U.S. DEPARTMENT OF ENERGY

SRS™

Saltstone Disposal Units (SDUs) 7-12

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Purpose

- Reinforce that Saltstone Disposal Units (SDU) are integral infrastructure within the Liquid Waste program
- Discuss SDUs 7-12 scope and mission
- Provide an update of SDU project status
- Provide the schedule of SDU project completion

SDUs 7-12 – Mission

- SDU mission consists of:
  - Construction of six (6) mega tanks with a 33-million gallon capacity and to:
    - ✓ Provide land fill capacity for receipt of Low Activity Treated Waste grout
    - ✓ Reduce SRS reliance on long term liquid storage in underground tanks in the aging Tank Farms
- To realize efficiencies in cost and schedule and to streamline procurement activities, the six tanks are being built under the three projects' structure (SDU 7, SDU 8/9, and SDU 10-12)
- SRS plans to construct these mega tanks on a schedule that fulfills the Site's need for the needed space to disposition Low Activity Waste
- The construction of each SDU and release to operations are integrated with the Liquid Waste System Plan (LWSP), R.21

SDUs 7-12 - Scope for each SDU

- Complete site preparation activities
- Design and construct a 375 ft. in diameter, 43 ft. high 33 million gallon cylindrical disposal cell (large tank), based on American Water Works Association design criteria
  - Robust reinforced concrete design, including the incorporation of 289 miles of cable wrapped around the cell to strengthen it
- Balance of Plant (BOP) - Design and construct all infrastructure to tie the SDU into the Saltstone Production Facility:
  - Grout distribution system
  - Drain water system
  - Modular instrument/Electrical equipment skid (MIEES)
  - Temperature monitoring
  - Power, cameras, lighting
  - Facility tie-ins

SDUs – Fact Sheet

Project dule Data

SDU 6
- **CD-4: May 2017**
- **Actual Costs at Complete - ~$125M**

SDU 7
- **CD-4 - 3/31/22**
- **Site Preparation benefits all remaining SDUs**

SDU 8/9
- **CD-4: 9/30/24**

SDU 10-12
- **High Schedule Range – 3/30**

Site Plan

SDU Key Performance Parameters (KPPs)

- Provide Saltstone grout containment capacity of no less than 30 million gallons (Mgal).
- Provide infrastructure capable of delivering Saltstone grout at 100 gallons per minute minimum
- Install a single leak detection system in accordance with the Z-Area Industrial Solid Waste Landfill Permit requirements

Key Physical Characteristics

- Tank Dimensions = 375' Avg. ID X 43' Tall
- Volume = 32.8 M gallons (Filled to 41' height)
- Mud Mat Concrete = 4252 cu. yds
- Tank Concrete = ~16872 cu. yds
- Wall Panels = 25 @ 24" base / 12"top
- Floor Area = 110,000 sq. ft (14 sections at 24")
- Columns = 208 @24" diameter
- Roof Coating System to reflect solar absorption & minimize thermal stress
- 425 post tensioning rods in walls (17 per)
- 7 layers of prestress cables = 341 miles
- Liner panels = 7000+ pieces;11' X 41" X 3mm thick
- Piping = 2,400 linear feet and 17 valves

SDU Schedules

LWSP 21							
Project	Design		SDU	Construction		Operations	
	Start	Finish		Start	Finish	Start	Finish
SDU 7	Jun 2017	Dec 2017	SDU 7	Mar 2018	Mar 2021	Nov 2021	May 2023
SDU 8/9	Mar 2018	Apr 2019	SDU 8	May 2019	Apr 2023	Jun 2023	Oct 2024
			SDU 9	Sep 2019	Jul 2024	Nov 2024	Apr 2026
SDU 10-12	Jan 2020	Jan 2021	SDU 10	Feb 2021	Sep 2025	May 2026	Sep 2027
			SDU 11	Aug 2022	Jul 2027	Oct 2027	Mar 2029
			SDU 12	Nov 2022	Mar 2029	Apr 2029	May 2031

SDU 7 – Project Status

- Project progressing well – ahead of schedule and under cost
- Risks are being proactively managed
- Cell construction commenced in December 2019 and completed in June 2020
- Cell liner work commenced in July 2020
- Balance of Plant (BOP) activities in progress
- Exhaust ventilation design has been completed
- Operating procedures are being developed
- Critical Decision (CD) - 4 forecast for end of July 2021

SDU 8/9 – Project Status

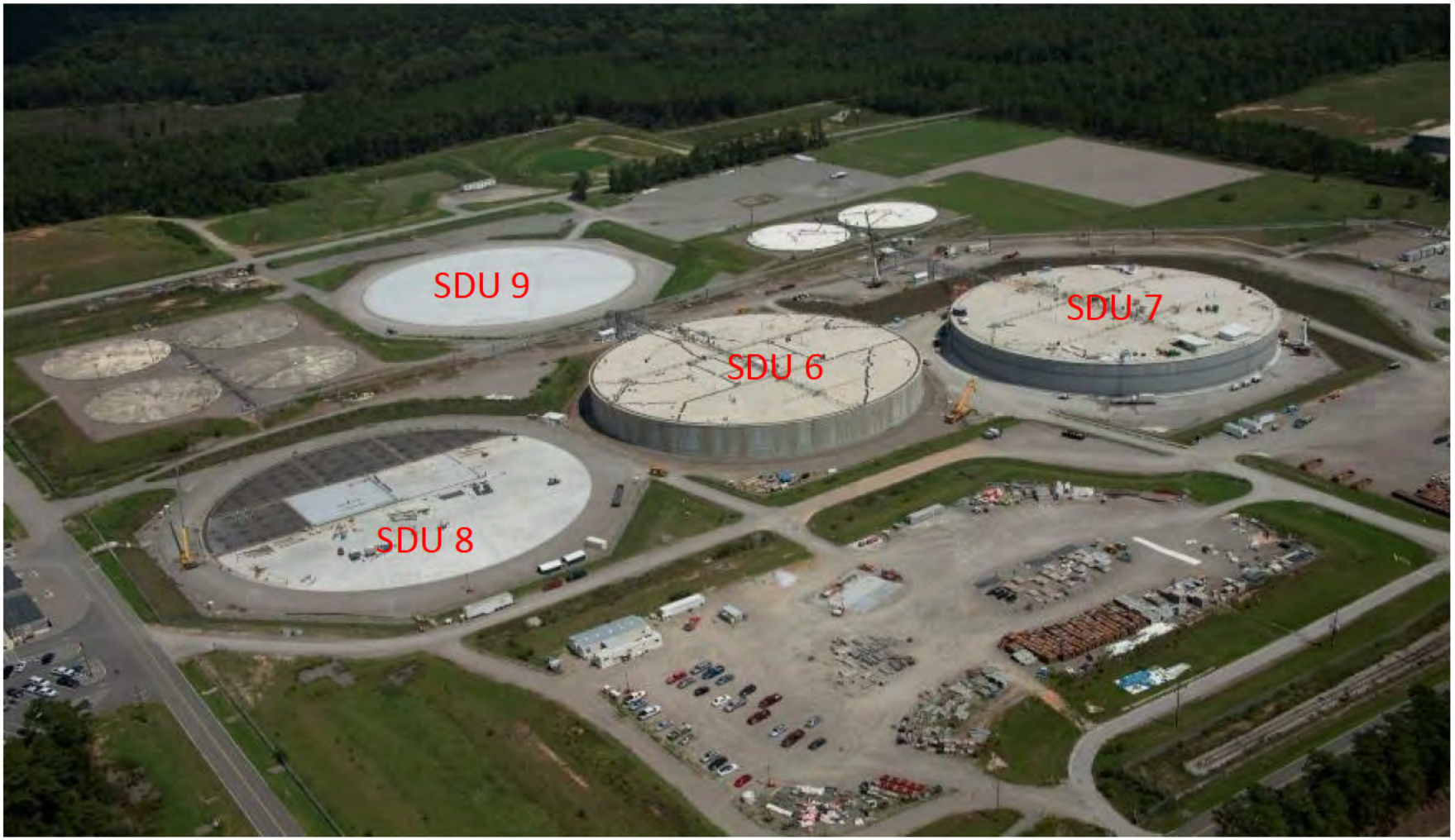
- Project schedule adjusted to reflect funding received in FY2020:
  - SDU 8 cell construction activities in progress
  - SDU 9 cell construction start delayed until FY21
  - Currently, no impact to approved CD-4 date expected
- All risks are being proactively managed
- Field work on SDU 8 cell construction commenced in July 2020:
  - Floor formwork and rebar installation in progress
  - First cell concrete placement scheduled late September 2020
- SDU 9 site preparation activities in progress:
  - Lower mud mat installation is complete
  - Grassing and stabilization work in progress

SDU 10-12 – Project Status

- Project achieved Critical Decision – 1 in December 2018
- New Start received in FY2020
- Design activities continue
- Planning and discussions with HQ continues to make progress to obtain CD-2/3 in FY2021

Groundbreaking for SDU 8/9

SDU Area – Aerial View



SDU 7 - Progress

Cell Construction complete – Liner installation and BOP activities in progress

SDU 8 - Progress

Floor form work underway

SDU 9 - Progress

Lower and upper mud mat and HDPE liner installed

Summary

- We are building off the success of SDU 6 and SDU 7 by incorporating lessons learned
- We have a plan for construction that is integrated with the LWSP, Rev. 21
  - SDU's are integral infrastructure within the Liquid Waste program
- We need sustained funding to meet our construction timeline
- We continue to realize the greatest schedule efficiencies and lower costs when we build SDUs as we have planned - moving crews from one SDU to the next as we complete a phase; i.e., when site preparation and construction activities are completed on SDU 8, we then move to SDU 9, then to SDU 10 etc.

Questions