Transuranic (TRU) Waste Overview and Status

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TRU Waste Overview

• TRU Waste Definition
  – Radioactive waste container with more than 100 nanocuries (nCi) of alpha-emitting transuranic isotopes with half-lives greater than 20 years per gram (g) of waste
  – Transuranic isotopes: atomic number greater than 92
  – Does not include
    • Waste determined to be High-Level Waste
    • Waste determined by DOE, with EPA concurrence, that does not require isolation per 40 Code of Federal Regulations (CFR) 191
    • Waste approved by Nuclear Regulatory Commission for disposal per 10 CFR 61

• TRU Waste Prohibitions
  – Reactives
  – Ignitables
  – Corrosives
  – Explosives
  – Compressed Gases
  – Unabsorbed Liquids
  – Pressurized Containers

1) Standard Waste Boxes
2) Seven-packs of 55-gallon drums
3) Standard Large Box
Solid Waste Management Facility (SWMF) (TRU Waste Facilities)
SRS TRU Waste Management (Cradle to Grave)

1. Package at Generation Facility
2. Ship to SWMF (TRU Pads)
3. Perform WIPP Characterization
4. Certify for WIPP Disposal
5. Ship to WIPP

Waste Isolation Pilot Plant (WIPP)

TRU Waste Storage Pad
Transuranic (TRU) Waste Status

- Approx. 20 cubic meters per year generated at SRS
- Currently 573 cubic meters stored at SWMF on TRU pads
- Shipments to WIPP resumed in 2017
  - FY21: 6 shipments (61 cubic meters)
  - FY22: 4 shipments (33 cubic meters) through 12/31/21
  - Additional FY22 expected: 4+ shipments

Three Different TRU Waste Shipments Leaving SRS
Goal: Ready to Ship Criticality Control Overpacks (CCOs) by 3QFY22

- National Environmental Policy Act (NEPA) Approval (13.1 Metric Tons)
- Criticality Container Overpack (CCO) Storage Pad Construction and Operations
- WIPP Characterization of CCOs
  - WIPP Certification (Ongoing)
  - Load and Ship (Ongoing Facility Readiness)