New Mexico nuke repository studied for plutonium storage

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This March 6, 2014 file photo shows the idled Waste Isolation Pilot Plant, the nation's only underground nuclear waste repository, near Carlsbad, N.M. The U.S. Department of Energy has commissioned a national group of scientists to study the viability of diluting surplus weapons-grade plutonium and storing it permanently at the federal government's underground repository in southern New Mexico. A committee of The National Academies of Sciences, Engineering and Medicine has been tasked with evaluating the storage potential at the Waste Isolation Pilot Plant. (AP Photo/Susan Montoya Bryan, File)

The U.S. Department of Energy has commissioned a national group of scientists to study the viability of diluting surplus weapons-grade plutonium and storing it permanently at the federal government's underground repository in New Mexico.

The panel of about 15 scientists from universities, corporations and laboratories around the nation will evaluate the storage potential at the Waste Isolation Pilot Plant, the nation's only facility for permanently disposing of tons of Cold War-era waste contaminated with small amounts of plutonium and other man-made radioactive elements.

The scientists held their first meeting in November in Washington, D.C., then gathered again Tuesday in Carlsbad, where officials gave presentations and fielded questions on the feasibility of bringing plutonium to the repository, the Carlsbad Current-Argus reports.

Critics are unconvinced the Waste Isolation Pilot Plant can safely hold the plutonium, or that the facility's mission can be expanded via federal law in an appropriate amount of time.

Experts estimated about 34 metric tons of surplus plutonium exist around the world, mostly in the U.S. and Russia. As part of a nonproliferation agreement between the two countries, 6 metric tons are being diluted at the Energy Department's Savannah River Site in Georgia for potential shipment to the southeastern New Mexico repository.

The scientists are members of the National Academies of Sciences, Engineering and Medicine, a prestigious coalition that provides advice on complex problems and public policy questions. They will evaluate the repository's transportation capabilities, current and future operations, and compliance with federal regulations before and after a nearly three-year shutdown caused by a 2014 radiological release.

Senior Program Officer Jennifer Heimberg of the National Academies of Sciences' Nuclear and Radiation Studies Board said the group hopes to make a recommendation to the Energy Department by December. She said the study is considering only the Waste Isolation Pilot Plant for the program and has not evaluated other sites.

Heimberg declined to comment on the board's impressions after hearing from Carlsbad leaders.

Repository officials estimate the program would cost about $17 billion and that alternatives could cost up to $55 million.

Todd Shrader, manager of the Energy Department's Carlsbad field office, said the office supports the proposal as part of the agency's mission to dispose of nuclear waste leftover from the Cold War. Through the dilution process, plutonium could be characterized as transuranic waste, which would allow it to be permanently stored at the repository using the facility's existing infrastructure and processes, he said.

Transuranic waste includes contaminated tools, clothing, gloves and other items from decades of bomb-making and nuclear research at national laboratories and defense sites around the country.

The repository has the capacity to hold the 6 metric tons being diluted at Savannah River, department officials said.

A federal law enacted in 1992 regulates the amount of waste disposed of at the site. Congress could take decades to amend the law to expand acceptable waste at the Waste Isolation Pilot Plant to include plutonium, said Don Hancock with the Southwest Research and Information Center, an Albuquerque-based watchdog group.

"There is no quick fix solution," he said. "They need to look at other things they can do in the short term. We need to reiterate what WIPP's mission is, and what it's not."

In the meantime, Hancock suggested securing the waste at the sites where it's generated until a permanent solution is found.

Hancock also pointed to a history of safety concerns and struggles by the repository to meet deadlines for depositing waste.

New Mexico state Rep. Cathrynn Brown, a member of the Legislature's Radioactive and Hazardous Waste Committee, said the Carlsbad community was supportive of the repository since its opening in 1999. She said she's confident moving and storing plutonium will be done safely.

"We are a consenting community," Brown said. "People are not afraid to ask questions. We are one of the few communities that accepted a project like this. If it's not safe, we don't want it."