DWPF Canister Storage Facilities

Glass Waste Storage Buildings

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Purpose

• Provide update on the DWPF Canisters Storage Capacity
• Provide update on GWSB #1 Interim Canister Storage Double-Stack Project
Vitrification Process

Tank Farm

Glass Waste Storage

Transporter

Canister Cleaning

Welding

Glass Melting & Canister Closure

DWPF Chemical Processing

Chemical Addition

Hg

MFT

SME

SRAT

LPPP Sludge Tank
GWSB Storage Capacity

- Two Glass Waste Storage Buildings (GWSB)
  - 4,602 Storage Positions
    (GWSB #1 – 2,262 Positions and GWSB #2 – 2,340 Positions)
- Interim Canister Storage – Double Stacking Project
  - GWSB #1 will double its capacity to 4,524 Storage Positions
  - Provides a total storage capacity of 6,864 (GWSB #1 - 4,524 and GWSB #2 – 2,340 Positions)
  - Additional storage capacity not needed until FY29
- Canisters Produced To Date (September, 2017) 4,155
- Estimated Total Canister Production – 8,170
  - Still need space for approximately 1,306 more canisters
Proposed Modifications

Single Stack (Current)

Plug Replaced

Crossbar Removed

Double Stack (Modified)

Tapered Plug

Floor Plate Added
Interim Canister Storage – Double Stack Concept for GWSB1

- Two canisters per location (vs. one can per location)
- Lower canister on support on vault floor (vs. cross bar support 3’ off floor)
- Upper canister placed directly on top of lower canister
- Upper canister extends into operating deck floor, but remains below grade
- Shield plug redesigned for equivalent radiological protection
Designed Tools

1. Tool capable of removing 1 ½ inch x 3 inch galvanized steel
2. Cross Bar Assembly is 1 ½ inch x 3 inch galvanized carbon steel bars
3. Cross Bar Assembly - 18 ft down with 30 inch Outside Diameter

Crossbar Cutting Tool In Field

Completed Crossbar Cut
Glass Waste Storage Building Vault A

Inside View across vault A - Single Storage

Position Being Recovered in vault A

Inside View of Vault A - Double Stack

Concrete Plug being replaced with Redesigned Steel Plug
Summary

- 400 positions have been fully modified and available for use (Cross-bar cut, floor plate installed and cast iron plug installed)
- 73 additional positions have had the cross-bar removed. Plan to complete cross-bar removal on the reminder 73 positions in Vault A by 12/31/2017
- 202 canisters have been double stacked. Plan to double stack 100 more canisters by 12/31/17.
Acronym List

DWPF: Defense Waste Processing Facility
SWPF: Salt Waste Processing Facility
GWSB: Glass Waste Storage Building
LPPP: Low Point Pump Pit
SRAT: Sludge Receipt and Adjustment Tank
SME: Slurry Mix Evaporator
MFT: Melter Feed Tank
SCT: Shielded Canister Transporter
HLW: High Level Waste
OD: Outside Diameter
ID: Inside Diameter