



U.S. DEPARTMENT OF
ENERGY



Facility Decommissioning at SRS

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Citizens Advisory Board
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ACRONYMS

- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (one of the laws requiring cleanup of the Savannah River Site)
- BOA – Basic Order Agreement
- D&D - Deactivation and Decommissioning
- D&R – Demolition and removal
- DOE – US Department of Energy – Savannah River
- DPFR – Decommissioning Project Final Report
- EE/CA – Engineering Evaluation/Cost Analysis
- FDE – Facility Decommissioning Evaluation
- FFA – *Federal Facility Agreement for the Savannah River Site*
- RCRA – Resource Conservation and Recovery Act (another law requiring cleanup)
- NNSA – National Nuclear Security Administration

PURPOSE

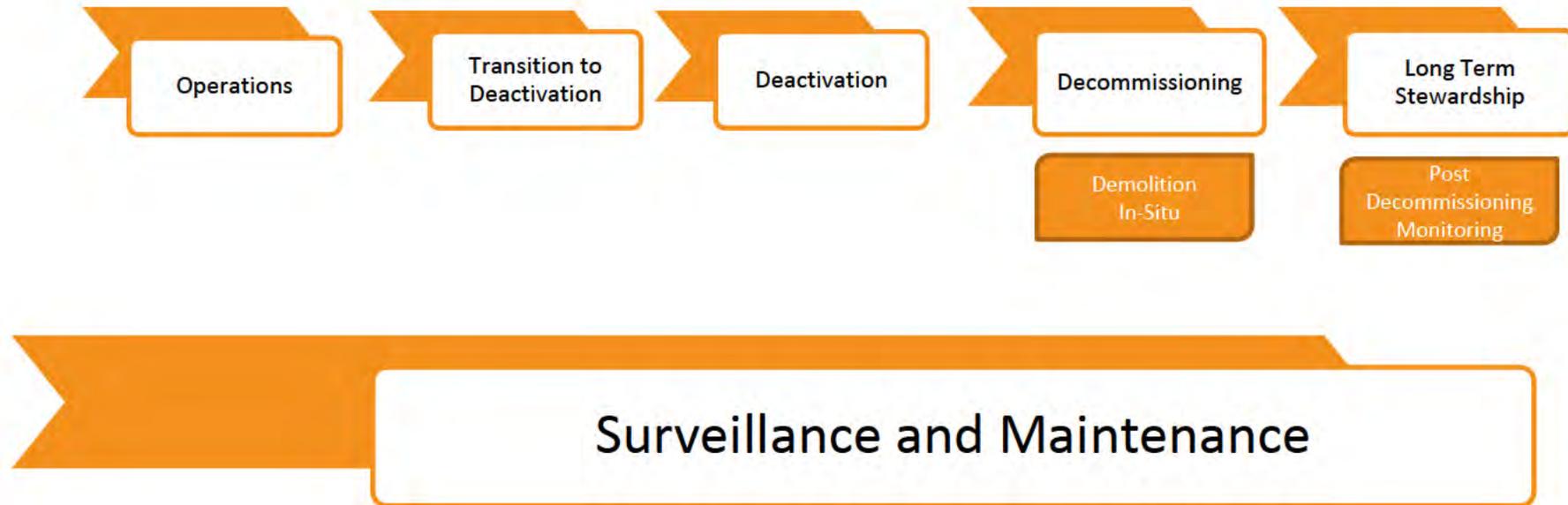
- Provide an overview of the Deactivation and Decommissioning (D&D) process at SRS, including progress over the last 20 years, Decommissioning End States and current status of the Program

DEACTIVATION AND DECOMMISSIONING FRAMEWORK

- DOE Order and Supporting Guides
 - DOE Order 430.1C Real Property Asset Management
 - 430.1-2, Implementation Guide for Surveillance and Maintenance
 - 430.1-3, Deactivation Implementation Guide
 - 430.1-4, Decommissioning Implementation Guide
 - 430.1-5, Transition Implementation Guide
- SRS Facility Disposition Manual 1C
 - Addresses safe shutdown, S&M, D&D
- Deactivation – Stable condition, protective
- **Decommissioning tailored to three different “models”**
 - Simple Model
 - Integrated Sampling Model
 - CERCLA Model (EE/CA)

DEACTIVATION AND DECOMMISSIONING FRAMEWORK

Facility D&D Process



DECOMMISSIONING END STATES

Two (2) primary end states at SRS

- **“Demolish (e.g., Office Building, Warehouse)”**

- Non-hardened structures
- Contaminants are removed
- Demolition to grade, foundation remains

- **“In-Situ Decommissioning” (e.g., P Reactor)**

- Hardened, concrete structure
- Contaminants remain
- Seal structure, fill below-grade spaces
- Long term monitoring: Surveillance and maintenance of remaining structure and groundwater monitoring

PICTURES OF DEMOLITION TO GRADE



232-1H before decommissioning



232-1H after decommissioning

DEMOLITION TO GRADE



777-10A Before



777-10A After



770-U HWCTR Before



770-U HWCTR After

DEMOLITION TO GRADE



305-A Before



305-A After



710-B Before



710-B After

Picts of Demo to Grade



719-A Before



719-A After



420-D Before



420-D After

IN SITU END STATE



105-P Reactor Before



105-P Reactor After

K COOLING TOWER



HWCTR DECOMMISSIONING

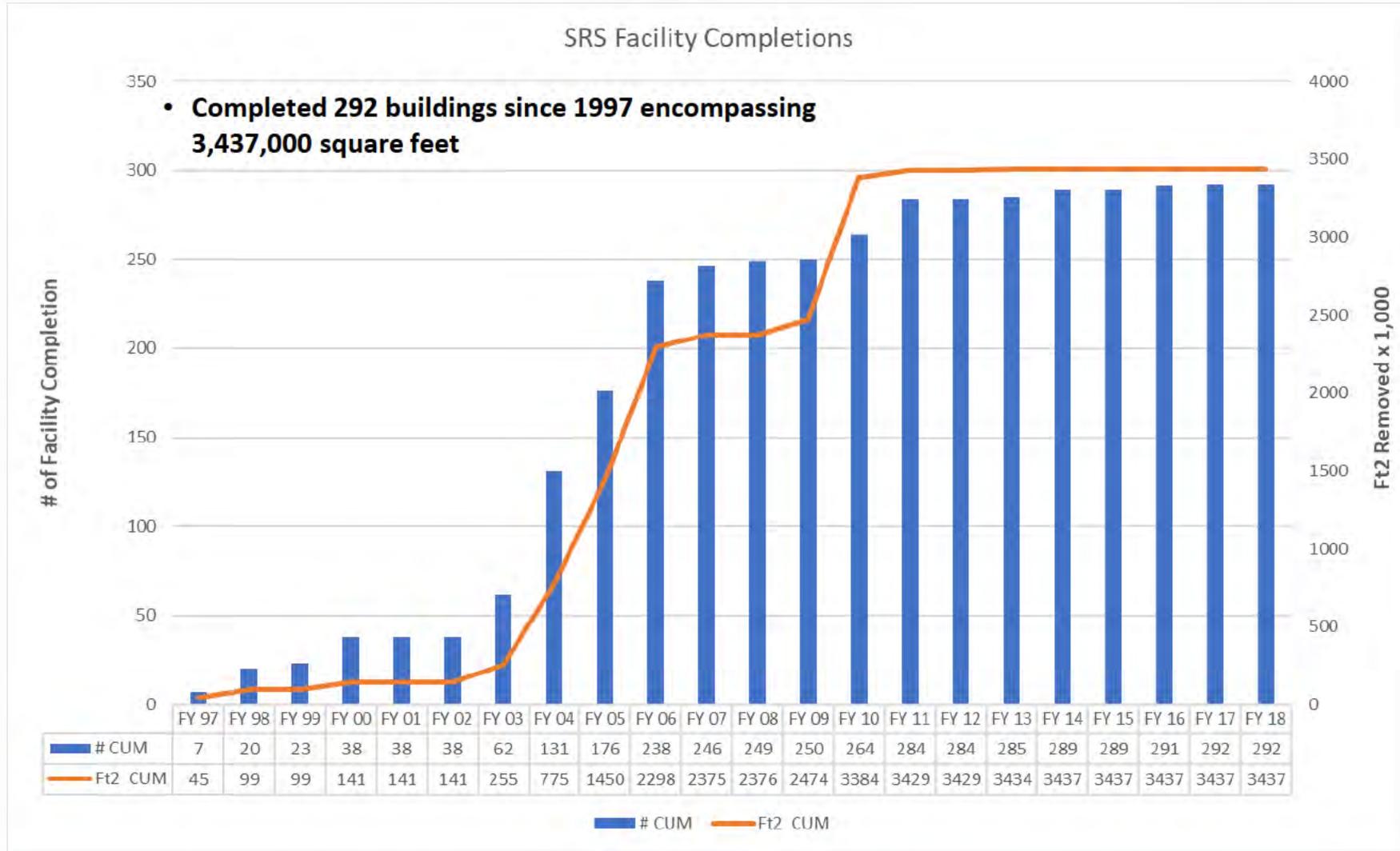


DECOMMISSIONING END STATES

Objectives for both end states

- Attain final end state with minimal long term stewardship
- Stabilize/isolate/remove contamination within or from the structure
- Protective of the industrial worker
- Protective of groundwater
 - Models conservatively assume receptor well is located at edge of structure
 - Primary drinking water standards are NOT exceeded
- Prevent human/animal intruder exposure to radioactive and hazardous contamination

Progress chart



CURRENT STATUS OF D&D PROGRAM

- D&D program in FY19
 - ~\$7M for D&D planning and demolition
- Onboarded D&D mentor protégé Subcontractor; CTI Associates, Inc.
 - Existing BOA for D&D technical and project management personnel
 - Developing multi-vendor BOA for D&D services
- Initiated planning/execution of small, low hazard demolition projects
 - Execute 10 structure demolitions in FY19
 - *i.e., Towers, Platforms, Sheds, Trailers*
 - Planning in progress for additional 10 structures with slightly higher hazards
 - *i.e., Ford Building, Shipping Cask Facility, Sewage Treatment Plant*
- Supporting other Sitewide D&D projects

NEAR TERM D&D PROJECTS



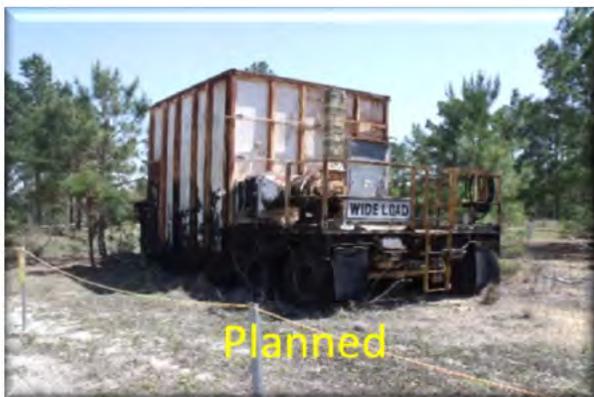
904-47G Trebler Sample Pit



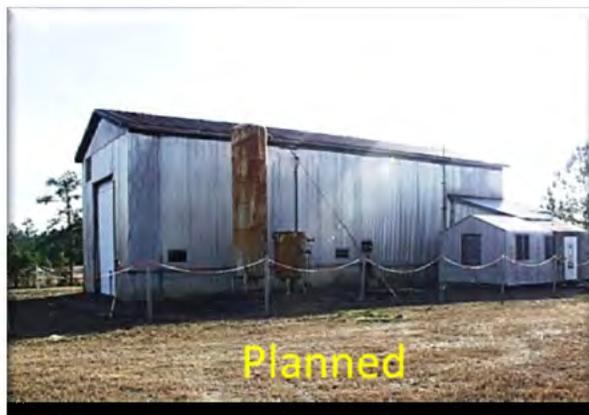
904-108G Trebler Sample Pit



690-N Process Heat Exchanger Facility



690-1G Deionizer Trailer



728-N Cask Repair Facility



704-20N Modular Office

ONGOING D&D

– 232-1H Construction Shops

- Work performed by Area Completion Projects and Project Management and Construction Services (PMCS) for the Savannah River Tritium Enterprise (SRTE) and is funded by the National Nuclear Security Administration (NNSA).

- Fixed Price subcontract awarded to Global Environmental Inc. (Blane Casey Bldg. Contractor) – Small Business Contractor

Completed



– 236-H Reservoir Burst Testing and Helium Purification

- Ongoing deactivation by SRTE/Construction
- Demolition estimate complete
- Submitted regulatory documents and conducted site walk down with Regulators
- Demo planned for FY21



237/238-H Tritium Reservoir Reclamation and Storage

- Deactivation being performed by SRTE/Construction
- Demolition estimate complete 1/19 Demo planned for FY22



CONCLUSIONS – SRS D&D

- SRS has a mature program for D&D
 - Protective of human health, public and environment
 - Compliant with Federal regulations and Department of Energy expectations
 - **Captured in SRS procedures (e.g., ‘Facility Disposition’, Manual 1C) and the Federal Facility Agreement (FFA)**
- Deactivation completed as precursor to decommissioning
- Decommissioning
 - **Two end states: “In-Situ Decommissioning” and “Demolish”**
 - Successfully decommissioned 292+ facilities in last 15 years

QUESTIONS???

