



Highlights of [GAO-08-72](#), a report to congressional requesters

Why GAO Did This Study

The Department of Energy (DOE) recognizes that a terrorist attack on a DOE site containing material that can be used in a nuclear weapon could have devastating consequences. DOE currently stores special nuclear material at 10 sites in 8 states. To reduce security costs, DOE plans to consolidate the material at fewer sites and dispose of material that it no longer needs. In 2005, DOE chartered the Nuclear Material Disposition and Consolidation Coordination Committee (the committee) to plan for consolidation and disposition of DOE's special nuclear material. GAO was asked to (1) examine DOE's progress in consolidating and disposing of special nuclear material and (2) determine if DOE's plans to consolidate and dispose of special nuclear material can be implemented on schedule and within cost. To do this, GAO reviewed the committee's plans and discussed consolidation and disposition with DOE officials.

What GAO Recommends

GAO recommends that DOE (1) specify who in the department is responsible for final approval of the committee's plans and (2) require that the plans include descriptions of organizational roles and responsibilities and performance measures. In commenting on a draft of the report, DOE agreed with the recommendations but believed that the report did not sufficiently recognize DOE's progress.

To view the full product, including the scope and methodology, click on [GAO-08-72](#). For more information, contact Gene Aloise at (202) 512-3841 or aloise@gao.gov.

SECURING U.S. NUCLEAR MATERIAL

DOE Has Made Little Progress Consolidating and Disposing of Special Nuclear Material

What GAO Found

Although the committee has spent nearly 2 years planning to consolidate and dispose of special nuclear material, it has drafted only two of the eight implementation plans it intends to develop; and complexwide consolidation and disposition activities have not yet begun. The committee has drafted plans for consolidating and disposing of plutonium-239 and for disposing of uranium-233:

- *Plutonium-239*: Under the committee's plutonium-239 plan, surplus plutonium currently stored at the Hanford Site, Lawrence Livermore National Laboratory, and Los Alamos National Laboratory will be consolidated at the Savannah River Site. Much of the plutonium-239 would then be prepared for permanent disposition through vitrification—a process that mixes nuclear material with molten glass, which is then poured into metal canisters where it hardens. The vitrified plutonium-239 would be stored on site inside large canisters filled with vitrified high-level radioactive waste and, if DOE's plans are realized, later be permanently disposed of at a geologic repository to be built at Yucca Mountain, Nevada.
- *Uranium-233*: Under the committee's draft uranium-233 plan, most of DOE's uranium-233 will be disposed of by mixing it with other uranium isotopes to convert it into a more stable form that requires less security and that is suitable for long-term storage or disposition as radioactive waste. DOE has begun activities to modify an existing facility that can perform this process at Oak Ridge National Laboratory, where most of DOE's uranium-233 is currently stored. Other sites that store uranium-233 would either ship it to Oak Ridge for processing or send it to DOE radioactive waste disposal facilities in New Mexico or Nevada.

The remaining six plans are still in early stages of development. Factors that have contributed to DOE's limited progress in finalizing plans include leadership changes on the committee and uncertainty over who in the department has final approval authority for the committee's plans. Because of such factors, DOE is unlikely to meet its goal of completing all eight implementation plans by December 2008.

DOE cannot ensure that its plans are carried out on schedule and within cost because the plans drafted to date have only limited descriptions of organizational roles and responsibilities and lack performance measures to monitor the department's progress toward meeting its consolidation and disposition goals. DOE officials stated that the plans do not need to include such information because a forthcoming revision of a DOE order on nuclear material management will define organizational roles and responsibilities and the department already uses performance measures. However, the revision to the DOE order is not scheduled to be completed until late 2007, and the performance measures that DOE uses are not specifically intended to monitor activities required to implement consolidation and disposition plans.