



U.S. DEPARTMENT OF  
**ENERGY**



# Savannah River Site TRU Waste Shipments and Spent Nuclear Fuel Receipts

*Fiscal Year 2025 (FY 25)*

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*December 9-11, 2024*

# SRS Legacy Transuranic (TRU) Waste Topics

- SRS TRU Waste Operations
- SRS FY 2024 Legacy TRU Waste Accomplishments
- SRS Legacy TRU Waste Challenges
- Shielded Waste Containers
- Fiscal Year 2025 Shipments



# Foreign and Domestic Research Reactor Program Topics

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- **Mission**
- **Receipts**
- **Foreign Shipments**
- **Domestic Shipments**



# SRS TRU Waste Operations at SRS

- TRU waste is stored in E-area on Resource Conservation and Recovery Act (RCRA) permitted TRU Pads
- TRU Waste requires characterization and certification by WIPP before it can be shipped
- TRU waste mission at SRS can be divided into three distinct programs
  - 1) Legacy TRU waste
  - 2) New Gen TRU waste
  - 3) Surplus Pu Disposition
- Implementing new packaging and shipping process for legacy Remote-Handled TRU waste



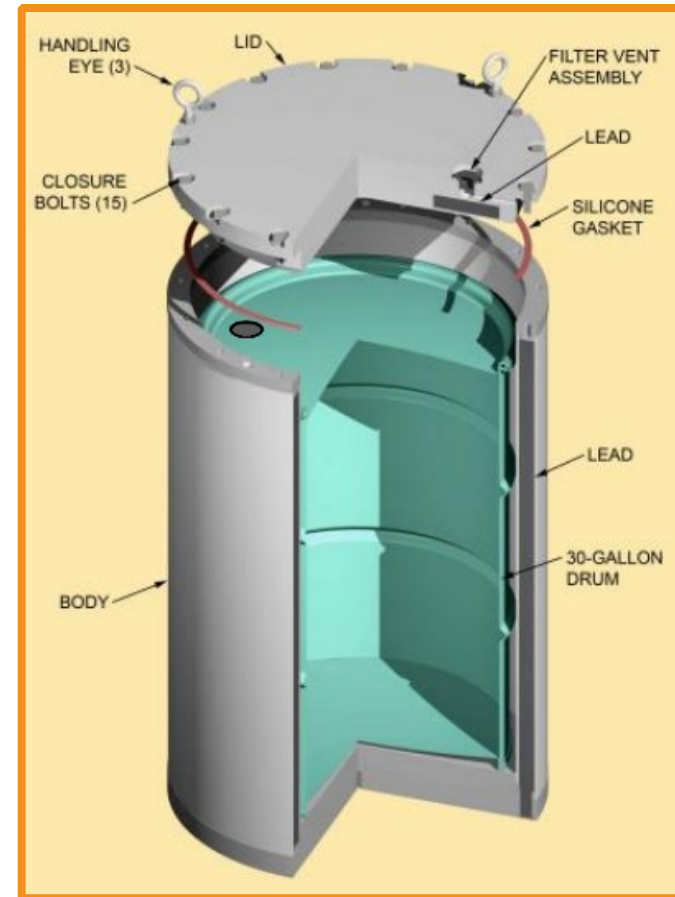
# SRS FY 2024 Legacy TRU Waste Accomplishments

- **Completed shipping Large Container Shipments in December of 2022**
- **Increasing Shipment Rate**
  - FY23 TRU Waste Shipments
    - Total: 26 shipments
      - Legacy: 13 Shipments
      - New-Gen: 13 Shipments
  - FY24 TRU waste shipments
    - Total: 59 Shipments
      - Legacy: 24 Shipments
      - New-Gen: 35 Shipments



# SRS Legacy TRU Waste Challenges

- **Updated WIPP Requirements**
  - Waste generated prior to current requirements
  - Documentation not always available
  - Prior characterization documentation not always viable
- **Overpacks**
  - Previously overpacked drums not re-certified at same time
  - Need for additional overpacking
  - Repacking will be needed for specific containers
- **Shipping Logistics**
  - Competing with other Sites
  - Requires coordination with State Agencies
- **Remote Handled (RH) Containers**
  - Approximately 50% of remaining waste is remote handle
  - Plan to accelerate shipments to WIPP utilizing
    - *Shielded Container Assemblies (SCAs)*



## Shielded Container Assemblies

- Characterization approval for Initial Remote Handle Containers- Feb 2025
- Procurement of lifting mechanism- January 2025
- Finish Procedure Development- March 2025
- Operator Training- May 2025
- Testing and Qualification of Loading Equipment- June 2025
- Loading of SCAs- July 2025
- **Make first shipment- CY 2025**



## Fiscal Year 2025

- **Plan to complete 42 Shipments to WIPP**
  - 12 legacy shipments from E-Area
  - 30 New-Gen shipments from K-Area
- **Begin loading Shielded Container Assemblies (SCAs)**

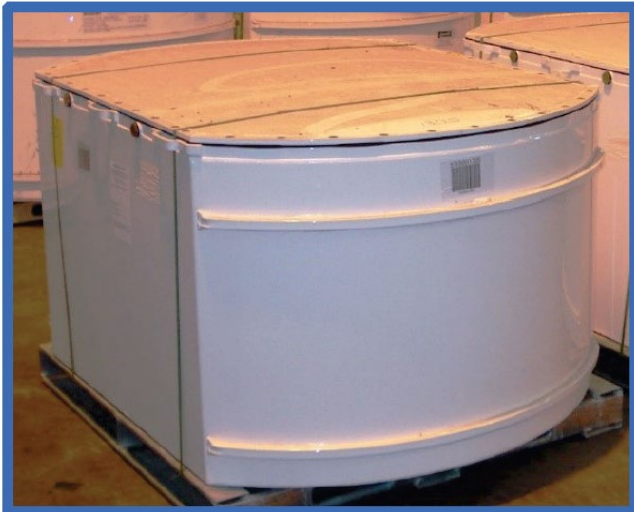


Figure - Typical Standard Waste Box





## Spent Nuclear Fuel Receipt Mission

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- Receive and store aluminum-based Spent Nuclear Fuel (SNF) from foreign and domestic research reactors
- Support National Nuclear Security Administration's (NNSA) nonproliferation effort for removal of Highly Enriched Uranium (HEU) from reactor sites (~34 Foreign Countries)
- Support Office of Nuclear Energy and the Office of Science ongoing reactor programs (~5 Domestic Sites)



L-Area Facility

## Fuel Receipt Projection for FY 25

- SRS is expected to receive 16 fuel receipts in FY 25, all through the Domestic Research Reactor (DRR) program, for a total of 32 assemblies and 12 HFIR cores.
- There are no projected receipts through the Foreign Research Reactor (FRR) program for FY 25.
- Combination of BRR and GE2000 Casks

BRR Cask →



← GE 2000 Cask

# Foreign Research Reactor (FRR) Fuel Receipts

## Shipments Received from 32 Countries and Taiwan



# Domestic Research Reactor (DRR) Fuel Receipts



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# Any Questions?