

Savannah River Site

Transuranic Waste Status

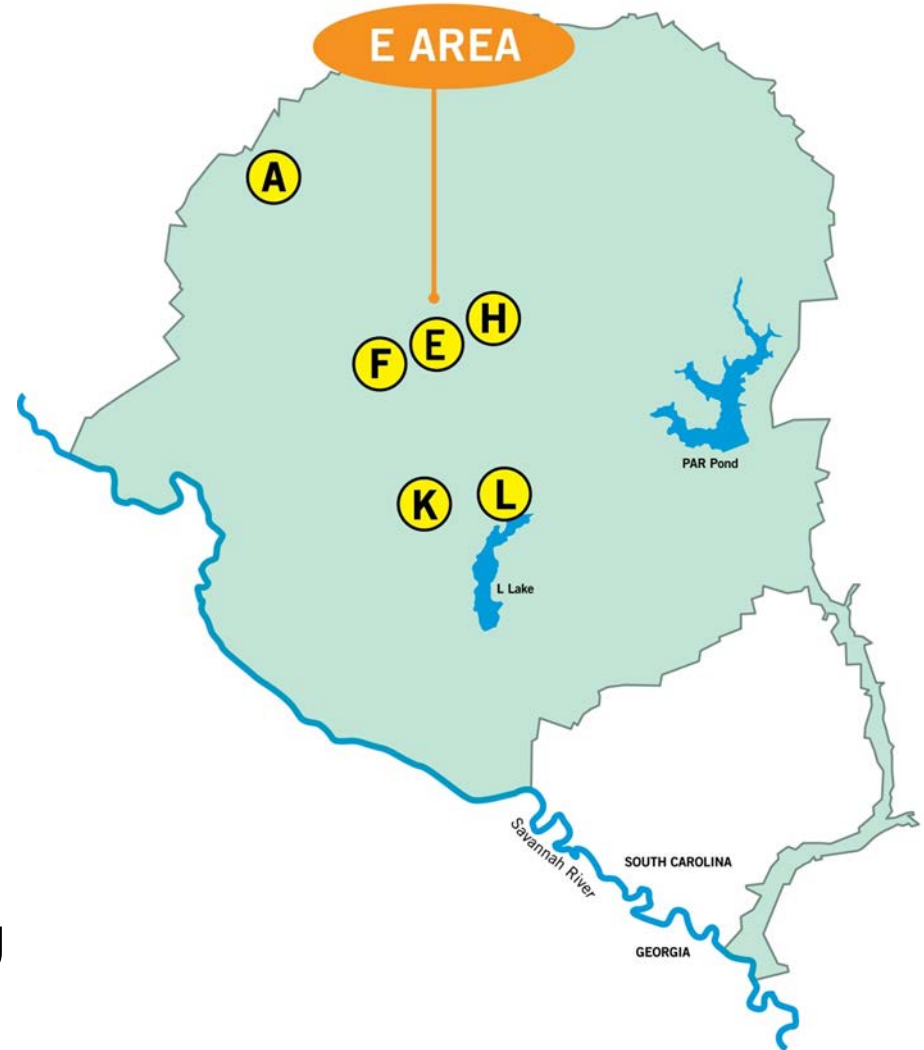
Waste Consolidation Prior to Classification

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Savannah River Site Waste Program Overview

- Low Level Waste (LLW) generation is ~5,000 m³/year
- Transuranic (TRU) waste generation is ~30 m³/year
- TRU waste storage capacity is sufficient for at least 5 years
- Hazardous Waste (HW) / Mixed Waste (MW) generation is ~75 m³/year
- Treatment and disposal of HW/MW is by commercial vendors per Land Disposal Restrictions (LDR) requirements
- The Site Treatment Plan identifies a small volume of MW maintained in long term storage to allow for decay of tritium or fission products



SRS E Area – Solid Waste Disposal Facility



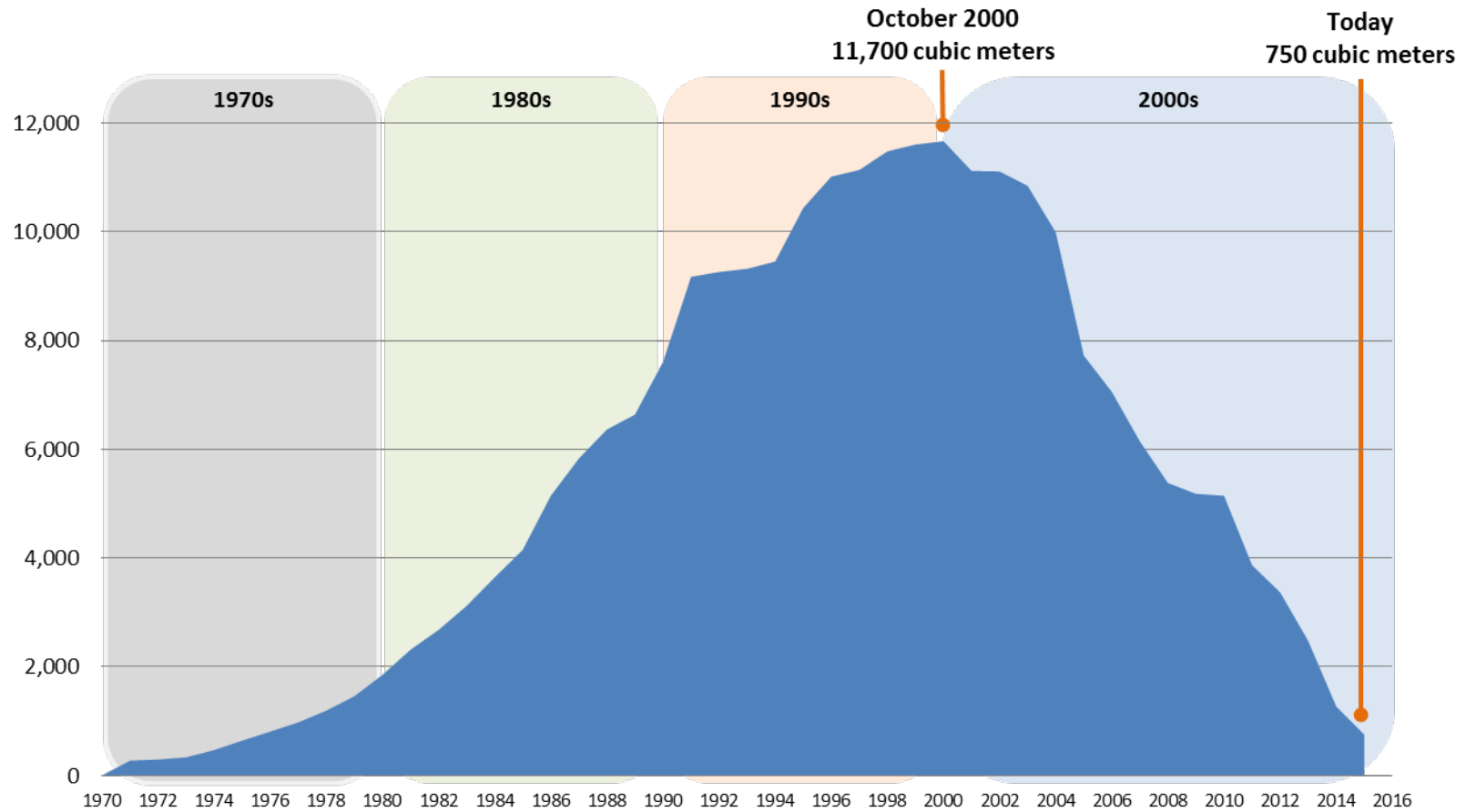
TRU Waste Status

- American Recovery and Reinvestment Act (ARRA) funded the majority of legacy TRU waste inventory disposal
- Remaining TRU waste inventory
 - Compliantly packaged with majority certified for disposal
 - Estimate 142 shipments
 - 7 Contact Handled (CH) TRUPACT-III shipments
 - 80 Contact Handled (CH) TRUPACT-II shipments
 - 55 Remote Handled (RH) 72-B shipments



Legacy TRU Waste at SRS

TRU Waste Volume Stored (cubic meters)



Legacy TRU Waste Storage Over the Years



Waste Consolidation Examples

- DOE Order 435.1 allows for consolidation of compatible waste from multiple streams if it:
 - Reduces worker exposure and/or risk
 - Promotes cost effective life-cycle management
 - Renders the waste more suitable for storage, treatment, or disposal
- Consolidation of waste can result in TRU waste being re-classified as LLW
- Consolidation does not increase the overall volume of waste generated
- Addition of non-waste in order to lower the classification of the waste is considered dilution and is prohibited
- SRS has successfully used consolidation during the legacy TRU waste disposition campaign.
 - Paducah Cask (Spent Fuel Operations)
 - Large Black Boxes (Canyon Operations)

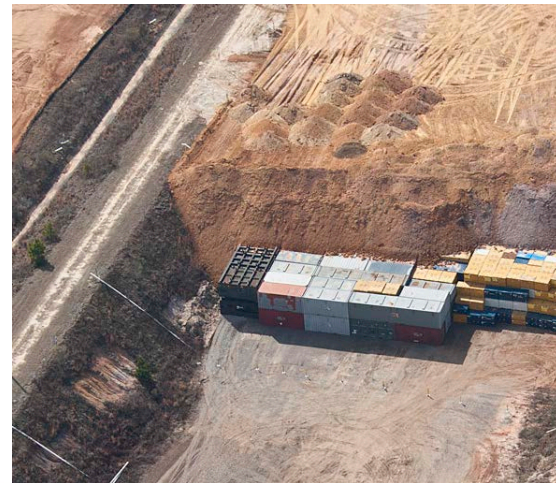
Paducah Cask Waste Stream (Spent Fuel Operations)

- Spent Fuel Operations had several waste items to be disposed and an excess transfer cask.
- Waste items that were consolidated:
 - Cask constructed of depleted uranium and clad with stainless steel (LLW). Used as packaging for other waste items.
 - Cobalt Slugs & Slabs (LLW)
 - Thulium Slugs (LLW)
 - Curium (Pu239) Sampler Slugs (TRU waste)
- Characterization of cask with contents after consolidation resulted in LLW determination and allowed for disposal at SRS
- Avoided repackaging and disposal of curium sampler slugs as TRU



Large Steel Boxes (Canyon Operations)

- With no size reduction capabilities, waste loaded into large steel boxes
- Waste classified as TRU based on usage and expected contamination levels
- Represented a significant percentage of the total legacy TRU inventory
- Repackaging of the waste into WIPP approved containers would result in radiological dose and considerable risk of injury to the workers
- Empty large steel boxes were contaminated and would require disposal as LLW
- In many cases, the weight of the box and the enclosed waste allowed for re-classification from TRU to LLW



Thank You – Any Questions?

