

Solid Waste Management

Solid Waste Management (SWM) is responsible for the disposition of Savannah River Site's (SRS) solid wastes, which include sanitary, construction and demolition (C&D), hazardous, low-level radioactive and transuranic wastes. Sanitary waste is household-like waste that is recycled or disposed at the Three Rivers Landfill. C&D wastes are generated by the Site's construction activities and are disposed in a South Carolina Department of Health and Environmental Control-permitted landfill located on-site.

Radioactive wastes are classified into three categories, the majority of which is low-level radioactive waste (LLW). This waste is disposed on-site in engineered facilities. LLW is contaminated with predominately short-lived isotopes. Transuranic (TRU) waste is defined by Department of Energy (DOE) Orders and is described below. The third classification of radioactive waste is High Level Waste and is not managed by SWM.



Preparing a shipment of TRU waste in a TRUPACT II for shipment to WIPP

Transuranic Waste (TRU)

The term transuranic means those elements with an atomic number greater than that of uranium (92). These wastes typically consist of protective clothing, tools, rags, equipment and miscellaneous items contaminated with small amounts of plutonium and other heavy elements.

In 1999, the U.S. Department of Energy opened the Waste Isolation Pilot Plant (WIPP), a geologic repository near Carlsbad, New Mexico. When the SRS TRU Ship-to-WIPP program began, more than 30,000 containers of TRU waste were stored at SRS. SRS made more than 1,665 shipments of approximately 10,730 cubic meters through 2019. Shipment of legacy TRU waste and down-blended plutonium resumed in 2017 after WIPP reopened.

Characterization

In order to ship the TRU waste to WIPP, SRS must meet stringent WIPP Waste Acceptance Criteria (WAC) and Resource Conservation and Recovery Act permit requirements as issued by New Mexico. TRU is characterized by:

- Assay of all TRU containers to determine the amount of radioactivity
- X-ray of all containers to verify that the physical contents meet WIPP WAC
- Sampling of all containers to detect hydrogen gas concentration



Employees maneuver a TRUPACT III shipping container onto a truck trailer

Safe Packaging and Transport of TRU

TRU wastes at SRS are packaged for shipment to WIPP in one of three Nuclear Regulatory Commission licensed casks. The casks are transported by specifically designed transport trucks along approved routes designated by the U.S. Department of Transportation and the impacted states. Drivers must pass strict safety and emergency exams, maintain excellent driving records and renew their certifications annually.