



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

Saltstone Disposal Unit (SDU) 6 and Saltstone Disposal Units (SDUs) 7 - 12

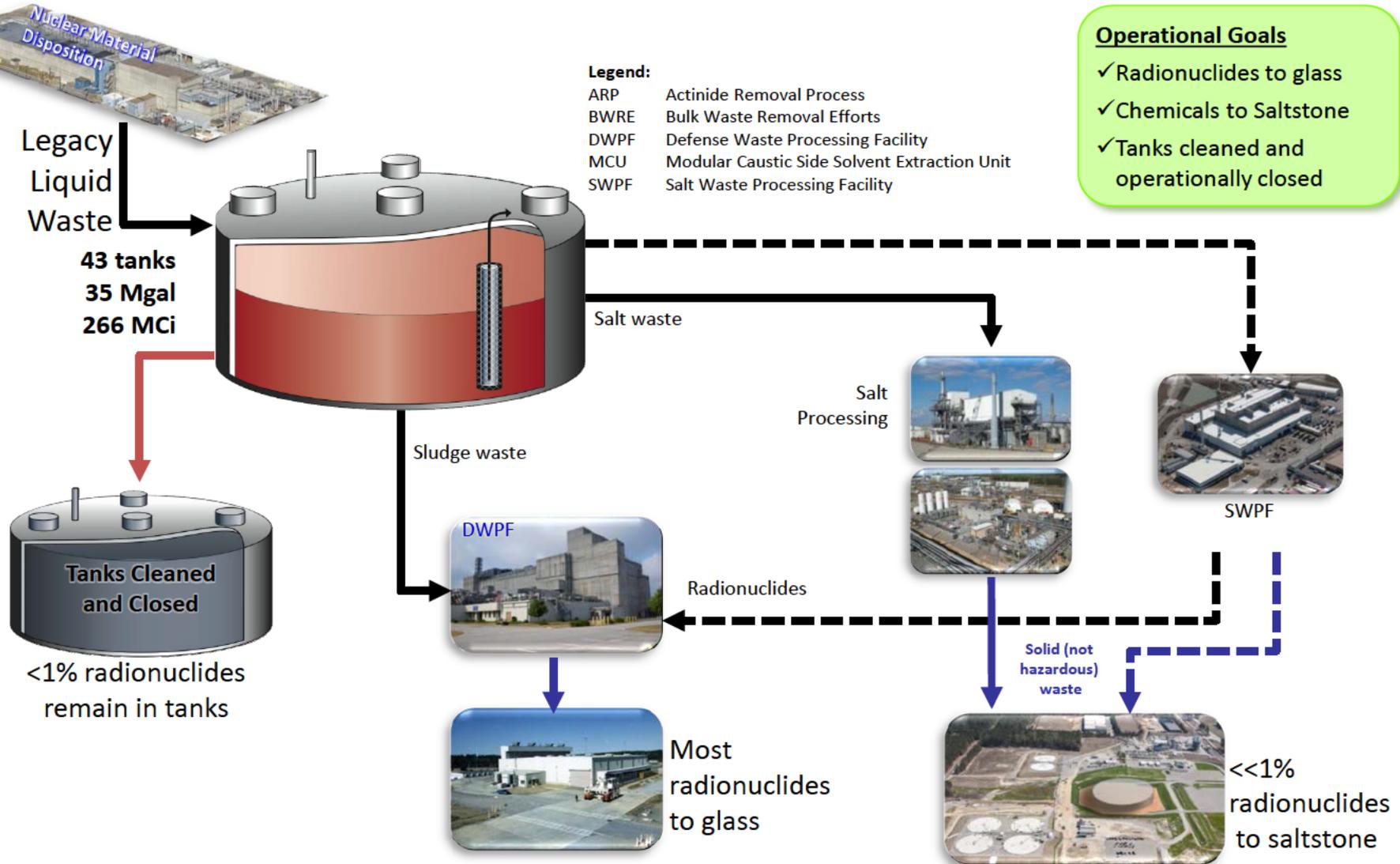


Jean Ridley, PE
Federal Project Director, SDU 6

Shayne Farrell
Federal Project Director, SDU 7 – 12

May 2017

Liquid Waste Mission

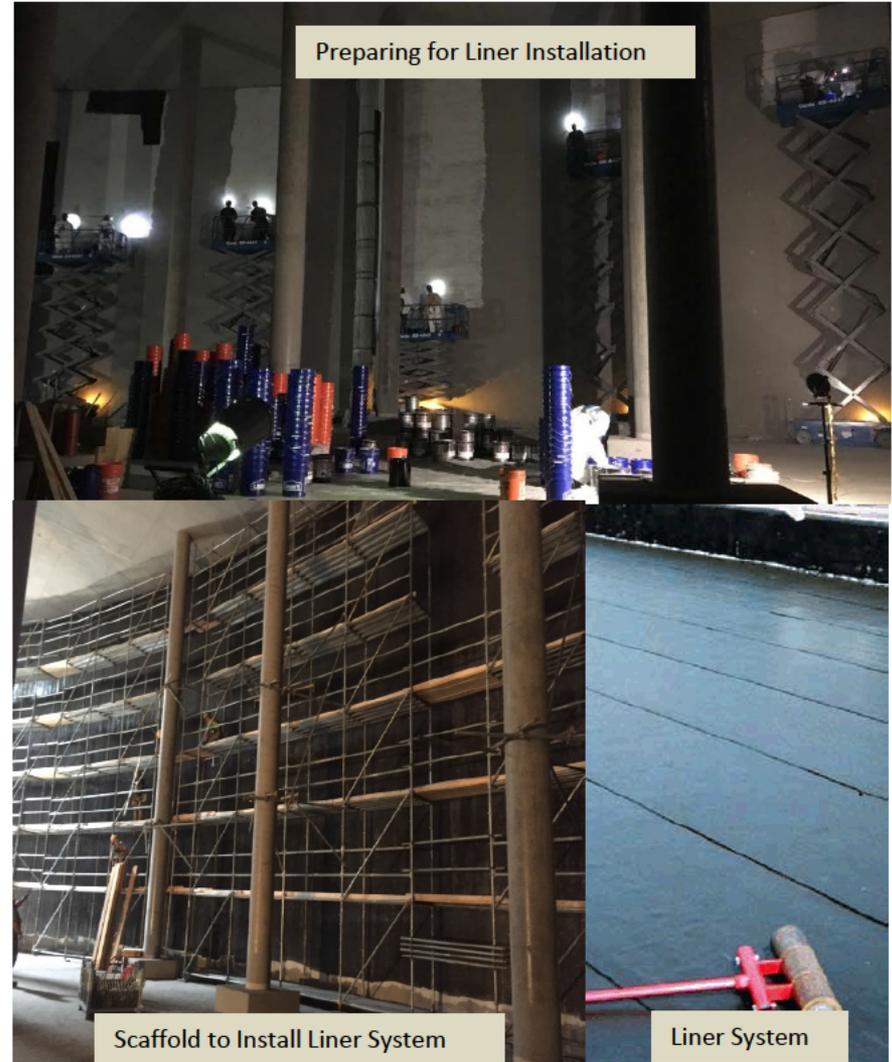


SDU 6 Tank Construction Progress

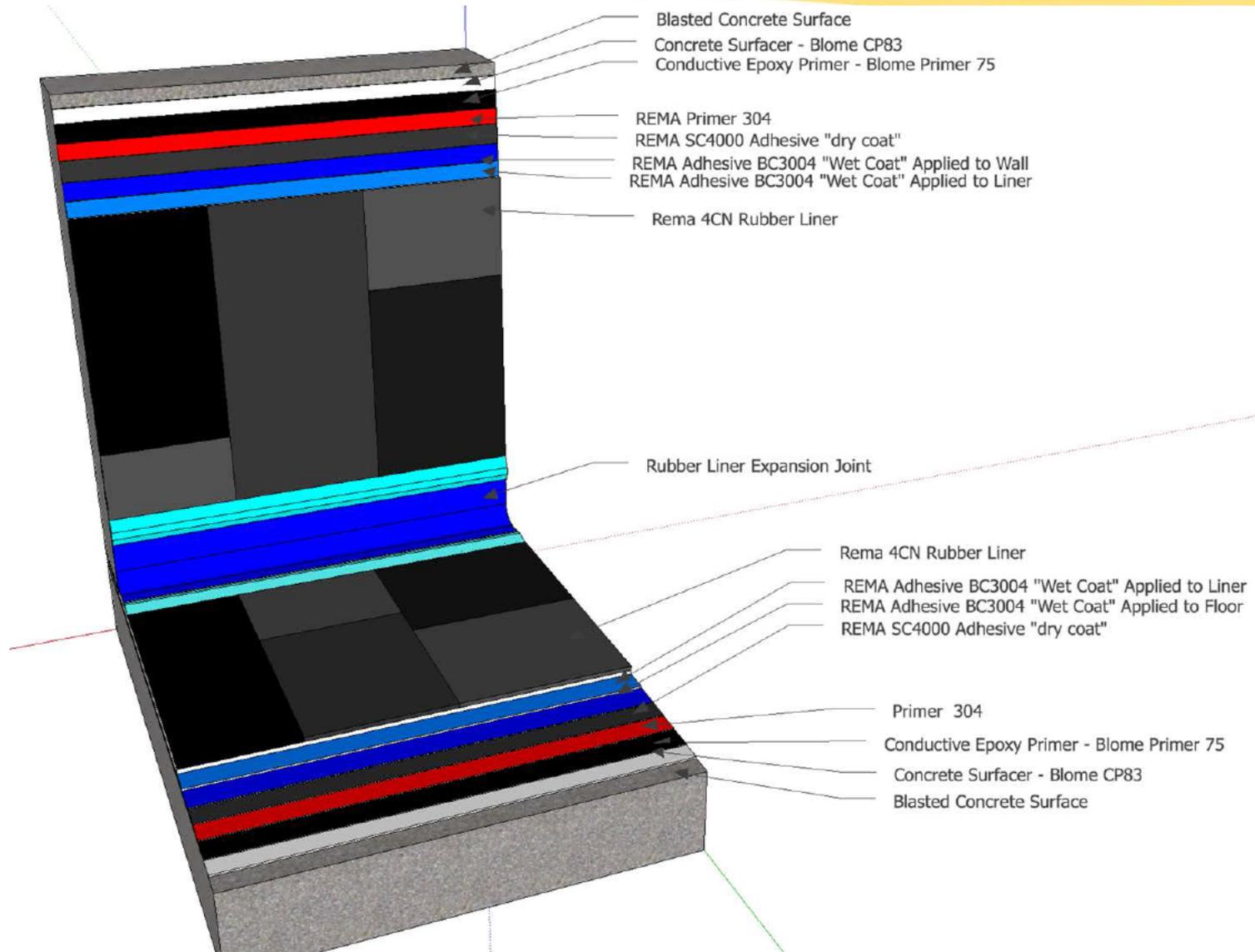


SDU 6 Cell Status

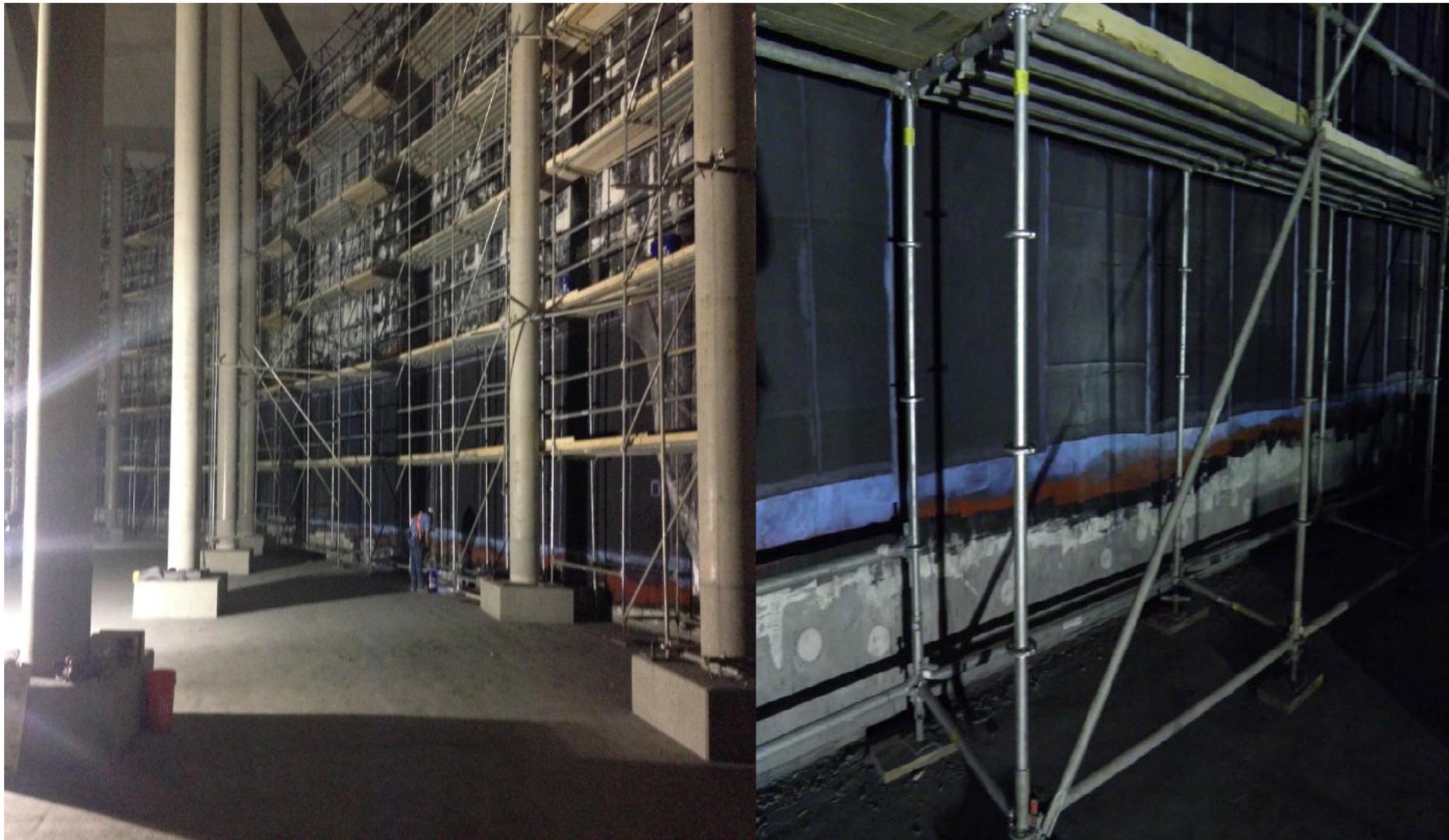
- Cell failed hydrostatic leak test due to cracks in the floor. (November 2015)
- Attempted repair cracks using epoxy injection. (December 2015)
- Partially filled cell with buffered water to promote Autogenous healing. Tank floor continued to leak. (January 2016)
- Subject Matter Experts (SMEs) employed to determine path forward. (February 2016 – March 2016)
- Engineering Study Report (ESR) recommended an elastomeric liner system (REMA 4CN) to provide leak tightness. (May 2016)
- Liner successfully passed 1000 hour salt solution soak test. (June 2016)
- Liner procured and installed. (August 2016 – December 2016)



SDU 6 Liner System



SDU 6 Liner Installation in Progress



SDU 6 leak tightness assured by:

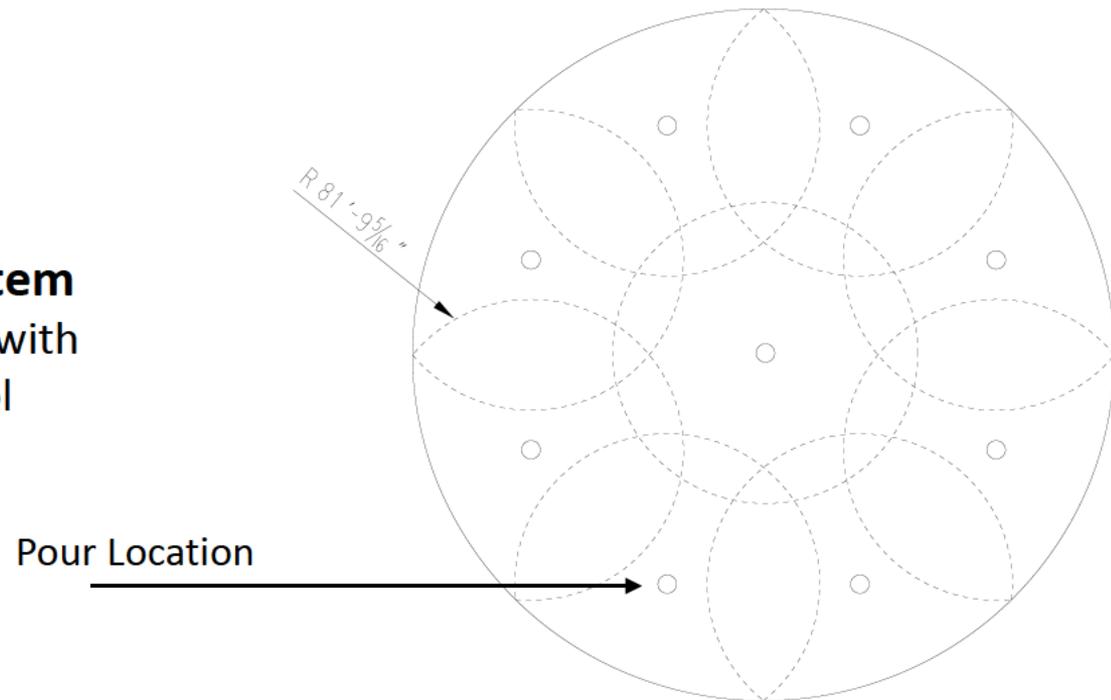
- Selection of the best synthetic liner system
- Installation of the selected liner system in accordance with manufacturer approved procedures
- Appropriate application of Quality Requirements
- Installation oversight by the Manufacturer's Service Representative
- Hydrostatic leak test performed with 41' of water

■ SDU 6 Operations:

- Filling SDU 6 with radioactive grout for approximately 4 years [Ref. LWSP]
- Anticipate grout pump rate of ~150 gpm (216,000 gals in 24 hours)
 - SDU 6 is approximately 43 feet high (at walls) with avg. ID of 375 feet which equates to ~68,850 gals / inch high (~3.13 inches/day 24 hour ops.)
- Liquid grout has the consistency of “chocolate milk”

■ Grout Distribution System

- 9 Grout Pour Locations with automated valve control



SDU 6 Cost and Schedule

- Critical Decision-2 (Establish Baseline) Cost \$143.2M
- CD-4 (Commence Operations) Estimate at Completion \$121.8M

- CD-2 Schedule Completion November 2018
- CD-4 Schedule Completion May 31, 2017

SDU 6 Status



- **Liner installation complete December 15, 2016**
- **Successfully passed 41' hydrostatic leak tightness test December 28, 2016**
- **Successfully passed first clean cap grout run March 22, 2017**
- **Completed DOE readiness assessment April 2017**
- **Approval to Commence Operations (CD-4) package submitted to DOE headquarters May 2017**

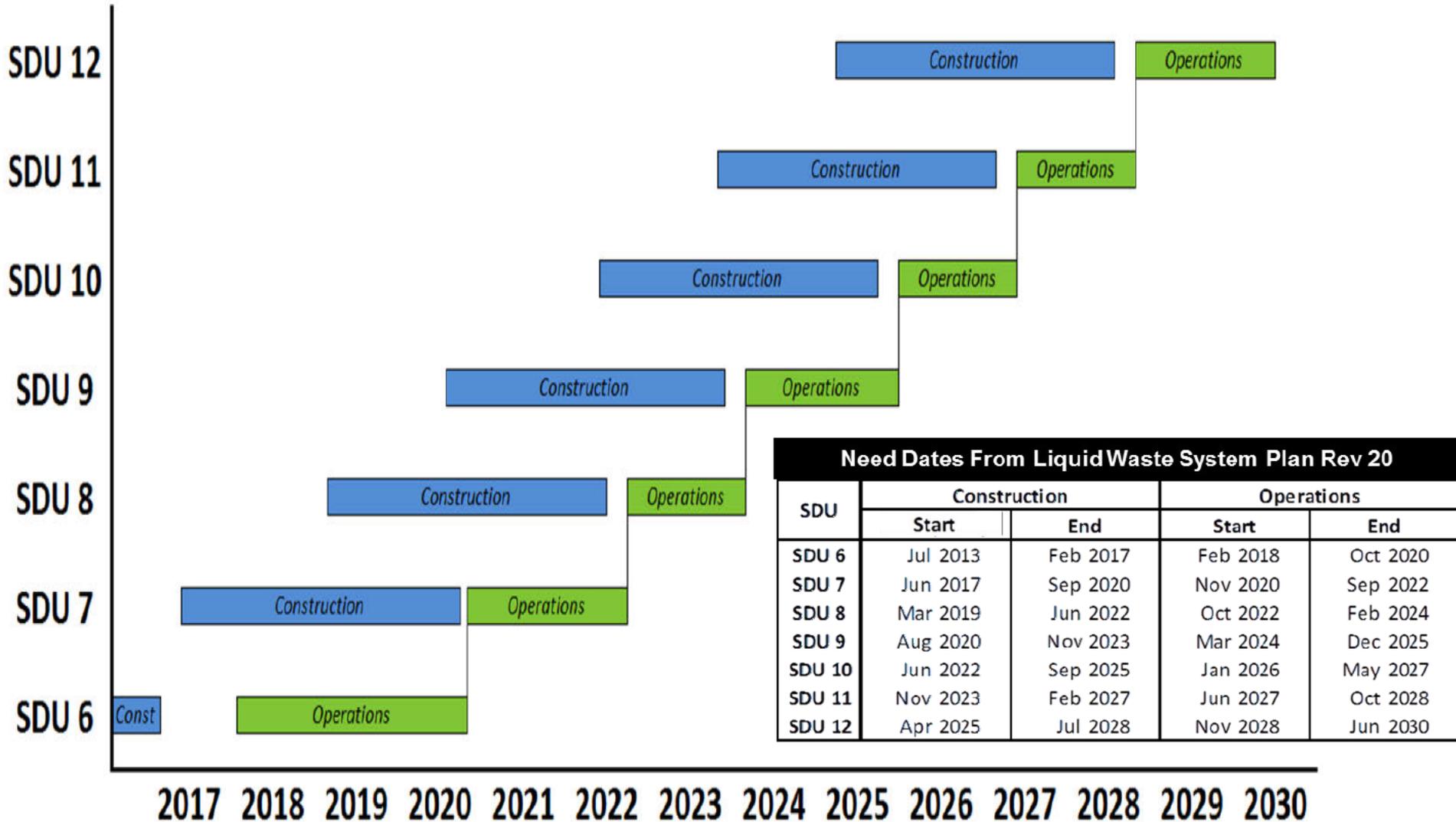
Remaining SDUs

SDUs 7 - 12

Future Saltstone Disposal Units (SDUs) (SDUs 7 – 12)

- SWPF Project Office (SWPFPO) assumed project management ownership for future SDUs
 - Shayne Farrell (SWPF - DFPD) named Federal Project Director for remaining SDUs
 - Utilizing experience and resources from successful construction of SWPF
- Remaining SDUs will be designed and constructed incorporating lessons learned from successful completion of SDU 6, including use of the liner

SDU Mission Need Timeline

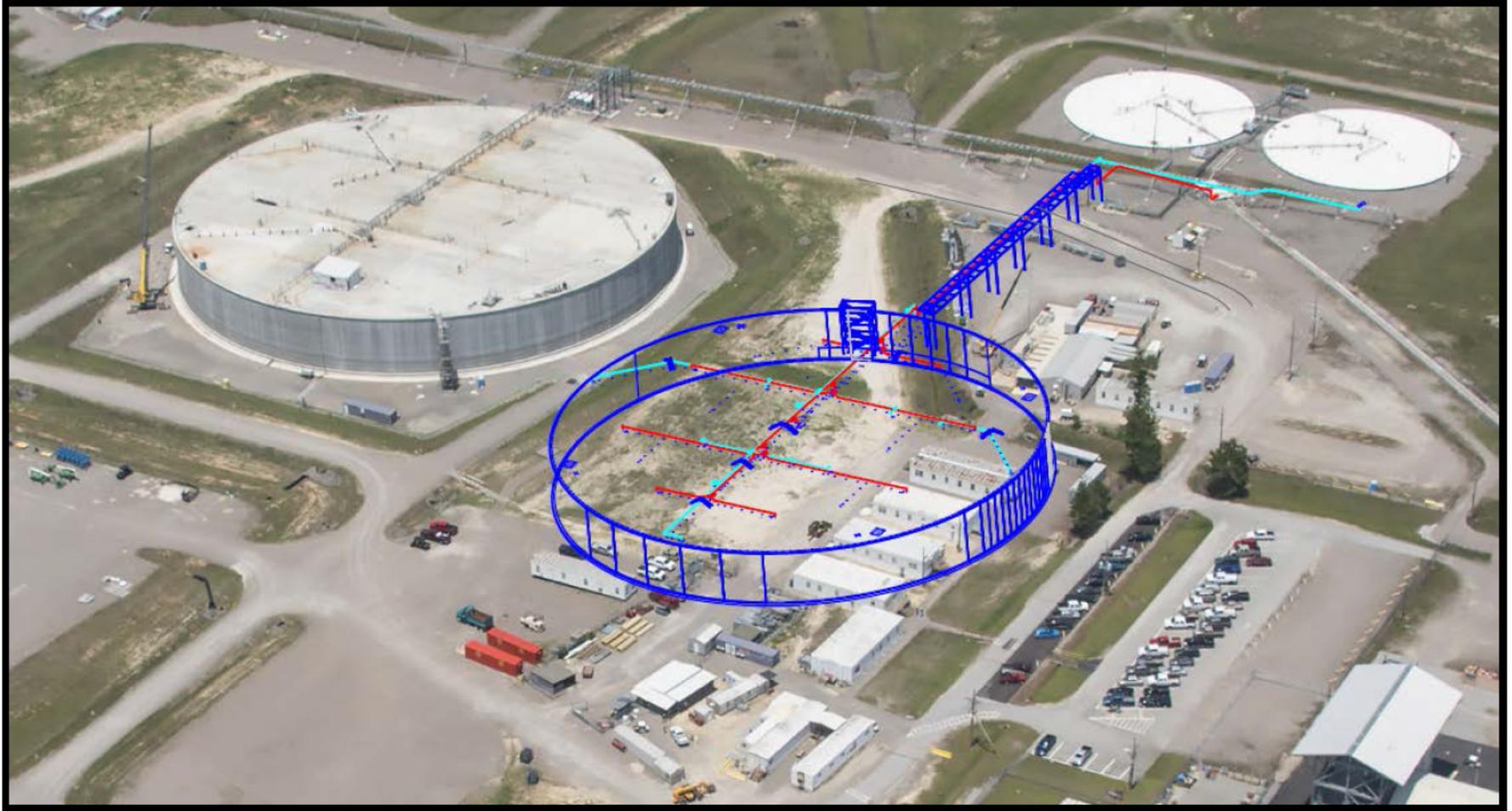


SDU 7 Project recently obtained Approve Alternative Selection & Cost Range (CD-1)

- Cost
 - Cost Range: \$110 million to \$170 million
- Schedule
 - Approve Long Lead Procurement (CD-3A) – September 2017
 - Approve Performance Baseline/Approve Start of Construction (CD-2/3) – November 2017
 - Approve Start of Operations (CD-4) – October 2022

Note: This date includes CD-1 estimated schedule contingency of 23 months however, the project is focused on the target date of November 2020 to meet LWSP Rev. 20 need date.

SDU 7 Proposed Siting



SDU 8 – 12 Status

- Mission Need for SDUs 8 and 9 SDUs approved in March 2017
- SDU 8/9 Design planned to begin in Fall 2017
- Approval for Mission Need for SDUs 10-12 planned for Fall 2017

Site Plan Concept



QUESTIONS

