May 2004

DOD OPERATIONAL RANGES

More Reliable Cleanup Cost Estimates and a Proactive Approach to Identifying Contamination Are Needed

GAO Highlights

Highlights of GAO-04-601, a report to congressional requesters

Why GAO Did This Study

For decades, the Department of Defense (DOD) has tested and fired munitions on more than 24 million acres of operational ranges. Munition constituents such as lead, trinitrotoluene (TNT), and perchlorate may cause various health effects, including cancer. Concerned about the potential cost to clean up munitions, Congress required DOD to estimate the cost to clean up its operational ranges.

You asked GAO to determine (1) how DOD identified the location and last use of operational ranges and the basis for DOD's cost estimates for cleaning up those ranges; and (2) DOD's policy to address contaminants linked to the use of munitions on operational ranges and, where contaminants such as perchlorate have been detected, what corrective actions the military services have taken.

What GAO Recommends

GAO recommends that DOD (1) revise its cost estimates for the cleanup of operational ranges using its most complete range inventory and a consistent estimating methodology, and (2) provide specific funding for sampling at sites where perchlorate contamination is likely, in accordance with DOD's policy requiring sampling.

In commenting on this report, DOD disagreed with GAO's findings and recommendations. GAO believes its findings are sound and its recommendations are appropriate.

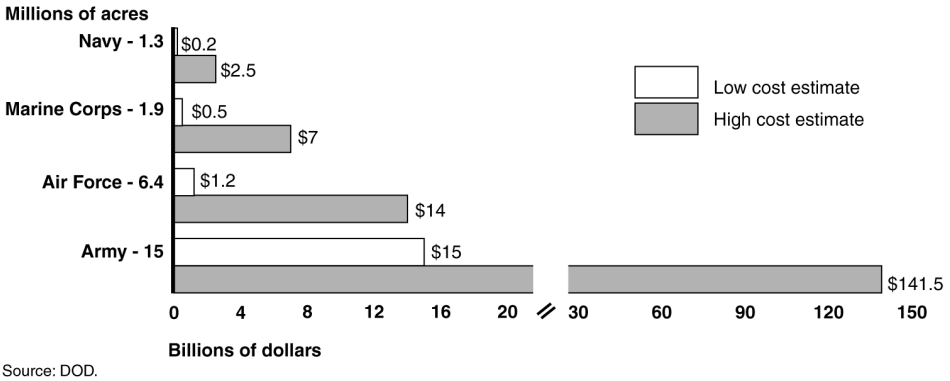
www.gao.gov/cgi-bin/getrpt?GAO-04-601.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu MIttal at (202) 512-3841 or MittalA@gao.gov.

What GAO Found

DOD identified the location and status of its operational ranges based on inventory data developed by the individual military services. However, the reliability of DOD's inventory is questionable because the services did not use a common framework to collect and analyze data on the number of existing operational ranges. Because DOD's cost estimates to clean up its operational ranges were based on individual service calculations that combined inventory data with unvalidated DOD cost assumptions, various service assumptions, and computer-generated cost rates, these cost estimates are also questionable. Specifically, GAO found that each service compiled inventory data using various methodologies over different time periods and developed cost estimates using a mix of differing assumptions and estimates, along with actual data. As a result, the services' estimates to clean up an acre of highly contaminated land vary from about $800 for the Air Force to about $7,600 for the Army. The figure below shows high and low cost estimates and range acreage used to estimate costs, by service.

High and Low Cleanup Cost Estimates and Total Range Acreage by Service



Source: DOD.

DOD does not have a comprehensive policy requiring sampling or cleanup on operational ranges for the more than 200 chemicals associated with military munitions. However, when required by the Safe Drinking Water Act or other environmental laws, DOD has sampled and cleaned up munitions and munitions constituents. With regard to perchlorate, DOD has issued sampling policies but cannot assure funding is provided for such sampling. In some cases, DOD has sampled for perchlorate when required under the Safe Drinking Water Act's Unregulated Contaminant Monitoring Regulation and for other contaminants when directed by state environmental agencies. However, DOD generally has not independently taken actions specifically directed at cleaning up munitions contaminants, such as perchlorate, on operational ranges when they have been detected.