U.S. DEPARTMENT OF ENERGY

SRMC SAVANNAH RIVER MISSION COMPLETION
Integrated Mission Completion Contractor

Mega SDU Construction Update

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Citizens Advisory Board
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Celebrating 30 Years CAB

Saltstone Disposal Units (SDUs)

Mega-SDU versus Smaller SDUs

- **Smaller SDUs design (SDUs 2,3, & 5)**
  - 3Mgal capacity tanks
  - 150’ diameter, 22.5’ tall
  - 82 tanks required to complete Liquid Waste (LW) mission at SRS

- **Mega-SDU design (SDUs 6-12)**
  - Modified Commercial Water Tank Design
  - 33 Mgal capacity tanks
  - 375’ diameter, 42’ tall
  - 7 tanks required to complete LW mission at SRS
  - Estimated cost savings of $500 million versus former design

Mega-SDU Construction Stages

1. Site Preparation
2. Mud Mat Installation
3. Cell Construction
4. Liner Installation
5. Balance of Plant
6. Leak Testing
7. Balance of Plant Testing

Total Construction Time: 4-5 years

Comparable in diameter to Madison Square Garden

Madison Square Garden- 404’ diameter

Mega-SDU Construction Stages

Site Prep Work

- ~169,000 cubic yards of excavation
- ~1,400 linear feet of sub-surface drainage
- Lays foundation for SDU mud mats

Mud Mats

- Lower mud mat - ~1,830 cubic yards of concrete
- High Density Polyethylene/Geosynthetic Clay Liner - ~123,000 square feet of liner
- Upper mud mat - ~2,500 cubic yards of concrete

Mega-SDU Construction Stages

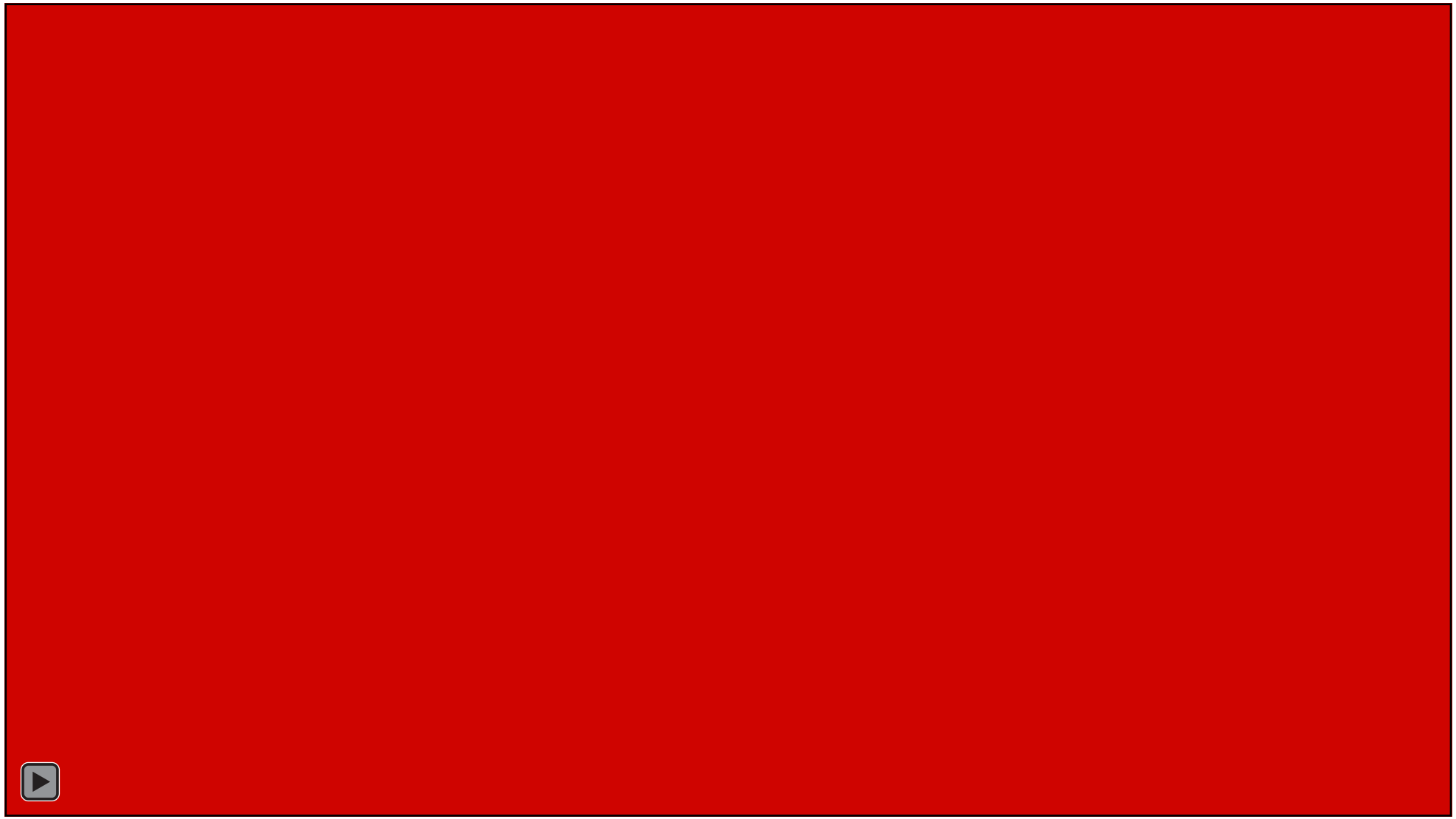
Cell Construction

Floors, Walls, and Columns -
~17,000cy of concrete

- 14 Floor Sections
- 25 Walls
- 208 Columns

- **Hydro blasting**
- **Prestress Cable**
- **Shotcrete Application**
- **Water Curing**

Time Lapse of Wall Construction



Mega-SDU Construction Stages

Interior Liner

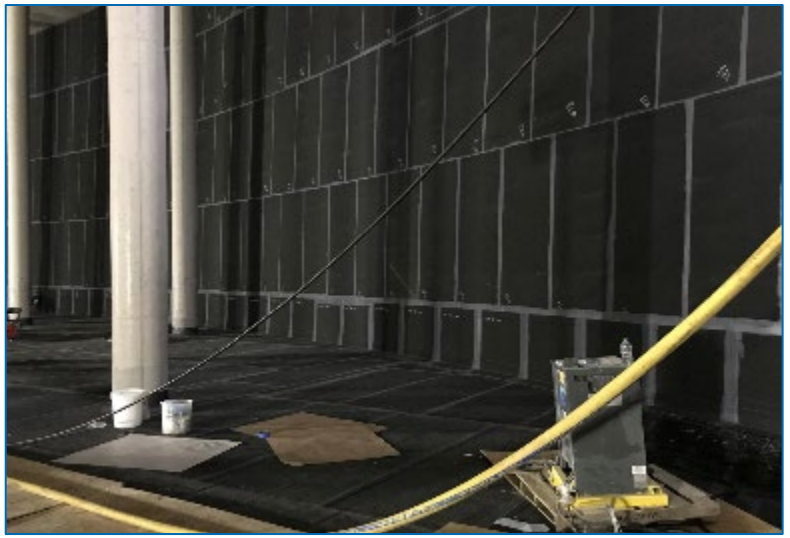
- Bromo butyl liner system completely covers the floor and walls of the entire SDU

Balance of Plant

- Piping
- Supports
- Bridge
- Stair Tower
- Equipment
- Cable Trays
- Conduit

Leak Tightness Test

- ~24 Days to Fill
- ~18 Days to drain



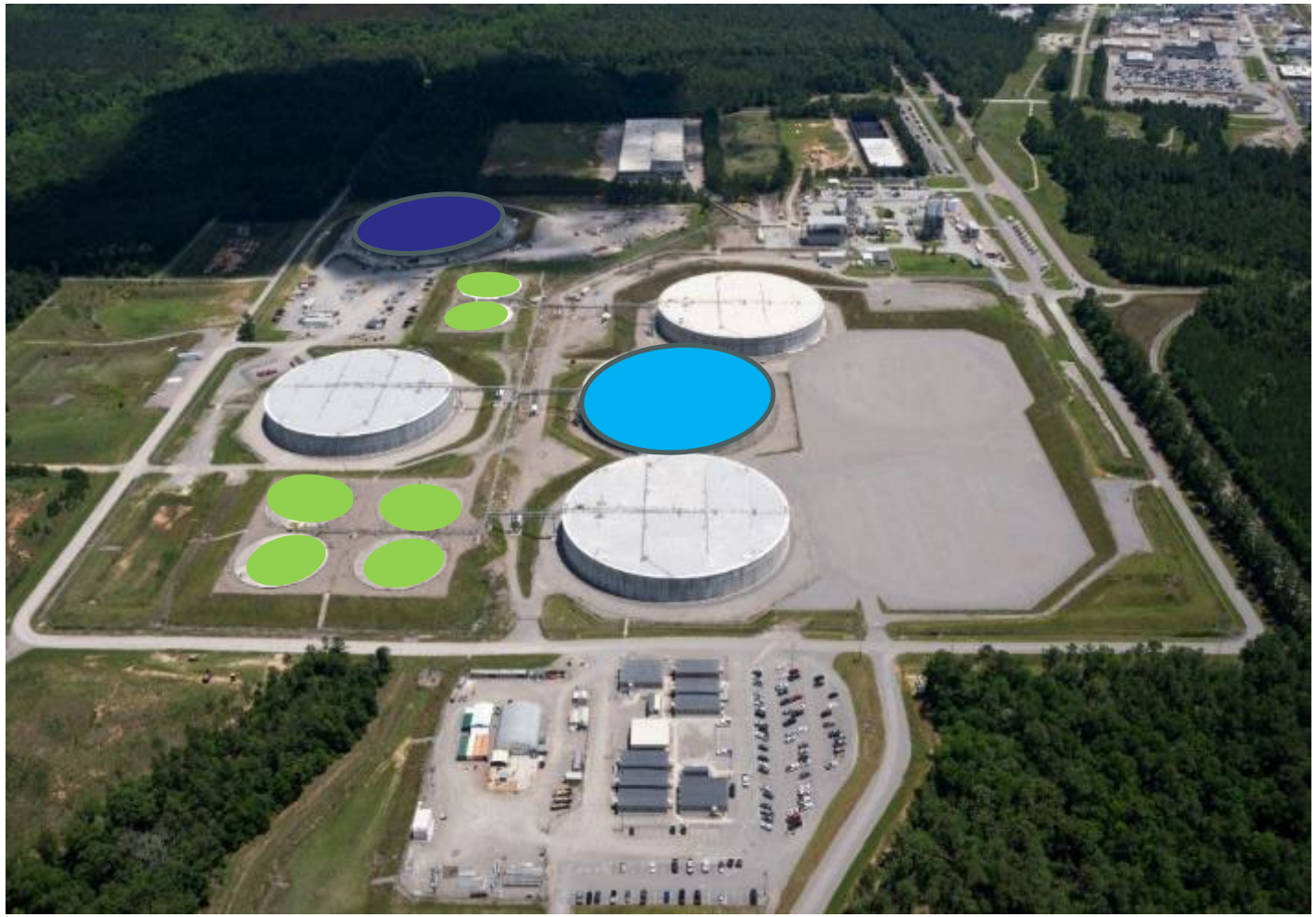
SDU Current Status

Mega-SDUs

- –SDU 6: Operational- 50% Filled
- –SDU 7: Operational- 16% Filled
- –SDU 8: Operational- 0% Filled
- –SDU 9: Operational- 0% Filled
- –SDU 10: Under Construction
- –SDU 11-12: site preparation

Other SDUs

- –SDU 2A & 2B: Filled
- –SDU 5A & 5B: Filled
- –SDU 3A & 3B: Filled



SDU 10 Current Status

Completed
- 14 Floor Sections
- 25 Walls
- 208 Columns
- 7 Roof Sections including penetrations for BOP connections

On-Going→
- Hydro blasting
- Shotcrete Application
- Water Curing
- 341 miles of pre-stressing cable

Upcoming
- Interior Liner Installation
- BOP Commodity Installation

BOP – Balance of Plant

SDU 11 & 12 Current Status

Completed
- Site Prep
- Design

Upcoming
- Mud Mat Installation
- Floor Section Installation

Delivering Commitments Ahead of Schedule and Under Budget

The cost per SDU, escalated to 2024 dollars, shows the project team has significantly decreased the cost per SDU.

SDU	CD-4 Date	TPC	Actual Cost	Cost/SDU in 2024 Dollars	Awards
SDU 6	July 2017 (16 mos ahead of schedule)	$143M	$122M	$152M	2017 DOE EM Project of the Year 2018 DOE Project Management Excellence Award
SDU 7	July 2021 (8 mos ahead of schedule)	$159M	$127M	$143M	2021 DOE Project Management Excellence Award
SDU 8/9	March 2024 (6 mos ahead of schedule)	$280M	$218M	$109M	
SDU 10/12	July 2030	$496M	TBD	TBD	

Continuous Improvement

Questions?