



U.S. DEPARTMENT OF
ENERGY

Legacy Waste & Material Disposition Activity

Presented to

Oak Ridge Site Specific Advisory Board

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Legacy Waste and Material Disposition

- A diverse collection of legacy materials remains on the Oak Ridge Reservation
- Some of the material is *waste* requiring disposition
- Some of the material is *non-waste* with reuse potential
- Since the early 1990s, a significant amount of legacy waste and materials has been shipped for disposal or reuse.
- Remaining *waste* materials regulated by the State and EPA are under negotiated disposition schedules – Site Treatment Plan, Polychlorinated Biphenyl Federal Facility Compliance Agreement , Compliance Agreement
- Newly generated wastes from ongoing operations are now disposed directly by the generators, except for transuranic waste; no new “bow wave” of waste in storage is being created



Legacy Mixed Waste Disposition



- Legacy Waste Milestone was completed in September 2005
- 22,000 containers of low-level and 4,000 containers of mixed low-level waste were sorted, segregated, treated and disposed.
- 1,250,000 cubic feet of legacy waste was disposed.
- More than 3,000 shipments consisting of over 2.5 million miles of travel with zero transportation accidents

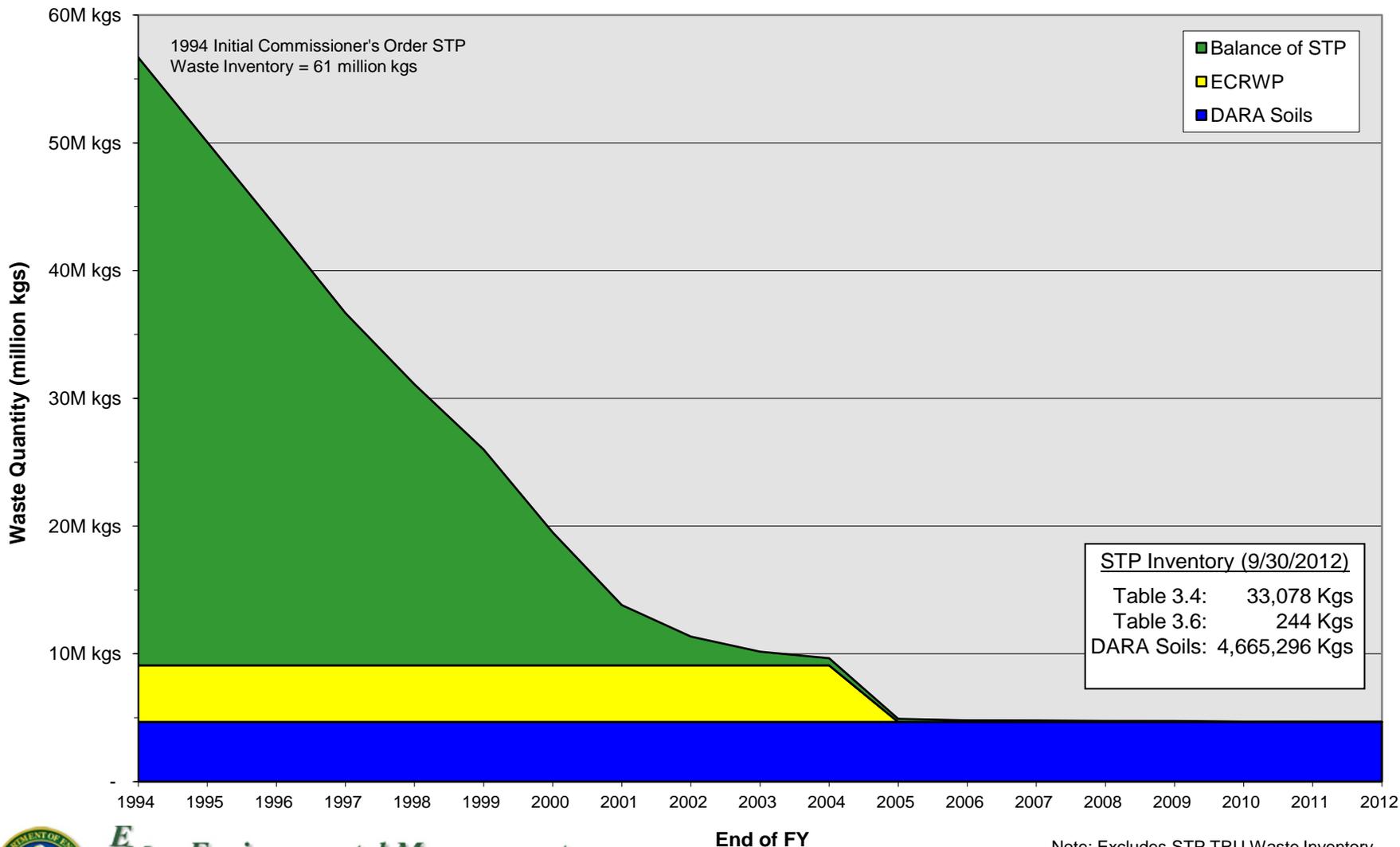


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Oak Ridge Reservation Site Treatment Plan Inventory



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Note: Excludes STP TRU Waste Inventory

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East Tennessee Technology Park Uranium Hexafluoride Cylinder Removal

K - Yard



2005



L - Yard



2005



Total number of cylinders shipped to PORTS = 5,925
Number shipped to disposal at NTS = 1,243
Number shipped to disposal at Envirocare/Energy Solutions of Utah = 77
Total = 7,245



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Building K-1065 Legacy Waste and Material Storage

- Building K-1065 - RCRA-permitted storage buildings
- Currently stores –
 - Remaining PCB FFCA inventory
 - Remaining mixed low-level waste (Compliance Agreement)
 - Low-level waste
 - Nickel stored for reuse



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Interior of Bldg 1065 Storage Area



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K-1313-F – Sodium Shields



- The sodium shields were originally used at ORNL reactors and were moved to ETTP in 2003 for sodium extraction.
- The extraction effort ended in 2004.
- The shields are not considered waste at this time.
- The facility is under routine surveillance and maintenance.



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Transuranic Waste Storage Facilities

- Transuranic waste facilities include buildings, bunkers and Rubb structures.
- Facilities are managed in accordance with applicable permit and safety documentation requirements.
- Transuranic waste is transferred from the storage facilities to TWPC, as requested, for processing and disposition.



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Shielded Transfer Tanks- Melton Valley

- The STTs are shielded shipping casks, historically used to transport products between Idaho National Laboratory, Hanford and ORNL, and removed from service between 1967 and 1971.
- The STTs are maintained under appropriate safety documentation, including routine inspections and surveys.
- TDEC DOE Oversight Division also regularly inspects the STTs.



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7822-K Pad

- The 7822-K pad at ORNL stores containers of remote-handled low-level waste –
 - Vaults previously prepared for onsite low-level waste disposal; vaults do not meet DOT container specifications for shipment and characterization for offsite disposal has not been performed.
 - Casks containing remote-handled LLW
 - Boxes with cesium casks retrieved during remedial action at ETPP
- Most waste on the 7822-K pad will require access to a hot cell facility for repackaging and characterization prior to disposal
- Routine inspections are performed to insure the storage pad is adequately maintained and posted.
- TDEC DOE Oversight Division also regularly inspects the 7822-K pad.



LLW vaults being disposed at IWMF



Cesium cask found at K-770



Well Drillers Steam Cleaning Facility

- Two Sea-Land containers store sodium and lithium shields and a beryllium reflector; small amounts of radioactivity are present in the form of activation products.
- These items are currently not considered waste.
- Weekly inspections are performed by Surveillance and Maintenance
- TDEC DOE Oversight Division also performs routine inspections.



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Summary Points

- Remaining legacy waste and material disposition needs represent a significant future scope of work, particularly for materials dependent upon off site disposal.
- In the interim, legacy waste and materials are being safely stored and monitored.
- Some materials present significant disposal or transportation challenges.
- Disposition efforts compete for funding with other building demolition and environmental remediation efforts.
- Disposition priorities will be based on risk and opportunity considerations.

