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NUCLEAR SECURITY

DOE Needs Better Information to Guide Its Expanded Recovery of Sealed Radiological Sources

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Highlights

Highlights of GAO-05-967, a report to the Chairman, Committee on Energy and Natural Resources, U.S. Senate

Why GAO Did This Study

Concerns remain over the control of sealed radiological sources, widely used in many industrial and medical devices and applications. The Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), and states have responsibilities for ensuring the safe and secure use and eventual disposal of these sources as low-level radioactive wastes. DOE must ensure disposal availability for greater-than-class C (GTCC) waste; states must do so for non-GTCC waste, that is, classes A, B, and C waste. NRC and DOE also collaborate to identify and recover unwanted sources that are not safe or secure. GAO examined DOE's (1) efforts to recover unwanted sources and develop a GTCC waste disposal option, (2) actions to recover and dispose of non-GTCC source waste, and (3) ability to identify sources for recovery and disposal.

What GAO Recommends

GAO recommends that DOE and NRC evaluate and report on the cost implications of DOE's recovery and disposal of non-GTCC waste, options to recoup these DOE costs from licensees, the feasibility of using DOE disposal sites, and how a national source tracking system can be designed and implemented to improve DOE's recovery and disposal efforts. DOE generally supported GAO's recommendations. NRC found the report well written and balanced, but did not agree or disagree with GAO's recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-05-967.

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.

What GAO Found

DOE has increased emphasis on its source recovery project and begun the process of identifying disposal options for GTCC waste. DOE transferred project responsibilities to another office that has given the project higher priority and accelerated DOE's recovery efforts. DOE exceeded an earlier goal for recovering sources and has now collected over 10,800 of them. This recovery has been facilitated by additional project funding support and DOE's resolving a shortage of storage space for certain sources. In May 2005, DOE issued a notice of intent to prepare an environmental impact statement to assess GTCC waste disposal options; however, DOE has not yet determined when a disposal site might be made available.

DOE has expanded the scope of its recovery effort to include non-GTCC waste from sealed radiological sources, a change that could increase DOE expenditures. DOE recovered and commercially disposed of 443 of these sources from a bankrupt firm, at a cost to DOE of about $581,000. Given that unwanted sources in storage present higher vulnerabilities, DOE might need to recover more of them in the future if the commercial disposal site that currently accepts this non-GTCC waste from most states ceases to do so as planned in 2008. Lacking a commercial disposal option, DOE anticipates storing this waste, rather than disposing of it at DOE sites, because, among other reasons, it does not want to undermine the responsibility the Congress gave the states to provide disposal availability for non-GTCC waste.

DOE lacks information that would assist its efforts to identify and recover unwanted sealed radiological sources that may pose a safety and security risk. DOE has useful information on the sources in its possession, including recovered sources. However, DOE does not know how many sources might need recovery and how much disposal capacity is needed for GTCC waste. NRC is developing a national source tracking system that would not be useful for DOE's source recovery efforts because it is only designed to track individual sources with high radioactivity. According to DOE, nearly all of the sites where it has recovered sources contained individual sources with lesser radioactivity than would be tracked by NRC, but their combined radioactivity posed enough of a risk to warrant their recovery by DOE.

DOE Personnel Packaging a Sealed Radiological Source in a Disposal Drum

Source: GAO.

Pictured left to right: A sealed source being removed (in pliers) from a shielded storage container at a recovery site; the interior of a multifunction container used for transport, storage, and disposal; and the process of closing the steel pipe component after the source has been loaded into the multifunction container.