

# SRR Accomplishments and Challenges

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# Liquid Waste Operations Overview

**URS**



CH2MHILL

**B&W**

technical services group

**A**  
AREVA

**ENERGYSOLUTIONS**

**URS**  
Safety Management  
Solutions

- **Single Liquid Waste Operations contractor**

- Savannah River Remediation LLC
  - Began work in July 2009
  - Workforce of ~ 2,600 employees
- Focused on acceleration of liquid waste mission

- **Liquid Waste budget requirements**

- Annual budget: ~ \$600M/yr
- Life cycle cost: \$13B (FY08 – FY26)
- \$200 million in American Recovery and Reinvestment Act (ARRA) – near term investment to accelerate tank cleaning and closure

**“The HLW at SRS represents the highest environmental risk in South Carolina” – South Carolina Department of Health and Environmental Control**

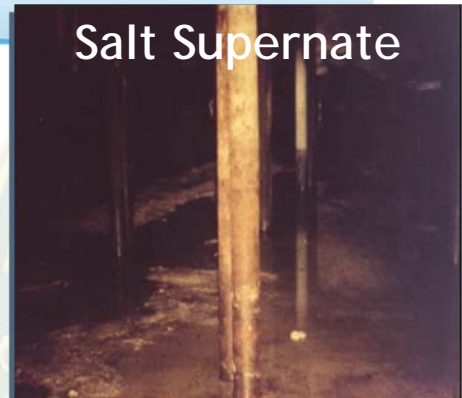
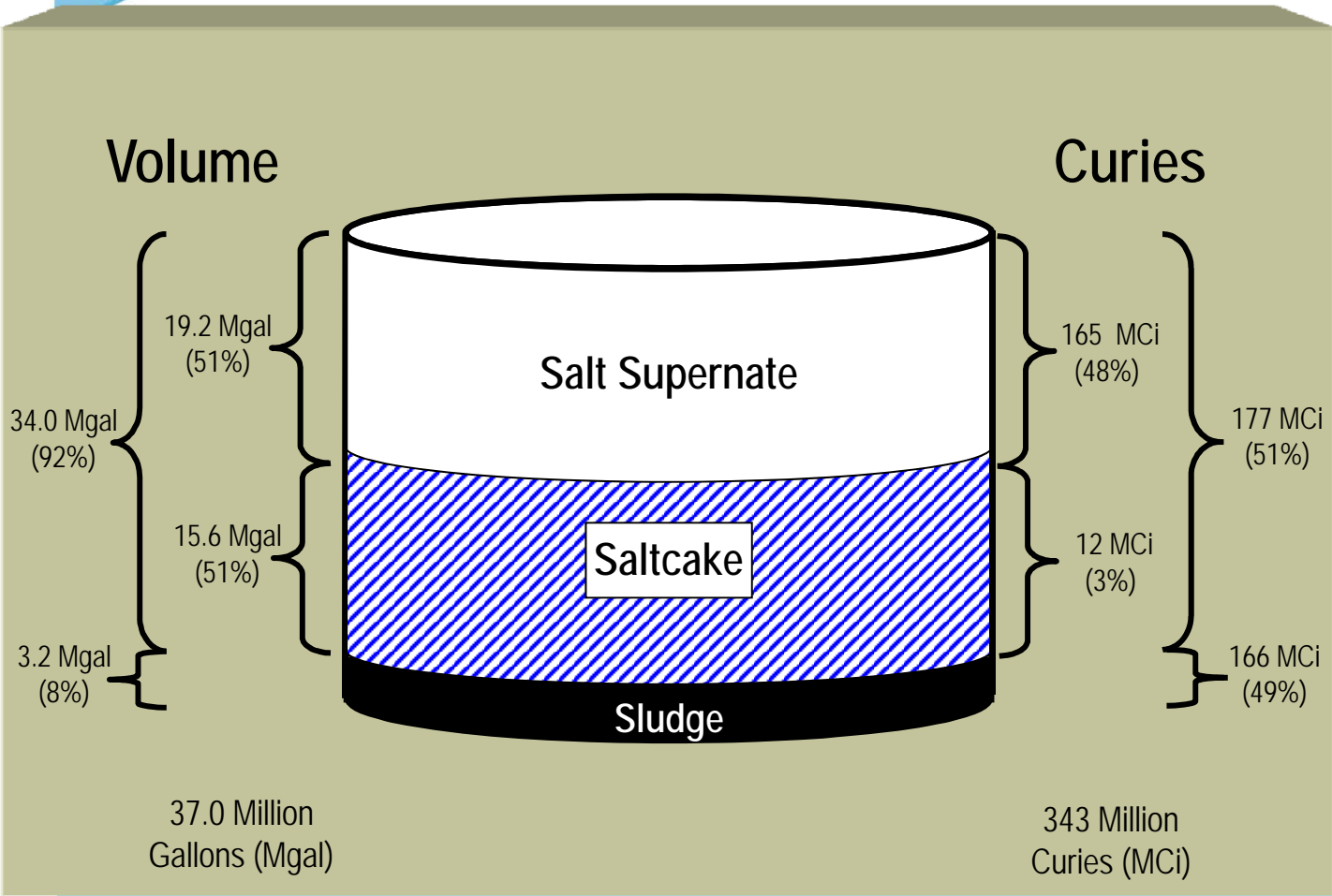


# Our Focus: Safety

- **Over 3 million safe hours in operations**
  - Operations employees had the lowest Total Recordable Case rate of any major SRS contractor in over 25 years (0.25 in FY10).
- **23 million-plus safe hours in Liquid Waste construction**
  - Record performance
- **1 million safe hours in Recovery Act work**
  - No recordable injuries since work began
- **Radiological Performance since assuming contract (July 1, 2009)**
  - No reportable radiological events
  - No Adverse Trends or Programmatic Issues
  - No Watch List Items or recurring issues
- **Environmental Performance since assuming the contract**
  - 0 Notice of Violations
  - 0 Reportable Spills
- **SRR has completed the Industrial Hygiene Exposure Baseline (one of DOE complex leaders in this area)**



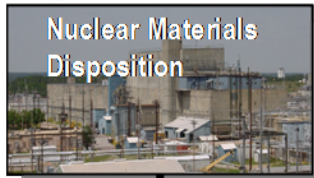
# The Challenge



Inventory values as of 2010-12-31

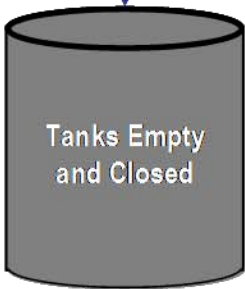


# The Solution

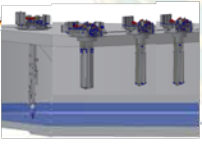
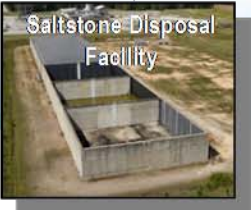
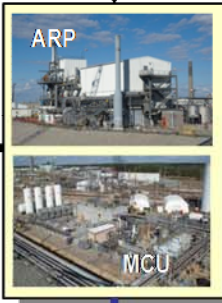


**Legend:**  
 ARP – Actinide Removal Process  
 DWPF – Defense Waste Processing Facility  
 MCU – Modular Caustic Side Solvent Extraction Unit  
 SWPF – Salt Waste Processing Facility

- ✓ Radionuclides to glass
- ✓ Chemicals to Saltstone
- ✓ Tanks empty and closed



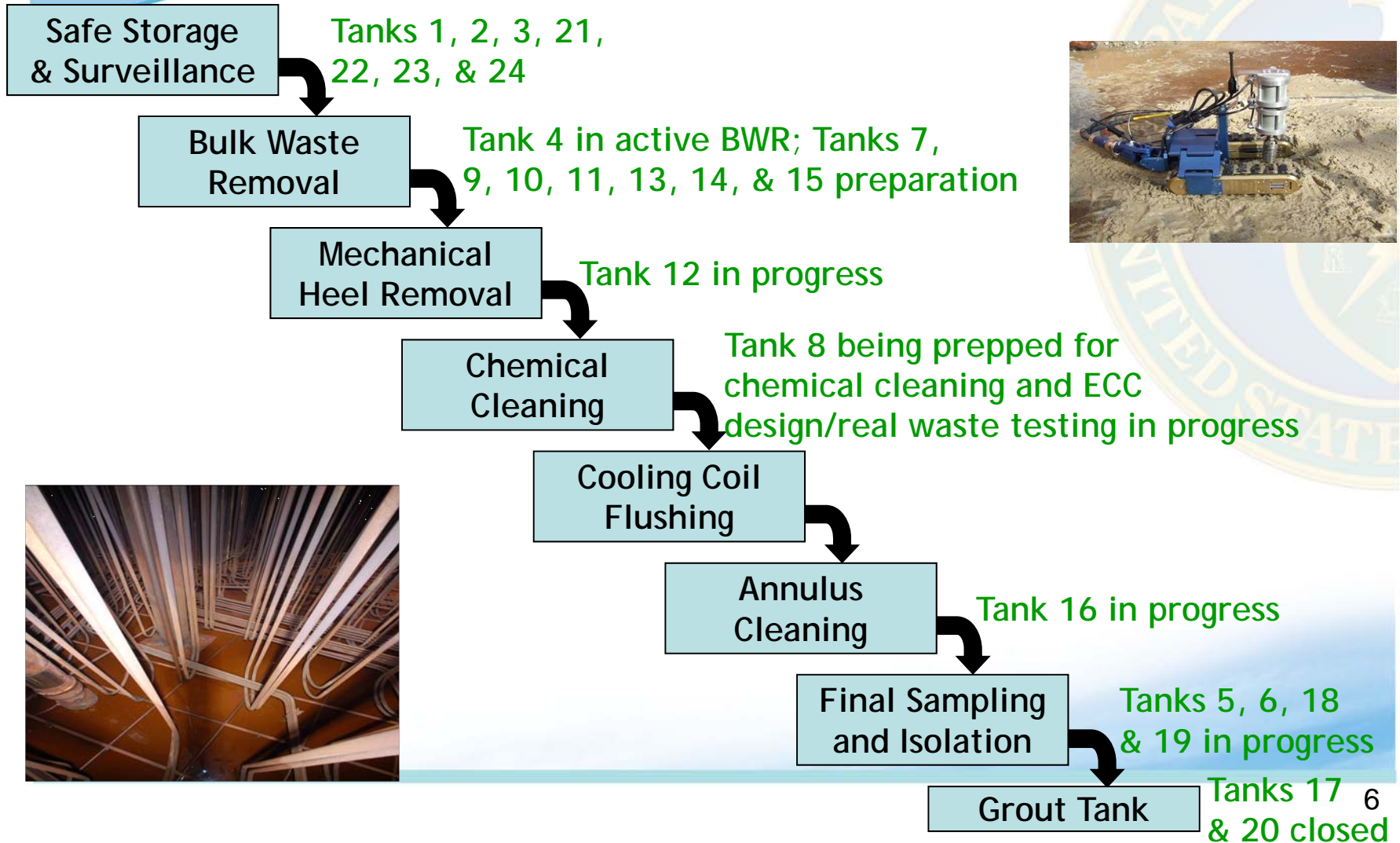
>99% radionuclides to glass



<1% radionuclides to saltstone



# Tank Closure Progression





# Sludge Waste Treatment

- Recently poured 3,000<sup>th</sup> canister of glass
- DWPF has poured more than 11.7 million pounds of glassified waste
- New technology, 'Bubblers,' recently installed has the capability to nearly double canister output
- DWPF Glass Waste Storage Buildings: Two in place
- Underground reinforced concrete vaults
- Seismically qualified
- Designed to be interim storage





# Salt Waste Treatment

- **Operating interim salt processing to support tank closure**
- **Saltstone facilities being upgraded to improve reliability and to receive organic materials**
  - Processed 800,000 gallons last fiscal year; already processed over 300,000 this fiscal year
- **Design in progress for supplemental salt processing capability to start-up in 2013**
  - Technology will accelerate salt waste removal

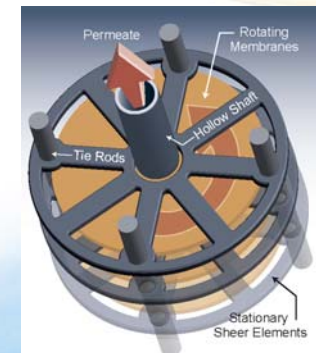
MCU Contactors



Saltstone



Rotary Microfilters



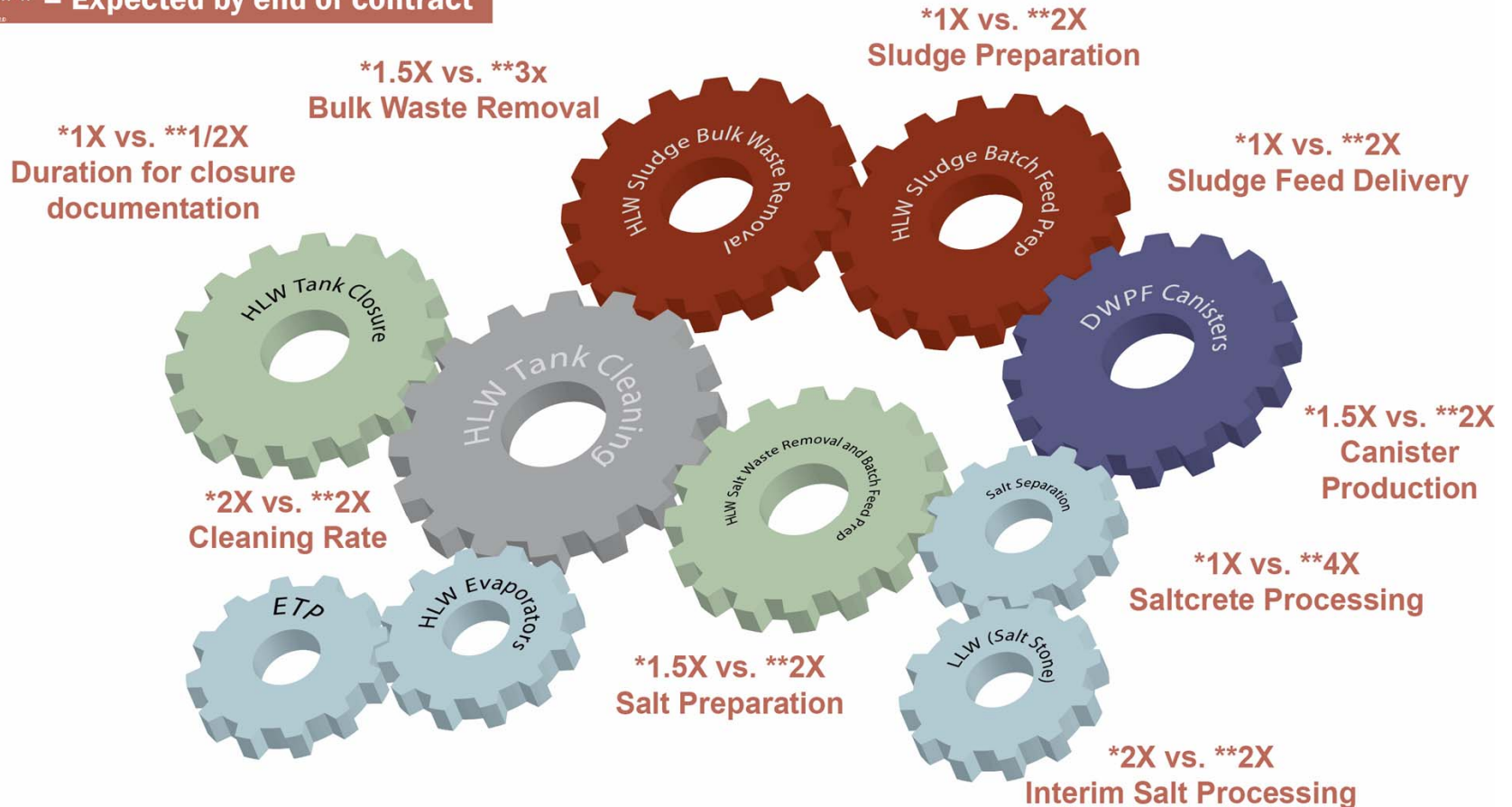




# Actual vs. Contract Goal

\* = Actual as of 1/1/11

\*\* = Expected by end of contract





# Accelerating the Liquid Waste Mission

## Next 12 Months

- **Deploy additional technology improvements in the Liquid Waste System**
- **Near-term investment for lifecycle acceleration**
  - Complete Recovery Act work
  - Execute Supplemental Salt treatment

## Results

- **Close 22 tanks by 2018**
  - Four years ahead of federal and state requirements
- **Complete HLW Mission 2026**
  - Realize 6 Year, \$3B lifecycle savings
- **Demonstrate technologies for deployment in the DOE Complex**

