Waste Disposition at the Hanford Site

Waste Box Arrival at Central Waste Complex

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"Reducing and Mitigating Risks at the Hanford Site"

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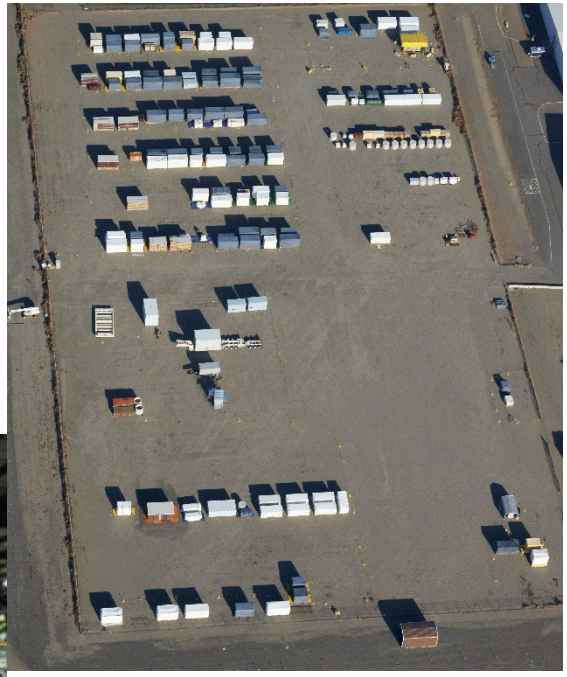
Mixed Low Level Waste (MMLW) Disposition at the Hanford Site

MLLW Generation History at the Hanford Site

- Multiple storage buildings were constructed in the 1990's to handle the mixed waste volumes
- By 1999, more than 9,200m^3 (≈27,000 containers) of MLLW were in Central Waste Complex (CWC) storage

Mixed Low Level Waste (MMLW) Disposition at Hanford



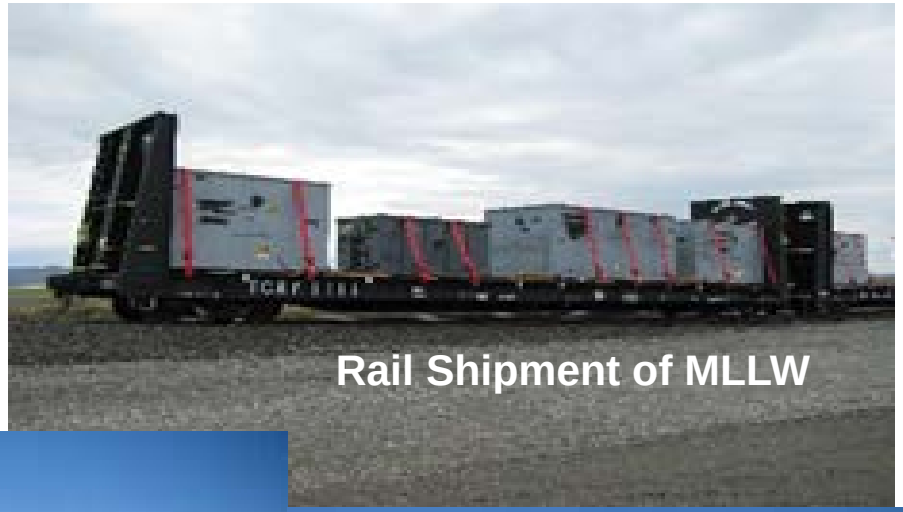
Waste in Storage at the CWC

Mixed Low Level Waste (MMLW) Disposition at Hanford

MLLW Treatment Begins

- The first Hanford MLLW commercial treatment contract was awarded to Allied Technical Group (ATG) in1996
- MLLW treatment begins at ATG's Richland facility in 1999 (macroencapsulation of MLLW debris)
- Multiple contracts were awarded in the 2000's to support higher volume throughput and various waste types
- Multiple contracts:
  - Reduced project risk
  - Realized treatment cost savings
- **Commercial waste treatment and transportation played a major role the overall project success**

Mixed Low Level Waste (MMLW) Disposition at the Hanford Site



Rail Shipment of MLLW

MLLW Shipment to Offsite Treatment Facilities

Mixed Low Level Waste (MMLW) Disposition at the Hanford Site

Remaining Legacy MLLW in Storage

- Approximately 100 MLLW packages (140m^3) remain in Central Waste Complex (CWC) storage including:
  - Retrieved drums containing liquids identified during real time radiography
  - Remote Handled concrete/lead shielded drums containing hot-cell debris
  - Containers (drums and boxes) that exceed offsite facility acceptance capabilities (i.e., too large, high U-235, high H3, high dose)
  - Containers that are funding constrained

Transuranic/Mixed (TRU/M) Waste Stored at Central Waste Complex

TRUM Waste Size Reduction and Repackaging

- CWC has ≈6,700 packages of TRUM and ≈3,300 packages of TRU waste in storage (>11,000m^3)
- All types, shapes and sizes of packages are stored requiring action for certification;
  - ≈800 55-gal drums
  - ≈200 Standard Waste Boxes/Standard Large Boxes
  - ≈800 boxes (up to 110m^3 in size)
- ≈800 Remote Handled waste containers from 200mR/hr to thousands R/hr (e.g., the Steel Waste Disposal Boxes, grouted K-Basin filters)
- ≈65 fiberglass reinforced packages (FRPs): generated more than 40 years ago, stored underground, retrieved and moved to CWC for storage

Transuranic/Mixed Waste Stored at Central Waste Complex

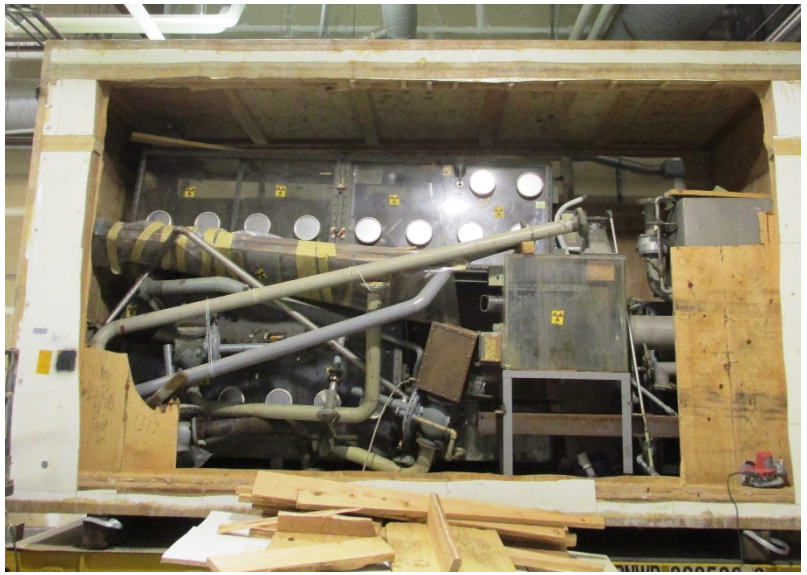
TRU/M Waste Stored at CWC

Transuranic/Mixed Waste Stored at Central Waste Complex

TRU/M Disposition Options

- Onsite processing at existing facilities (i.e., Waste Receiving and Packaging and T Plant)
  - Neither facility actively processing TRU/M waste
  - Current capabilities limited to TRU/M drum processing
- Offsite commercial processing
  - Used to process TRUM FRPs and small quantities of drums
  - Radiological license limited (<200g Pu)
  - Shipments require road-closures using a federal driver
- Onsite processing via a new capability (i.e., M-091)
  - Recently established M-091 Tri Party Agreement Milestones require development of additional capabilities to process TRUM waste and schedule to perform the work

Transuranic/Mixed Waste Processing at Perma-Fix Northwest



Issues/Risks

Issues:

- Priority low for Hanford TRU waste
  - WIPP shipments
  - Waste processing/repack

Risk:

- Container integrity challenges
- Loss of commercial capabilities

Potential Impact:

- Duplicate waste handling
- Increased regulatory oversight
- Increased lifecycle waste costs