NUCLEAR WASTE CLEANUP

DOE’s Efforts to Manage Depleted Uranium Would Benefit from Clearer Legal Authorities

What GAO Found

The Department of Energy’s (DOE) Office of Environmental Management (EM) used the COVID-19 shutdown to perform maintenance and modifications at the two depleted uranium hexafluoride (DUF6) conversion facilities located at the Portsmouth and Paducah sites. These facilities convert DUF6 into two primary products: depleted uranium oxide and hydrofluoric acid. According to EM, the agency spent about $47.4 million on modifications that officials say will improve the facilities’ efficiency. EM has not fully assessed the impact of this shutdown on the conversion mission, but officials said that they were developing new cost and schedule estimates for the facilities that will be finalized in 2022. Conversion operations restarted at the Paducah facility in November 2021, and EM officials told us operations restarted at the Portsmouth facility in July 2022.

EM has three agreements to reserve nearly 30,000 cylinders of DUF6 (about 44 percent of the inventory) for use by other entities. If the agreements are finalized, the agency may not need to convert all its DUF6 and could reduce operations of the conversion facilities by roughly 30 years, potentially saving over $2 billion in operations costs. EM has two agreements to transfer ownership of nearly 5,500 cylinders to the National Nuclear Security Administration for two separate programs, but the plans and timing of one agreement are uncertain. EM has also reserved over 24,000 cylinders to sell to a private company. However, DOE’s authority to sell depleted uranium is doubtful, as it appears to be inconsistent with the 1996 legislation governing DOE uranium disposition. Clarifying DOE’s authority to sell depleted uranium could help avoid litigation that could interrupt DOE’s efforts to sell DUF6.

Breakdown of DOE’s Depleted Uranium Hexafluoride (DUF6) Inventory

Source: GAO analysis of Department of Energy (DOE) documentation | GAO-22-105471

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