



U.S. DEPARTMENT OF
ENERGY



SRS Citizens Advisory Board

Salt Waste Processing Facility Status

September 2020

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Acronyms

- ARP – Actinide Removal Process
- CSSX – Caustic-side Solvent Extraction
- DWPF – Defense Waste Processing Facility
- ETF – Effluent Treatment Facility
- FTF – F Tank Farm
- HLW – High Level Waste
- HTF – H Tank Farm
- KCi – thousands of curies
- LLW – Low Level Waste
- LW – Liquid Waste
- MCU – Modular Caustic Side Solvent Extraction Unit
- Mgal – millions of gallons
- SPF – Saltstone Production Facility
- SRR – Savannah River Remediation (current Liquid Waste Contractor)
- SWPF – Salt Waste Processing Facility
- TCCR – Tank Closure Cesium Removal

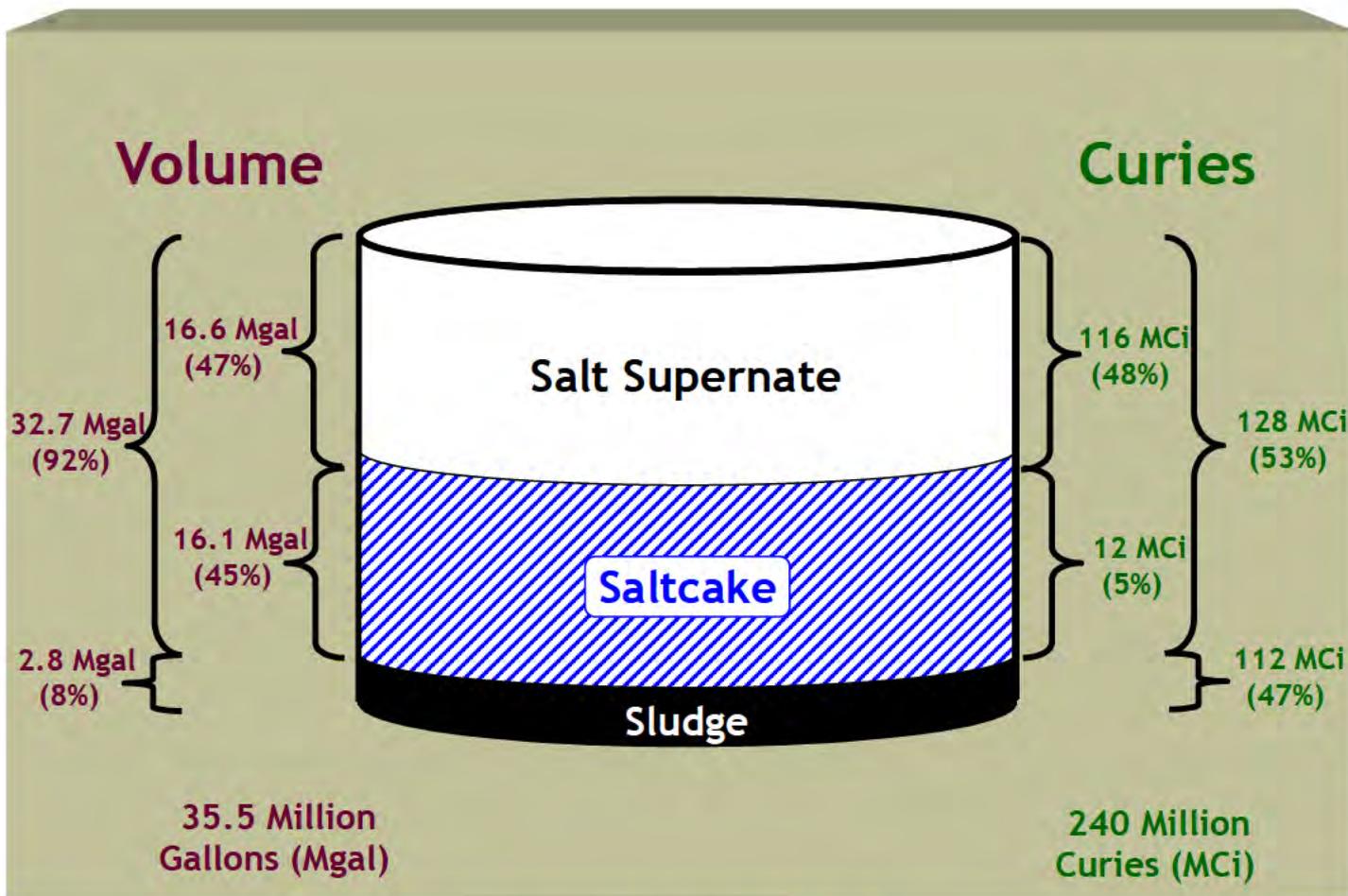
Agenda

- Completion of the Salt Waste Processing Facility Project (SWPF)
- SWPF Transition to Operations
- Objective of Hot Commissioning
- Startup Plan
- Examples of Elements in the Startup Plan
- Increasing Feed to Normal Radioactivity Levels
- SWPF Status – Summary and Path Forward

Salt Waste Processing Facility



SRS Composite Inventory



Inventory values as of 2020-06-30

SRR Liquid Waste Program

(with current status)

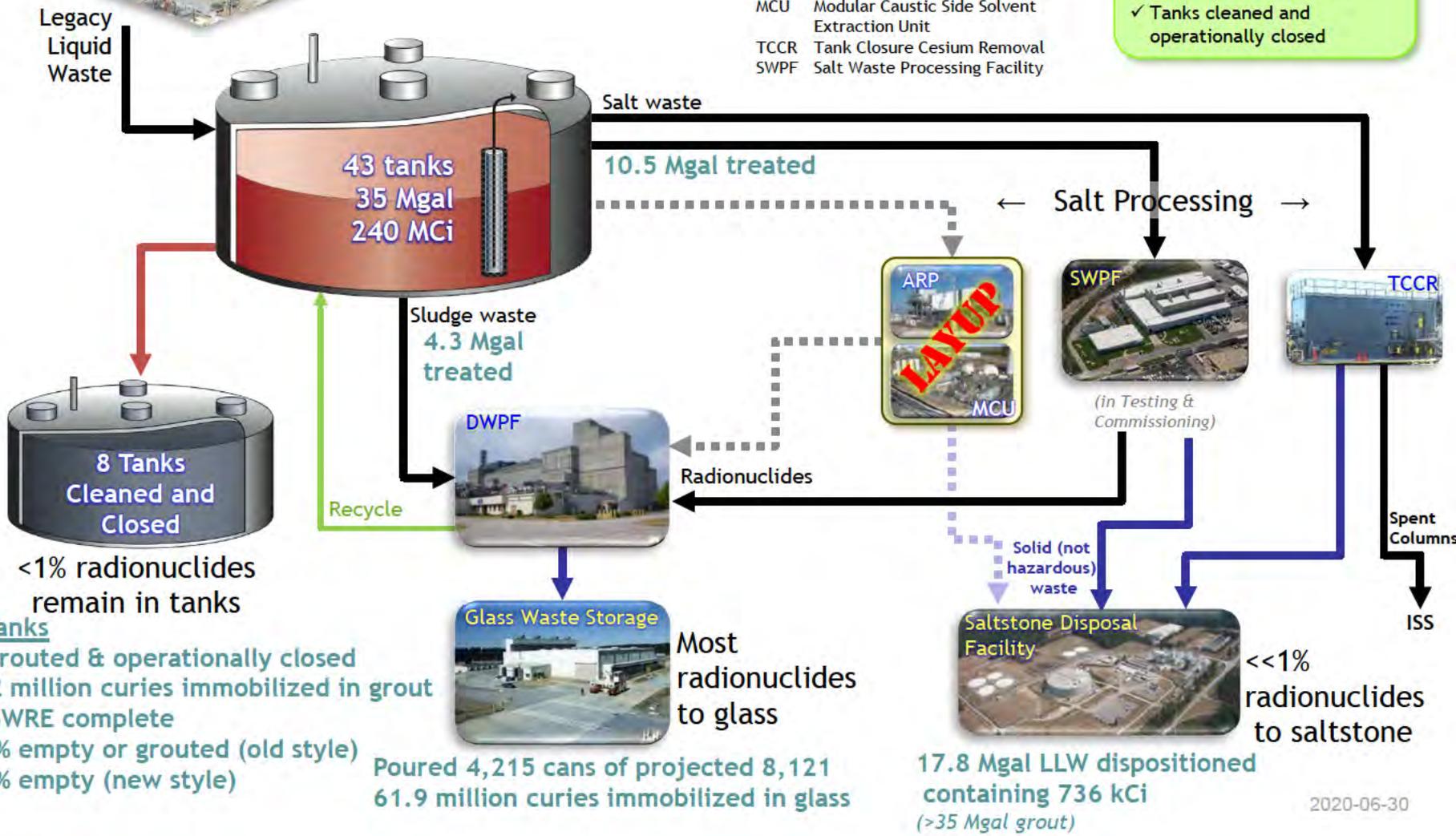


Legend:

ARP	Actinide Removal Process
BWRE	Bulk Waste Removal Efforts
DWPF	Defense Waste Processing Facility
ISS	Interim Safe Storage
MCU	Modular Caustic Side Solvent Extraction Unit
TCCR	Tank Closure Cesium Removal
SWPF	Salt Waste Processing Facility

Operational Goals

- ✓ Radionuclides to glass
- ✓ Chemicals to Saltstone
- ✓ Tanks cleaned and operationally closed



- 51 Tanks**
- 8 grouted & operationally closed
 - 1.2 million curies immobilized in grout
 - 6 BWRE complete
 - 69% empty or grouted (old style)
 - 20% empty (new style)

Poured 4,215 cans of projected 8,121
61.9 million curies immobilized in glass

17.8 Mgal LLW dispositioned
containing 736 kCi
(>35 Mgal grout)

<<1% radionuclides to saltstone

Completion of the Salt Waste Processing Facility Project

- **August 17, 2020 DOE approved Critical Decision-4 (CD-4) and Authorization To Operate for the Salt Waste Processing Facility (SWPF) authorizing “hot” or radioactive operations to begin at the facility.**
- **CD-4 signals project completion and the transition from project phase to operations.**
- **The approval comes five months ahead of the current baseline CD-4 completion date of January 31, 2021.**
- ***“This is a considerable achievement for EM’s cleanup program and will drive significant progress in treating the tank waste at SRS in the next decade”***
Sr Advisor for EM to the Undersecretary for Science, William “Ike” White
- **Congratulations to Federal Project Director Pam Marks and the entire Project Team – both DOE and Contractor for successfully achieving this significant milestone!**

SWPF Transition to Operations

- SWPF Operational and Contract Oversight will now be performed by DOE-SR Assistant Manager for Waste Disposition (Jim Folk and team)
- Parsons Corporation, who designed and built the first-of-a-kind facility, will
 - Perform Hot (Radioactive) Commissioning (Sep-Nov)
 - Operate for One Year
 - Managed by Frank Sheppard and team
- The SWPF remains on track to start normal operations later this year following completion of hot commissioning.

Objective of Hot Commissioning

- Follows successful completion of extensive cold commissioning tests, Contractor Operational Readiness Reviews (CORR), DOE Operational Readiness Reviews (ORR) and Receipt of the DOE Authorization to Operate (ATO) on August 17
- The objective of the Hot Commissioning period is to confirm operability of equipment, viability of procedures, and performance and knowledge of operators during radiological operations.
- The transition from Cold Operations to full radioactive “Hot Operations” will be a deliberate, carefully managed process to ensure the safety of personnel and the facility.
- Based upon the SWPF Startup Plan

Startup Plan

- **The plan establishes the additional controls, support and oversight to be implemented during the SWPF Hot Commissioning phase**
 - the critical period of the startup process as the plant begins deliberate operations and introduces radiological hazards for the first time
- **Describes management and facility activities necessary to achieve normal operations with emphasis on the following strategic areas:**
 - Management and Technical Oversight
 - Equipment Operability
 - Procedure Viability
 - Operator Knowledge and Performance, and
 - Final Management Review and Authorization

Examples of Elements in the Startup Plan

- **Confirmation of Equipment Operability**
- **Confirmation of Procedure Viability**



Increasing Feed to Normal Radioactivity Levels

- Hot Commissioning will be performed in a series of incremental batches in which the radioactivity content will be progressively increased from 10% of normal, to 20% of normal and so on.
- An additional 12 batches will be at full strength (approximately 0.6 Ci/gal)
- During these 12 batches the shielding verifications will be completed as well as a Process Capacity Performance test to demonstrate processing at normal high rates
- After all contractual tests have been completed, reviewed and approved the Plant Manager will release SWPF for unrestricted Hot Operations at which time one year of Hot Operations commences

SWPF Status - Summary and Path Forward

- Hot Commissioning will begin September 2020
- Current schedules estimate 3 months duration
- Deliberate Startup Plan execution more important than schedule
- First year (twelve months) of operations begins December 2020
- SWPF expected to process 4 to 6 Mgal during first 12 months of operations

Questions