March 27, 2017

DEFENSE WASTE PROCESSING FACILITY: MELTER 2 REPLACEMENT

SRS Citizens Advisory Board Meeting
Aiken, SC

Wes Bryan
Waste Treatment Outage Manager
Melter Replacement Scope
  • Melter 2 Removal
  • Melter 3 Prep & Installation

Questions
Melter

Defense Waste Processing Facility

Tank Farms

Actinide Removal Process/Modular Caustic Side Solvent Extraction Unit

Melter

Shielded Canister Transporter

Glass Waste Storage Building
Melter 2: Exceptional Performance

- The DWPF melter design life is ~2 years; however, Melter 2 operated for almost 14 years!
  - Equipment design improvements
  - Operational performance & monitoring
  - 2,819 canisters poured (>10 million lbs. of glass)

- Benefits
  - Minimized risk - Personnel Safety & Exposure
  - Exceeded mission objectives
  - Eliminated outage-related costs

- Melter 2 experienced operational issues indicative of melter end of life and was shut down 2/14/17
Melter 2 Removal Scope

- Cell Cover Cleanup for Melter 2 Exit Route
  - 4-5 containers of equipment removed from cell covers
- Cranes & Railroad
  - Preventive/Corrective Maintenance & Inspections
- Melter 2
  - Jumper & Component Removal (93 total)
  - Post-mortem inspection & evaluation
  - Removal from DWPF via Melter Storage Box (MSB)
  - Placement into Failed Equipment Storage Vault (FESV)
  - Melt Cell Cleanup using robotics

Mockup: MSB staged on railcar

Mockup: MSB lowered into FESV

Melter 1 being placed into MSB
Melter 3 Replacement Scope

- Melter 3
  - Placement of Melter 3 in mock-up stand at 717-F
  - Prep/test/checkout
  - Transport to DWPF
  - Installation/inspection/checkout
  - Startup testing

Melter 3 assembly September 2004

Melters 2 & 3 swap at 717-F
Questions And Comments?