



Highlights of [GAO-10-277](#), a report to congressional requesters

## Why GAO Did This Study

In the 1990s, creosote was discovered under a residential neighborhood in Manville, New Jersey. Creosote, a mixture of chemicals, is used to preserve wood products, such as railroad ties. Some of the chemicals in creosote may cause cancer, according to the Environmental Protection Agency (EPA). EPA found that creosote from a former wood-treatment facility (known as the Federal Creosote site) had contaminated soil and groundwater at the site. Under the Superfund program—the federal government’s principal program to clean up hazardous waste—EPA assessed site risks, selected remedies, and worked with the U.S. Army Corps of Engineers to clean up the site. As of May 2009, construction of EPA’s remedies for the site had been completed; however, total site costs were almost \$340 million and remedial construction costs had exceeded original estimates.

In this context, GAO was asked to examine (1) how EPA assessed risks and selected remedies for the site, and what priority EPA gave to site cleanup; (2) what factors contributed to the difference between the estimated and actual costs; and (3) how EPA and the Corps divided responsibilities for site work. GAO analyzed EPA and Corps documents and data on the cleanup effort and its costs, and interviewed officials from these agencies. This report contains no recommendations. EPA generally agreed with GAO’s findings on the agency’s cleanup costs and actions, while the U.S. Army Corps of Engineers had no comments.

[View GAO-10-277](#) or [key components](#). For more information, contact John B. Stephenson at (202) 512-3841 or [stephensonj@gao.gov](mailto:stephensonj@gao.gov).

## SUPERFUND

### Information on Cost and Other Issues Related to the Cleanup of the Federal Creosote Site

#### What GAO Found

The extent of the contamination in a residential area at the Federal Creosote site was the primary factor influencing EPA’s risk assessment conclusions, remedy selection decisions, and how EPA prioritized site work, according to site documents and agency officials. EPA assessed site contamination through multiple rounds of evaluation and concluded that soil and groundwater contamination levels were high enough that EPA needed to take action. Then, EPA evaluated remedies to achieve cleanup goals that it had established for the site and that were consistent with its residential use. EPA selected off-site treatment and disposal of the contaminated soil and long-term monitoring of the groundwater contamination as the remedies for the site. In selecting these remedies, EPA considered a range of alternatives but ultimately determined that certain options would be potentially infeasible or ineffective due to the residential setting. For example, EPA chose not to implement certain alternatives on-site because the agency found that there was insufficient space and they would be too disruptive to nearby residents. In addition, EPA chose not to implement certain alternatives because the agency found that they would be unlikely to achieve the cleanup goals for the site, especially considering the high level of treatment required to allow for unrestricted residential use of the area and the high levels of contamination found at the site. EPA made cleanup of the site a high priority because the contamination was in a residential area. For example, EPA took steps to shorten the cleanup period and prioritized the use of regional Superfund resources on the Federal Creosote site over other sites in the region.

The \$338 million in total site costs exceeded EPA’s estimated remedial construction costs of \$105 million by about \$233 million, primarily because EPA’s estimates focused only on construction costs, and EPA discovered additional contamination during the cleanup effort. EPA prepared preliminary cost estimates during the remedy selection process; however, EPA requires that these estimates include only the costs associated with implementing different remedies it was considering, not all site costs. Also, as a result of the movement of contamination in the ground and sampling limitations during EPA’s site investigation, a greater-than-expected amount of contamination was discovered during the cleanup effort, which increased costs. Other factors, such as contractor fraud, affected total site costs to a lesser extent.

EPA was responsible for managing the overall site cleanup and community relations, while the Corps was responsible for implementing the cleanup. EPA dedicated a full-time staff member to manage the site cleanup who, according to EPA, maintained a significant on-site presence to ensure that the project remained on schedule and was adequately funded and to work with residents. EPA also oversaw the work of the Corps and its costs. To conduct the actual cleanup work, the Corps hired contractors to design or implement cleanup activities who, in turn, hired subcontractors for some tasks. The Corps oversaw the activities and costs of its primary contractors but, according to Corps officials, was less involved in selecting and overseeing subcontractors.