



U.S. DEPARTMENT OF  
**ENERGY**



# Z-Area Saltstone Facility Update

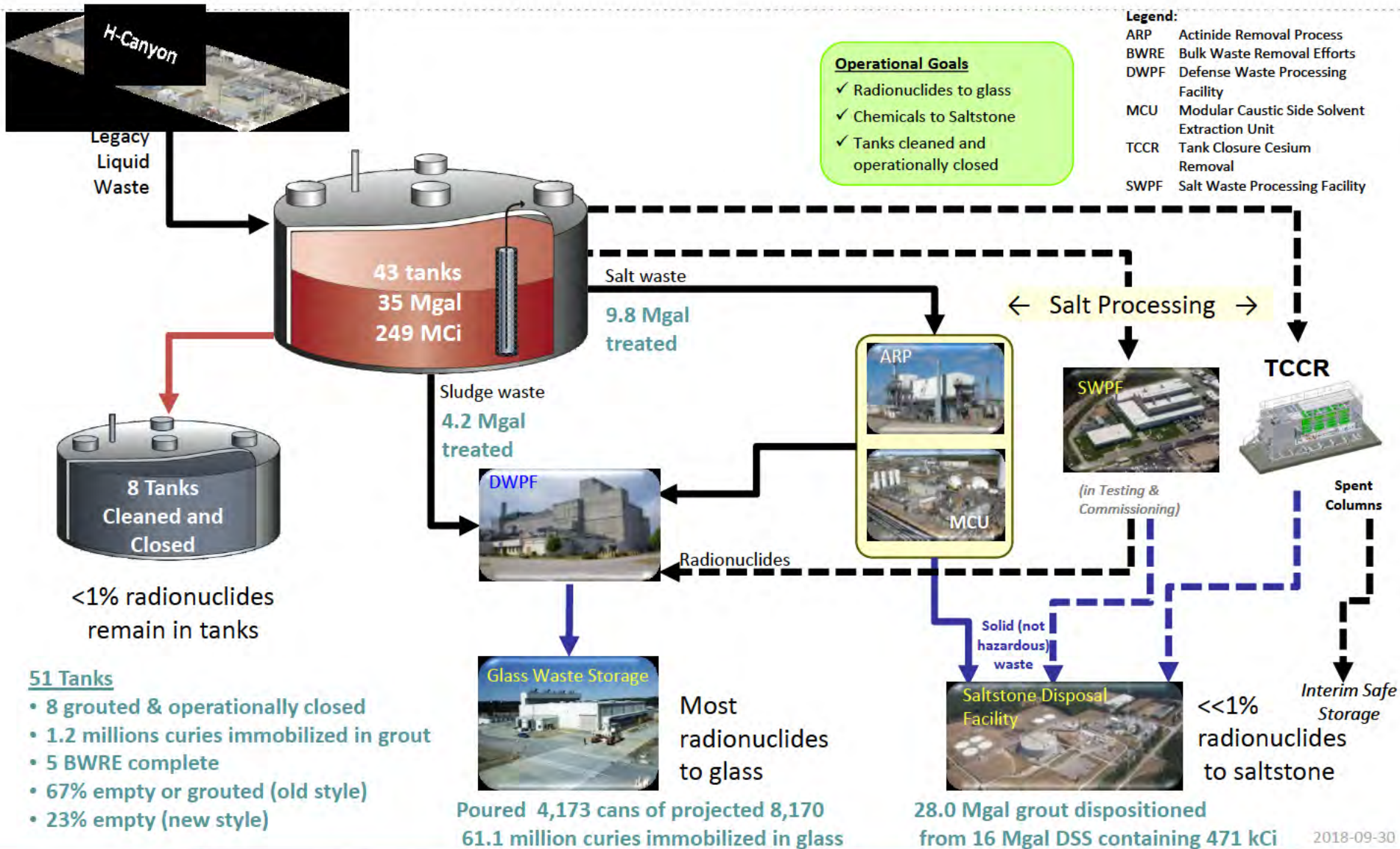
Jeffrey Bentley

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*Status Update*

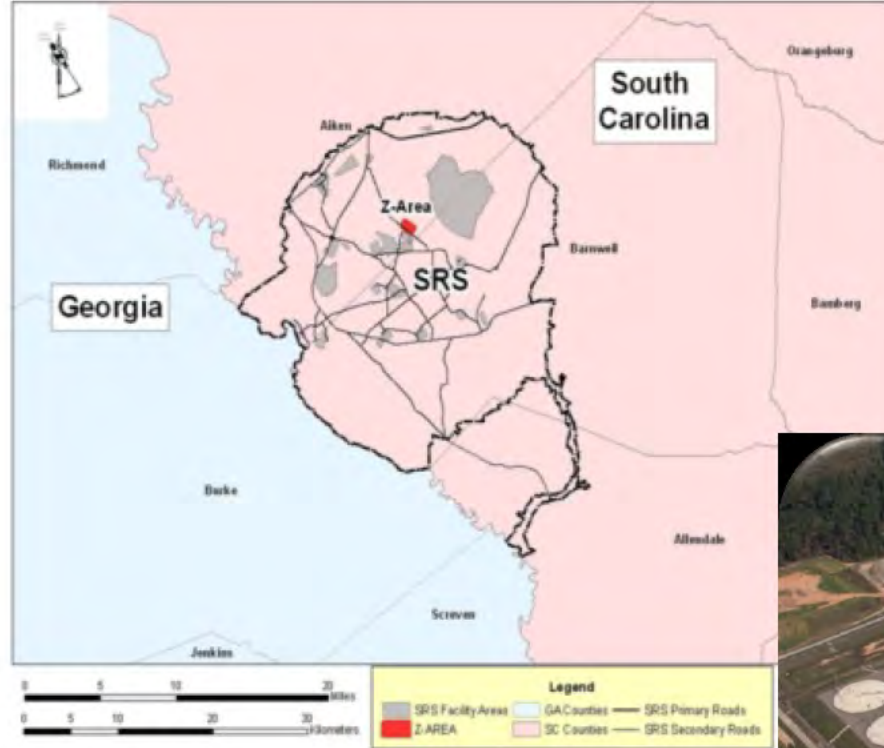
*January, 2019*

# DOE-SR Liquid Waste System (as of 09/30/18)





# Saltstone Facility



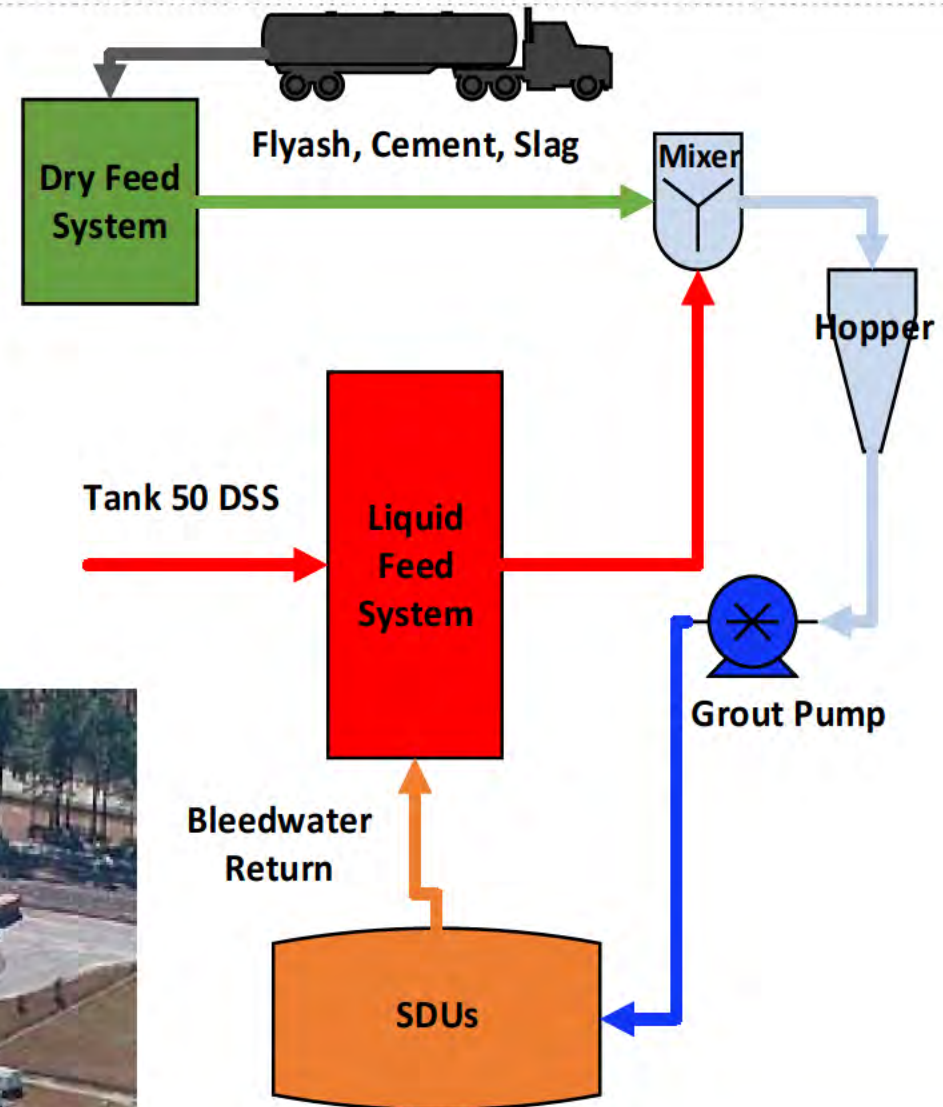
Location of Saltstone at SRS



Saltstone Facility

## Saltstone Facility

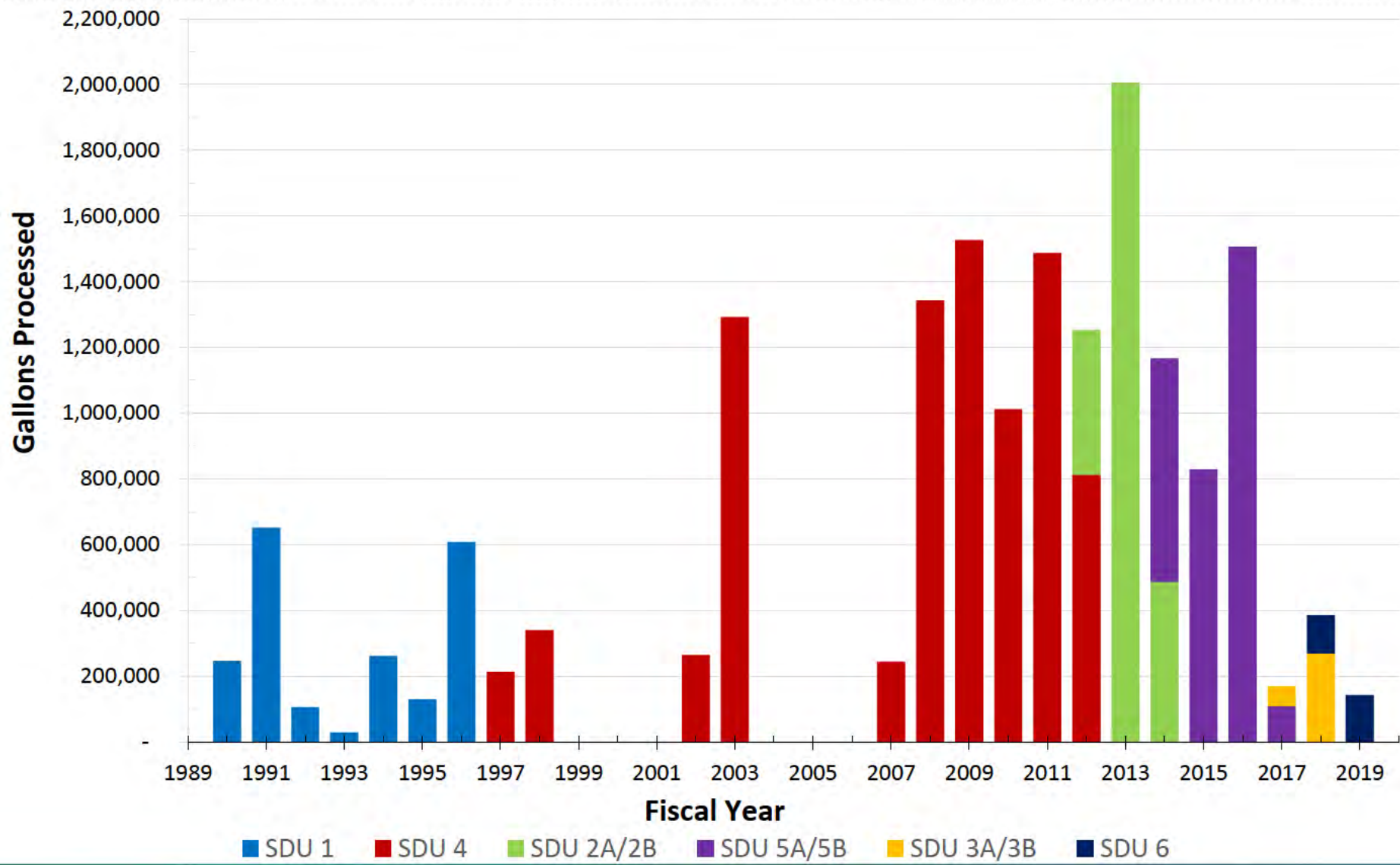
- The Saltstone facility takes Decontaminated Salt Solution (DSS) from either the Actinide Removal Process / Modular Caustic Unit, Salt Waste Processing Facility, or Tank Closure Cesium Removal, combines it with a cement mixture to create a grout that, when set, becomes a stable waste form for permanent disposal of this low level waste.



- Approximately 16 million gallons of DSS processed to date into entire SDF
- Approximately 385K gallons of DSS processed in FY2018
- Approximately 142K gallons of DSS processed in FY2019



# Salt Solution: 16M gal Gallons Processed to Date



## Saltstone Disposal Units

Disposal Cell	Volume/Capacity (gallons)	Status
Vault 1	5.6M/10.9M	Out of Service
Vault 4	19.1M/20M	Out of Service
SDU 2 A/B	5.5M/5.6M	Full
SDU 3 A/B	700K/5.6M	Reserve Capacity
SDU 5 A/B	5.5M/5.6M	Full
SDU 6	0.8M/32.8M	Currently in Use
SDUs 7-12	0.0/192M	Future Construction

## Saltstone Facility Upgrades

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### Needed to support Salt Waste Processing Facility:

- Dry feed upgrades to increase capacity/throughput of storage silos.
- Increased staffing levels to implement second shift operations this year and 24/7 operations in 2020.
- SDU expansion: addresses critical mission need for the treatment, storage, and disposal of DSS produced by the liquid waste system.



Saltstone Facility



## Update on Previous Projects

- **Sedimentation Basin Expansion**

- Expanded basin capacity to prevent overflow and discharge to waters of the State. Completed in 2014.
- New size accommodates 100-year storm event.
  - *Full expansion capacity remains.*

- **Vault 4 Stabilization**

- Stabilized Vault 4 to prevent in-leakage of rainwater. Completed in early 2015.
- Poured a “clean cap” in Vault 4 cells to minimize dose rates to workers.
- Applied a coating to the roof of cells D, E, F, J, K, and L.
  - *No evidence of rainwater intrusion since completion of project.*
- Replacement of degraded Vault 4 huts



## Presentation Takeaways

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- Intended to be informational to the CAB.
- Saltstone processing rate is trending up.
- Significant progress made to date (16M gal dispositioned).
- Disposal Unit capacity over 30M gal (grout).
- Ramping up to support upcoming SWPF operations.