Recommendation 379
Accelerate Disposition of Legacy TRU Waste at the Savannah River Site

Background

Transuranic (TRU) waste is waste contaminated with alpha-emitting radioisotopes with an atomic number greater than that of uranium (92), a half-life greater than 20 years, and a concentration level above 100 nanocuries per gram. Because it contains elements that decay slowly, effective and safe disposition requires thousands of years of isolation. At the Savannah River Site (SRS), TRU waste is solid waste consisting of protective clothing, tools, rags, residues, debris, and other items contaminated with trace amounts of plutonium.

In 1999, the U.S. Department of Energy (DOE) opened the Waste Isolation Pilot Plant (WIPP), a geologic repository near Carlsbad, NM, that was specifically constructed for the permanent disposal of TRU waste from DOE sites across the nation, including SRS. When the program to ship SRS TRU waste to WIPP began in 1999, SRS was storing more than 30,000 containers consisting of more than 10,000 cubic meters of TRU waste. As of December 15, 2022, DOE reports that SRS has 659 drums and 102 standard waste boxes of legacy TRU waste,[1] or approximately 400 cubic meters. All of this remaining legacy TRU waste at SRS is packaged and ready to be shipped to WIPP.

According to the "Savannah River Site Strategic Vision: 2020-2030," DOE-EM plans to complete disposition of this waste by 2030.[2] But there are at least four compelling reasons to accelerate disposition:

1. Risk reduction: TRU waste is highly radioactive and poses a serious risk to human health and the environment if not properly managed. By accelerating the disposal timeline, DOE can reduce the amount of time that this material is being stored, thus reducing the risk of accidents or leaks.
2. Cost reduction: The longer DOE waits to dispose of this waste, the more it will cost to store and transport. By accelerating the timeline, DOE can save money in the long run by reducing these costs.
3. Mission completion: It is important for DOE to make clear progress on its cleanup mission. Completing the disposition of SRS's legacy TRU waste is an important and high-profile milestone in DOE's mission of environmental cleanup.
4. Environmental responsibility: TRU waste has a long half-life and will remain radioactive for thousands of years. The sooner DOE can dispose of it, the less of a burden it will be on future generations.

[1] CAB Administrator James Tanner email correspondence with the Nuclear Materials Subcommittee entitled "CAB: NM Subcommittee Follow Up" on December 15, 2022.

[2] See https://www.energy.gov/em/articles/savannah-river-site-strategic-vision-2020-2030.

Savannah River Site
Citizens Advisory Board

Recommendation 379
Accelerate Disposition of Legacy TRU Waste at the Savannah River Site

Recommendation

The SRS Citizens Advisory Board recommends that DOE (1) accelerates the disposition of the remaining TRU waste to 2027 from 2030 and (2) provides the CAB with at least annual status updates on the disposition of this TRU waste until disposition is completed.