



Highlights of [GAO-07-761](#), a report to the Subcommittee on Energy and Water Development and Related Agencies, Committee on Appropriations, House of Representatives

Why GAO Did This Study

Since the 1940s, the development of nuclear weapons technologies has generated transuranic wastes—materials contaminated by certain man-made radioactive elements. These wastes can remain dangerous for thousands of years. Until 1970, the Department of Energy's (DOE) predecessors buried these wastes in shallow pits and trenches. Today, state officials and communities near DOE's major disposal sites have expressed concerns that such wastes might contaminate important ground and surface water resources.

GAO was asked to (1) determine the legal requirements and policies affecting DOE's efforts to address transuranic wastes buried before 1970, (2) determine what DOE is doing to address sites where these transuranic wastes are buried, and (3) assess the reliability of DOE's estimated costs to address these sites.

We met with federal and state officials at five DOE sites containing buried transuranic wastes, reviewed environmental laws and guidance, and obtained buried waste cleanup cost estimates from each site.

In commenting on this report, DOE generally agreed with our findings, and provided some clarifying comments.

What GAO Recommends

GAO is not making recommendations at this time.

www.gao.gov/cgi-bin/getrpt?GAO-07-761.

To view the full product, including the scope and methodology, click on the link above. For more information, contact James Cosgrove, 202-512-3841 or cosgrovej@gao.gov.

NUCLEAR WASTE

Plans for Addressing Most Buried Transuranic Wastes Are Not Final and Preliminary Cost Estimates Will Likely Increase

What GAO Found

Cleanup agreements with federal and state agencies require DOE to investigate and clean up the five major DOE sites where transuranic and other hazardous wastes were buried. While DOE has long considered pre-1970s buried wastes permanently disposed, in 1989, the sites where most of these wastes are buried were listed as "Superfund" sites subject to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). CERCLA requires that DOE determine the nature and extent of contamination at each waste site and determine what cleanup action, if any, is needed to protect human health and the environment. All five disposal sites are scheduled to have cleanup completed by 2025.

DOE is addressing the transuranic wastes buried at two sites, but it is still investigating cleanup options at the other three locations. At Oak Ridge and Savannah River, DOE is leaving the transuranic wastes in place under an earthen cap designed to prevent the wastes from migrating and taking steps to prevent animal and human access to the sites. In contrast, DOE is still investigating cleanup options at the Idaho National Laboratory, the Hanford Site, and the Los Alamos National Laboratory—where about 90 percent of DOE's transuranic wastes are buried. DOE has begun to remove a small amount of waste at the Idaho and Hanford sites, but how much buried transuranic wastes eventually will be removed or treated in place at these sites is currently undetermined.

DOE's preliminary estimate of the cost to address the five waste sites where transuranic wastes are buried is about \$1.6 billion in 2006 dollars, but the estimate is likely to increase for several reasons. For example, the estimates reflect the costs of leaving most waste under earthen barriers—typically the least expensive approach. If DOE is required to retrieve substantial portions of these wastes, costs would increase dramatically. In addition, the estimates exclude unknown costs, such as the cost of disposing wastes off-site, if necessary. For example, DOE's lifecycle cost estimate to remove transuranic wastes buried near the Columbia River at the Hanford site could triple once options and costs for disposal are fully evaluated. As DOE further evaluates the risks, benefits, and costs of cleanup options, its policies require it to improve the reliability of cost estimates. Thus, GAO is not making recommendations at this time.