

GAO
Accountability · Integrity · Reliability

Highlights

Highlights of [GAO-07-221](#), a report to the Chairman and Ranking Minority Member, Committee on Energy and Natural Resources, U.S. Senate

Why GAO Did This Study

GAO has reported on limitations in the management of U.S. low-level radioactive waste (LLRW). LLRW ranges from very low-activity to higher-activity waste. To identify potential approaches to overcome these limitations, GAO was asked to examine the extent to which other countries have (1) LLRW inventory databases, (2) timely removal of higher-activity LLRW from waste generator sites, (3) disposition options for all LLRW, and (4) requirements that LLRW generators have financial reserves to cover waste disposition costs, as well as any other approaches that might improve U.S. LLRW management. GAO primarily relied on a survey of 18 countries representing leading LLRW generators to identify their management approaches and to compare them with U.S. survey results and with approaches suggested by LLRW generators, disposal operators, and regulators in the United States.

What GAO Recommends

GAO recommends that the Nuclear Regulatory Commission (NRC) and DOE evaluate and report on the usefulness of (1) adopting the identified management approaches, and the steps and any authorities necessary to implement them; and (2) developing a U.S. radioactive waste management plan, and the costs, steps, and any authorities necessary to do so. NRC and DOE generally agreed with these recommendations, but raised a number of issues regarding their implementation.

www.gao.gov/cgi-bin/getrpt?GAO-07-221.

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

LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT

Approaches Used by Foreign Countries May Provide Useful Lessons for Managing U.S. Radioactive Waste

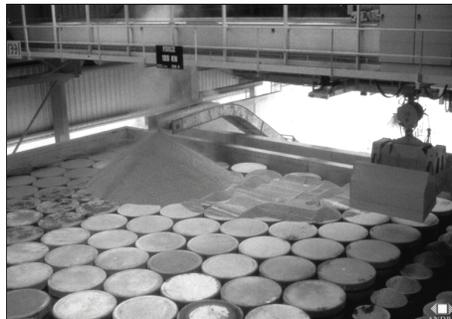
What GAO Found

Academic, industrial, medical, utility, and government entities in the United States, particularly the Department of Energy (DOE), disposed of at least 15 million cubic feet of LLRW in 2005. This waste includes debris, rubble, soils, paper, liquid, metals, and clothing that have been exposed to radioactivity or contaminated with radioactive material, and sealed radiological sources that are no longer useful for industrial or other applications (disused). Other countries that have nuclear reactor units and use radioactive materials in other ways manage the residual LLRW in some ways that are different than in the United States. Of the countries surveyed, GAO found that:

- Most countries indicated they have national radioactive waste inventory databases that include information on all waste generators, waste types, storage locations, and disused sealed radiological sources, and that they use them to forecast future disposal capacity needs.
- Most countries indicated they facilitate the timely removal of higher-activity LLRW, essentially disused sealed radiological sources, from generator sites to enhance safety and security, including requiring the return of a disused source to a source supplier.
- Most countries indicated they have disposal options for lower-activity LLRW, central storage options for higher-activity LLRW, and alternative disposal options for very low-level radioactive waste that in most cases does not require an exemption review by a nuclear regulatory authority.
- Half the countries indicated they impose financial assurance requirements on all waste generators to cover disposition costs, and most of these countries also use other approaches to reduce government costs to recover higher-activity LLRW, such as requiring a disposal fee at the time that a sealed radiological source is purchased.

GAO also found that most countries surveyed use national radioactive waste plans to guide the management of their radioactive wastes. Many representatives from LLRW generators, disposal operators, regulators, and others told GAO that the application of similar approaches to those used by other countries might improve the management of U.S. radioactive waste.

An Interior and Exterior View of the LLRW Disposal Facility in France



Source: French National Radioactive Waste Management Agency (Agence nationale pour la gestion des déchets radioactifs—Andra-FRL Productions).