to prevent contaminants from migrating off-site to nearby homes. The city began the removal of migrating landfill gas containing VOCs in 1990 and completed the action in 1991. The ROD for OU 1 was issued in 1993.</p>
<p>Operating Industries, Inc.</p> <p>California (Region 9)</p> <p>Settlement: AOC002 for PRP-lead RA at OU 3 signed September 30, 1998.</p> <p>Estimated Response Value: \$24,900,001</p>	<p>EPA signed an AOC with 80 <i>de minimis</i> parties for RA at the Operating Industries, Inc. site in Monterey Park, California. The AOC (AOC002) was signed on September 30, 1998. The estimated cost of this action is \$24,900,001. The remedy for OU 3 addresses the issue of landfill gas migration control. The gas control RA will be integrated with the final site remedy as the component for collecting and destroying landfill gas that would otherwise be released from the site.</p> <p>The landfill operated for close to 30 years and was closed in late 1984. Many wastes have been disposed of at this site, including residential and commercial refuse, liquid wastes, and various hazardous wastes. Air, groundwater, soil, and leachate at the site contain various organic and inorganic compounds. The ROD for final remedy was signed in September 1996.</p>

Source: Office of Enforcement and Compliance Assistance.

Exhibit 4.3-2
Highlights of Successfully Redeveloped Contaminated Sites

Industri-Plex Superfund Site (Massachusetts, Region 1): This site is a successful example of EPA's effort to achieve both remediation and reuse of a Superfund site. The site includes approximately 245 acres, of which about 110 acres contain heavy metals (lead, arsenic, and chromium) in the soils. Additionally, benzene and toluene hot spots exist in a portion of the groundwater. The remedy for the site is construction of a variety of covers over the contaminated soils, measures to address the groundwater contamination, and institutional controls. A group of responsible private parties are performing and paying for the remedy. Construction of the covers was completed in 1998. Groundwater cleanup is ongoing, and institutional controls to ensure the long-term protectiveness of the remedy are being completed.

As remediation has been proceeding, significant portions of the site are being developed or redeveloped for economic reuse. EPA has entered into PPAs with purchasers of three different parcels of the site that protect those parties from Superfund liability. One agreement is with a private company that is operating a recycling center. A second is with three state agencies who are constructing and operating a regional transportation center (RTC) consisting of a commuter rail station, a commuter express bus facility with service to Logan Airport and downtown Boston, and a new interchange from the adjacent Interstate highway onto the site. The third agreement is with a private company that will be constructing and operating a large retail store. A fourth agreement with a private company to develop an office park on yet another parcel of the site is currently being negotiated. In addition, the City of Woburn is upgrading and extending the main road that runs through the site.

In addition to the PPAs, several factors contributed significantly to the successful reuse efforts. EPA's remedy allowed the landowners to choose among several equally protective covers to remediate the contaminated soils, including a soil/grass cover, an asphalt cover, or a building foundation. These options gave landowners considerable flexibility in reusing and remediating their properties.

Further, as part of the consent decree, EPA, the responsible parties, and the City of Woburn formed a custodial trust to hold title to, manage, and develop about 120 acres of the site contributed by the prior owner as "payment" of his share of the remediation costs. The trustee has worked actively to promote development of that property. One 29-acre parcel sold for \$11.5 million for use as a large retail store, while another 50-acre parcel will soon be sold for use as an office park development.

The efforts of EPA, the responsible parties, the City of Woburn, and the custodial trustee have all contributed to the reuse of the site. Aside from new jobs and additional tax revenues for the city, reuse has had considerable environmental benefits. In constructing the RTC, the three state agencies will be installing a cap three-feet thicker than required by EPA. The RTC also will remove 2,400 vehicles from entering Boston daily, reducing traffic and helping the state comply with the Clean Air Act. Additionally, keeping viable companies and state agencies operating at the site helps ensure that the protective covers will be properly maintained and repaired.

Libby Groundwater Superfund Site, (Montana, Region 8): The site is located in northwestern Montana in and adjacent to the City of Libby. The site was originally part of a lumber and plywood mill complex that produced timbers and poles that were treated with creosote and pentachlorophenol, along with carrier oils. Groundwater contamination was first detected in domestic wells within the City of Libby in 1979 and the site was placed on the NPL in 1983. As of August 1998, the remedy is complete, except for the long-term groundwater bio-treatment process. This ongoing treatment is expected to continue for a significant period of time, although response activities at the portion of the site at issue (the Property) are limited to groundwater monitoring.

The Property consists of several parcels of land within the defined boundary of the Libby Site and is approximately 13 acres in size. The Property contains a park, several buildings formerly utilized as a motel, a convenience store, and a chiropractor's office. The site owner, Stimson Timber Company, has proposed to sell part of the site to a new developer to build a shopping center. The new companies, P.O.B. Montgomery and Albertson's, are national retail chains and have requested a PPA prior to accepting title. The Buyers' Counsel has indicated that a covenant not to sue and contribution protection would provide the assurance needed to purchase this property and to become involved in this community.

The buyers have stated that they are willing to compensate EPA, in accordance with EPA guidance, for the costs associated with attaining a PPA, including consideration of direct and indirect benefits to EPA. The prospective buyers will conduct the remaining work needed at the Property that includes the abandonment of one monitoring well and the modification of four monitoring wells to protect against damage from surface activities at the Property. The buyers have proposed to enter into a PPA with EPA upon purchasing the Property and have agreed to perform this work, as well as pay for oversight costs and the administrative costs of generating the settlement.

The buyers would like to develop approximately 60,000 square feet of retail development, that will be occupied, in part, by national chain stores. The development will generate approximately 100 permanent jobs for the community, in addition to many short term construction jobs. Further, the Libby City Council, the Lincoln County Board of Commissioners, and the Lincoln County Economic Development Council have expressed "great excitement" and are in strong support of this proposed retail development site. Improvements will have a value of approximately \$4,800,000 for the purpose of the local tax base and \$17,000,000 annually in sales. Such economic regeneration is a significant consideration, as the Property is located in a blighted, economically depressed community. On August 4, 1998 and August 7, 1998, P.O.B. and Albertson's, respectively, signed the PPA. On August 12, 1998, EPA signed the agreement, and the PPA will enter into a 30-day public comment period once DOJ approves the settlement.

Source: Office of Enforcement and Compliance Assistance.