

Why GAO Did This Study

USEC is the only company that uses U.S.-developed technology to enrich uranium. According to DOE, under international agreements the U.S. must use uranium enriched with domestic technology to meet national security needs, such as for nuclear weapons. In 2012 and 2013, DOE transferred uranium to USEC to support the development of next generation enrichment technology and for other national security purposes. In May 2013, USEC ceased enrichment operations and, in March 2014, filed for Chapter 11 bankruptcy protection. In April 2014, DOE announced it would assume managerial responsibility for continued development of the next generation technology.

GAO was asked to review recent DOE transactions involving USEC. This report examines (1) the uranium transactions DOE undertook in 2012 and 2013 involving USEC, (2) legal concerns regarding the transactions, (3) other issues the transactions raise, and (4) the extent to which DOE assessed impacts of the transactions on the domestic uranium market. To address these issues, GAO analyzed relevant laws and key documents and interviewed DOE, USEC, and uranium industry officials, among other steps.

What GAO Recommends

GAO recommends six actions to DOE to improve the transparency of its uranium transactions, including developing a consistent method for valuing depleted uranium tails and conducting quality assurance on future market impact studies. DOE generally disagreed with GAO's legal analysis and recommendations. GAO maintains that its recommendations are valid.

View [GAO-14-291](#). For more information, contact David C. Trimble at (202) 512-3841 or trimbled@gao.gov.

DEPARTMENT OF ENERGY

Enhanced Transparency Could Clarify Costs, Market Impact, Risk, and Legal Authority to Conduct Future Uranium Transactions

What GAO Found

The Department of Energy (DOE) undertook four uranium transactions involving USEC Inc. (USEC) in 2012 and 2013. These transactions served to provide the company with operating cash. According to DOE, the department benefited from these transactions in two ways: (1) by ensuring availability of domestic low-enriched uranium (LEU) for the production of tritium, a key radioactive isotope used to enhance the power of nuclear weapons, and (2) by supporting USEC's development of next generation enrichment technology. Three of the four transactions involved transferring ownership of depleted uranium tails (tails), a product of the enrichment process. Tails are generally considered to be an environmental liability, but can have value as an asset when uranium market conditions make tails re-enrichment economical in lieu of enriching natural uranium. In two transactions, DOE accepted ownership of tails, along with liability for disposal costs, in exchange for other benefits. In another transaction, DOE transferred ownership of tails to a third party to be re-enriched by USEC. The fourth transaction involved the transfer of uranium material other than tails.

GAO identified legal concerns with all four of DOE's uranium transactions. For the largest transaction—DOE's transfer of tails to a third party for re-enrichment—GAO believes that DOE likely did not have authority to transfer tails under restrictions imposed by the USEC Privatization Act. DOE disagreed, citing its authority to conduct this transaction under the Atomic Energy Act. Even if DOE had such authority, GAO found that it did not meet the Act's requirement to charge a price for the tails because it transferred them without charging any price at all. In another transaction, DOE transferred ownership of uranium material that it previously obtained to meet national security needs, without obtaining a presidential determination that the uranium material was no longer necessary for national security needs, as GAO found is required by the USEC Privatization Act.

GAO identified issues concerning DOE's methods for valuing tails and whether DOE received reasonable compensation with respect to its largest transaction. DOE does not have guidance for determining the value of tails when they are treated as an asset in a transaction, and as a result, the estimated value of the tails ranged from \$0 to \$300 million. DOE decided that the tails had no value in this transaction, and therefore, the transaction had no cost to the department. But, in other instances, DOE has determined that tails have value and has sought to sell its tails. Without consistent guidance for how to value its tails for transactions, DOE cannot ensure the government will be reasonably compensated, as required if, as DOE asserts, the Atomic Energy Act applies.

DOE contracted for two studies in 2012 and 2013 to support required determinations by the Secretary of Energy that certain uranium transfers would not have an adverse material impact on the domestic uranium market and posted these studies on its website. However, DOE did not take steps outlined in its contracts or in departmental quality assurance guidance to ensure the quality of these studies. For example, the studies provided only limited detail about their methodology and data sources; however, DOE's quality assurance guidance states that DOE information disseminated to the public should contain such information. GAO also identified shortcomings in the studies that raise questions about the definitiveness of the studies' conclusions.