Liquid Waste Program
Prime Contractor

U.S. DEPARTMENT OF ENERGY

Savannah River Remediation
AECOM | BECHTEL | CH2M HILL | B&W | AREVA

Saltstone Disposal Unit 6

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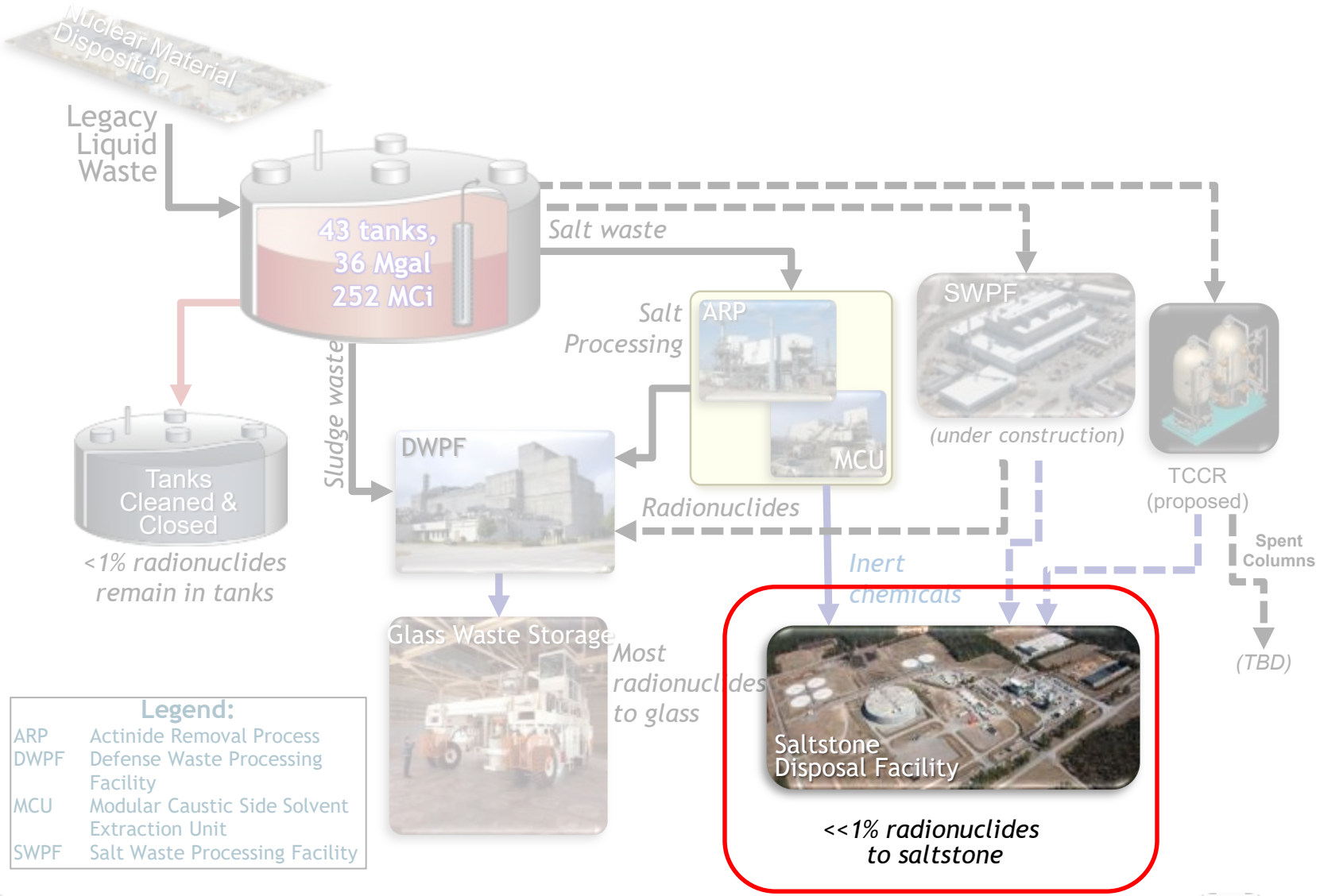
SRR Liquid Waste Program Operational Highlights



Saltstone and Saltstone Disposal Units (SDUs)

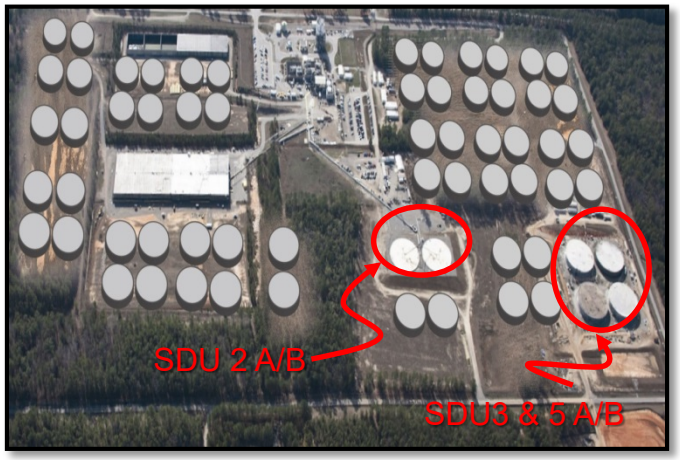
- **Salt treatment at SRS removes most of the radioactive material for vitrification at DWPF**
- **The decontaminated salt solution (low activity, large volume) is**
  - Mixed with dry cementitious material
  - Transferred to an SDU
  - Cures/hardens to form *saltstone*

- **SDU functions**
  - **Short Term**
    - Receives saltstone slurry
    - Collects drainwater and ensures leak tightness during emplacement
    - Provides shielding
    - Minimizes rainwater intrusion prior to covering with final closure cap
  - **Long Term**
    - Minimizes transport of water and contaminants
    - Minimizes infiltration of oxygen

Saltstone Disposal Unit (SDU) Evolution

- **SDUs 2, 3 & 5 — each have two reinforced concrete cells**
  - 150’ diameter • 22’ side wall height • 23.5’ center height • 2.9 million gallon capacity • ***$5.00/gallon***
  - SDU 2 placed into service in 2011; filled in 2013
  - SDUs 3&5 placed into service in 2013; expected to reach fill capacity in 2018

- **Committed to continuously seek efficiencies and innovative approaches—Mega-SDU is more economical**
  - 375’ diameter • 43’ high • 30 million gallon capacity • ***$2.50/gallon***
  - SDU6 ready to receive waste in 2017, well in advance of need



DOE estimated life-cycle savings ~$300M
(7 mega vs. 82 smaller SDUs)

SDU6 Construction Progress

SDU 6 Leak Tightness Testing

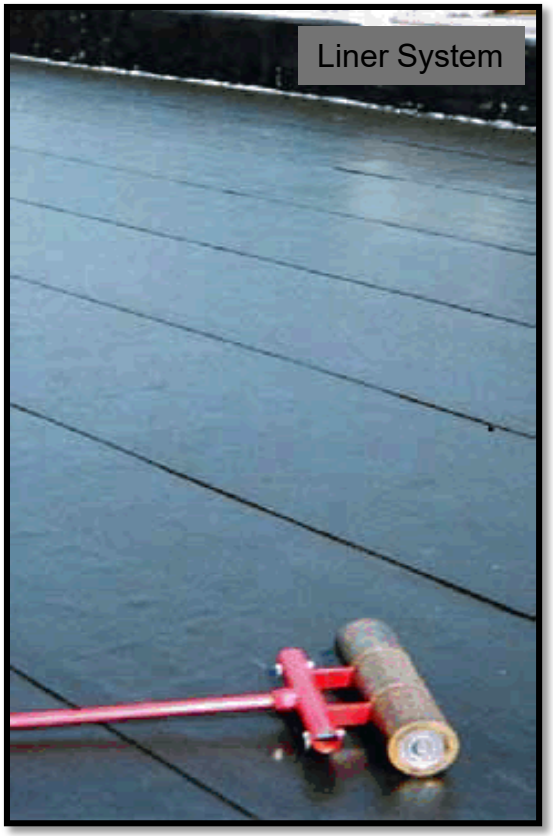
- **Project Scope/Baseline**
  - Included an interior coating system to protect SDU concrete from chemical degradation
  - Unlike SDUs 2, 3, and 5, SDU6 was leak tested prior to the coating as an opportunity to remove the coating scope

- **Leak Tightness Testing**
  - Initial testing filled tank to 41 feet; small amount of leakage identified
  - Drained tank and pressure injected all construction joints with epoxy
  - Partially filled tank; leakage observed

- **Expert Review Panel and Systems Engineering Evaluation held February 2016**
  - Structural integrity – *met all structural requirements*
  - Performance Assessment – *worse case modeling of cracking did not change results*
  - Leak Tightness – *liner system recommended to ensure leak tightness*

Liner System

- **Selected liner system**
  - Liner systems available in the market were reviewed against functional/technical requirements (chemical resistance, temperature range, rad resistance, elongation properties)
- **Completed a 1,000 hour test to confirm chemical resistance**
- **Began installation this month (July 2016)**
- **Will conduct final hydrotest to validate SDU 6 meets leak tightness requirement**



Closing

- SDU6 Project continues with positive performance in both cost and schedule
- SDU6 meets all structural and Performance Assessment requirements
- Liner installation followed by leak testing will ensure no leakage during SDU6 saltstone emplacement period
- SDU6 should be ready to receive waste in 2017, well in advance of 2018 need date