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SRMC-CWDA-2026-00055

Waste Tank Closure Process – Closure Completion

Larry Romanowski

September 22, 2026

Acronyms

- ALT – Alternate
- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
- CGCP – Consolidated General Closure Plan
- CM – Closure Module
- CTS – Concentrate Transfer System
- DOE – U.S. Department of Energy
- DWPF – Defense Waste Processing Facility
- EPA – U.S. Environmental Protection Agency
- ESD – Explanation of significant Difference
- FCR – Final Configuration Report
- FDB – F-Area Diversion Box
- FFA – Federal Facilities Agreement
- FTF – F-Area Tank Farm
- GWSB – Glass Waste Storage Building
- HDB – H-Area Diversion Box
- HTF – H-Area Tank Farm
- LWTRSAPP – Liquid Waste Tank Residuals Sampling and Analysis Plan
- LWTRS-QAPP – Liquid Waste Tank Residuals Sampling-Quality Assurance Plan
- MCI – millions of curies
- Mgal – millions of gallons
- NEPA – National Environmental Policy Act
- NRC – U.S. Nuclear Regulatory Commission
- PCWR – Preliminary Cease Waste Removal
- PO – Performance Objective
- RCRA – Resource Conservation and Recovery Act
- RVW – Review
- S&A – Sampling and Analysis
- SCDHEC – South Carolina Department of Health and Environmental Control¹
- SCDES – South Carolina Department of Environmental Services¹
- SDUs – Saltstone Disposal Units
- SPF – Saltstone Production Facility
- SRMC – Savannah River Mission Completion (current Liquid Waste Contractor)
- SRS – Savannah River Site
- STD - Standard
- SWPF – Salt Waste Processing Facility
- WD/I – Walkdown/Inspection

¹South Carolina Department of Environmental Services (SCDES) was known as South Carolina Department of Health and Environmental Control (SCDHEC) prior to July 1, 2024. Throughout this presentation figures and text reproduced from existing documents may still reflect SCDHEC nomenclature.

Purpose

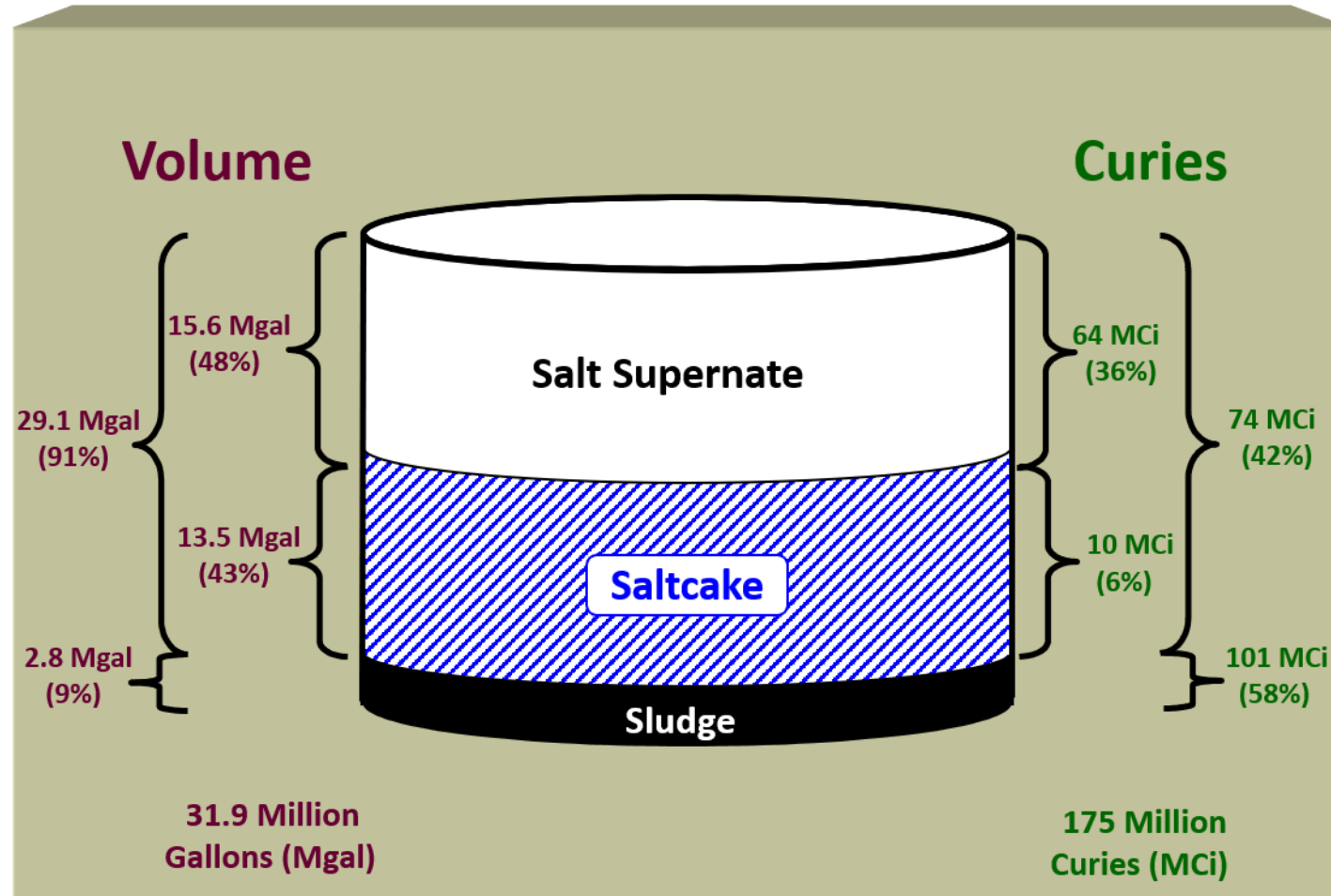
Provide status and an overview of the Savannah River Site (SRS) Liquid Waste tank closure process with a focus on Closure Completion

SRS Liquid Waste Program

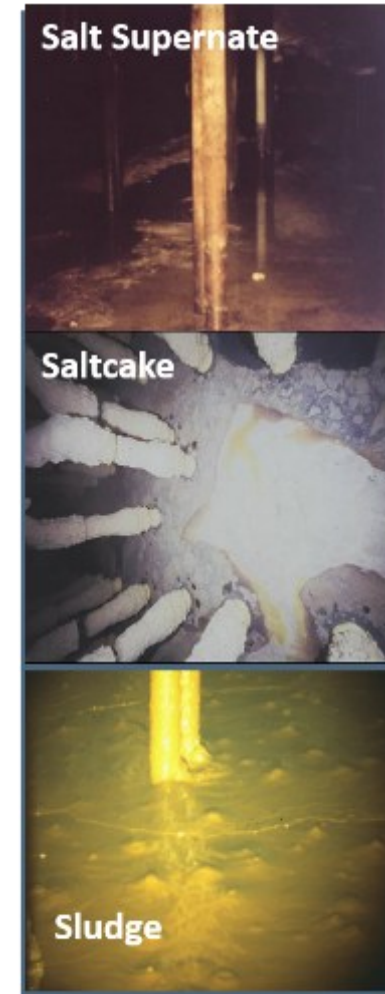
- Store, retrieve, process, treat, and dispose of legacy tank waste
- 43 active waste tanks, ~32 million gallons of radioactive waste
- **Four End States**
 - *Operational Tank Closure (Removal from Service)*
 - *Vitrified high-level waste canisters in Glass Waste Storage Buildings (GWSBs) 1 & 2*
 - *Low-level waste in Saltstone Disposal Units (SDUs)*
 - *Deactivate and flush operating facilities to enable safe setup for decommissioning activities*
- **Key processing and treatment facilities**
 - *Defense Waste Processing Facility (DWPF)*
 - *Salt Waste Processing Facility (SWPF)*
 - *Saltstone Production Facility (SPF)*
- **Saltstone Disposal Units**



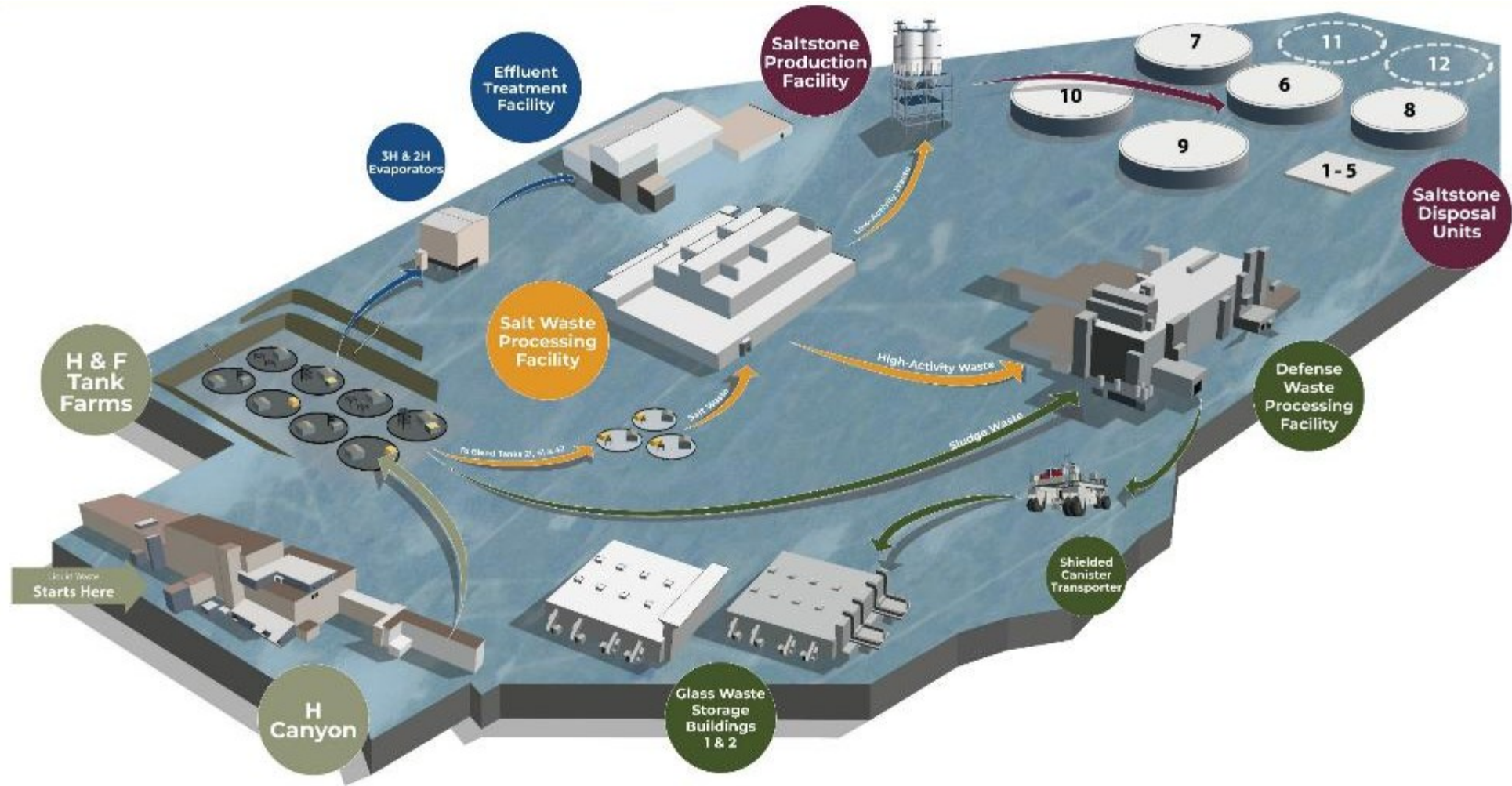
SRS Composite Inventory



Inventory values as of 2026-06-30

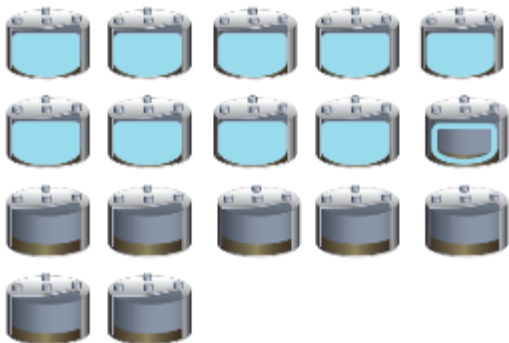


Liquid Waste Program



Liquid Waste Mission Progress to Date

Sludge batches processed:
9 of 17 projected



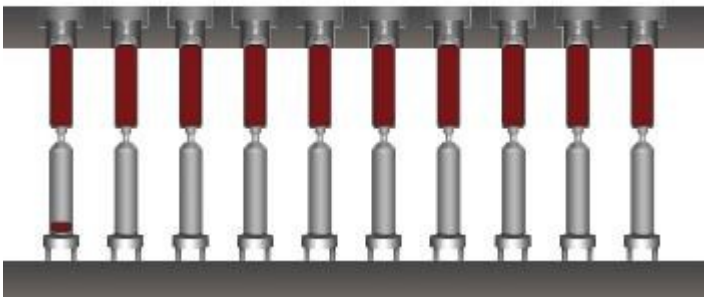
Salt batches processed:
16 of 79 projected



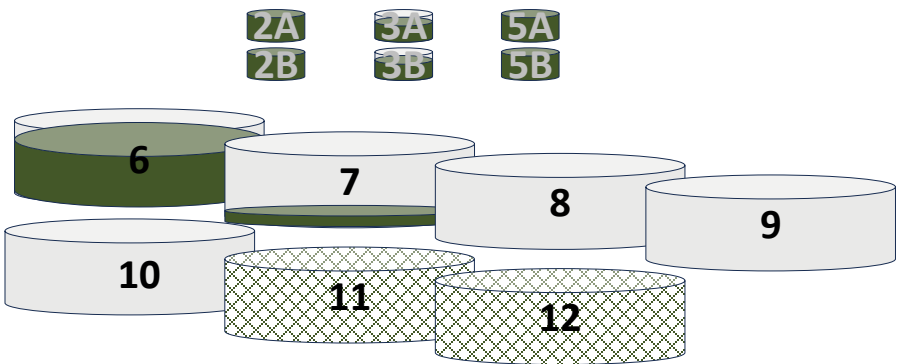
Preliminary Cease Waste
Removal Complete:
16 of 51 tanks



Canisters: 4,533 total
of 7,440 projected



Saltstone Disposal Units

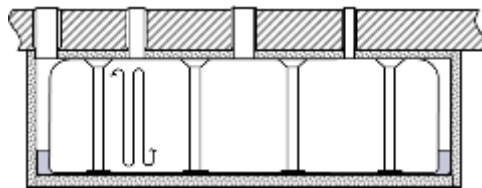
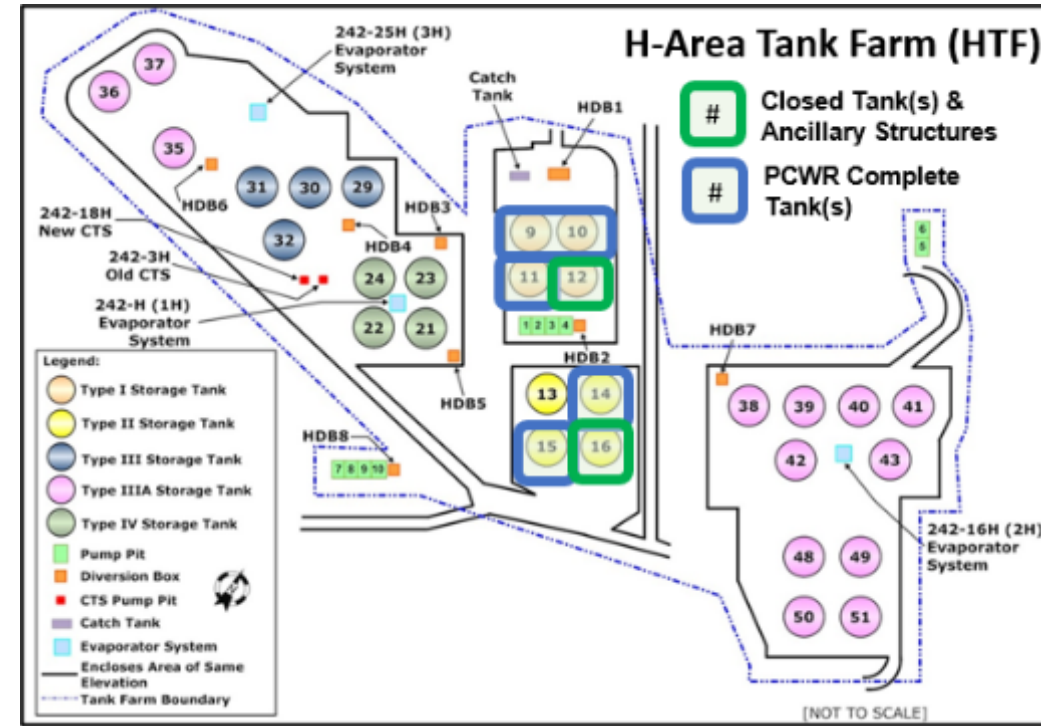
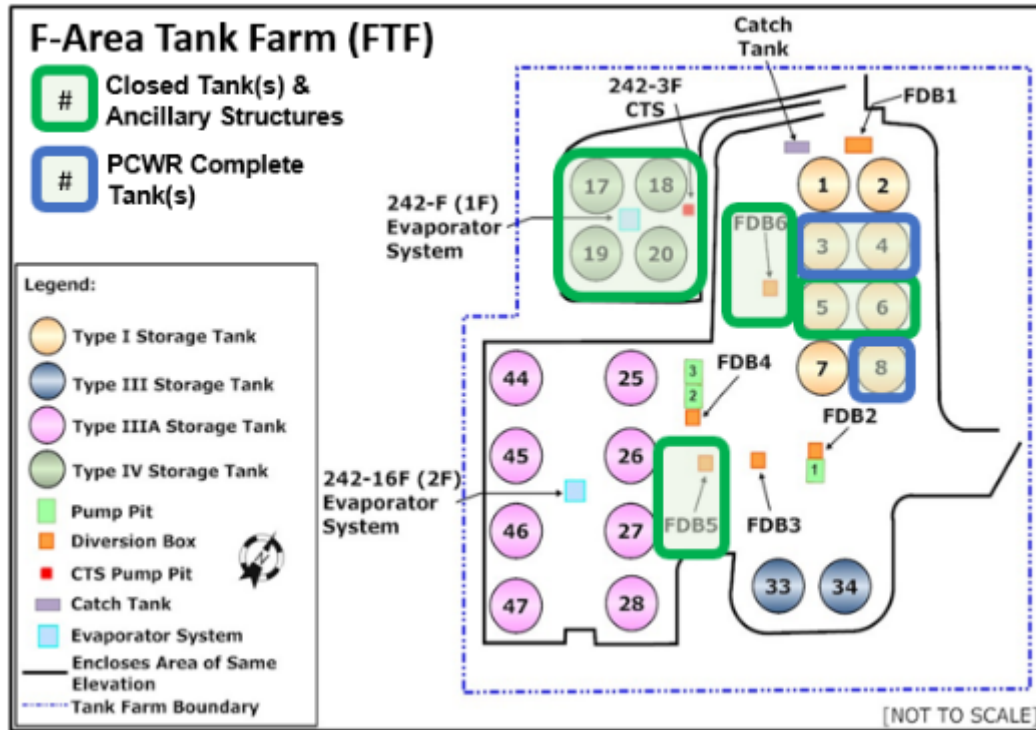


Tanks closed: 8 of 51

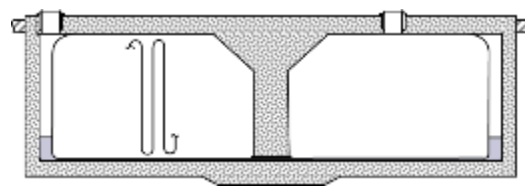


Updated through 6-30-2026

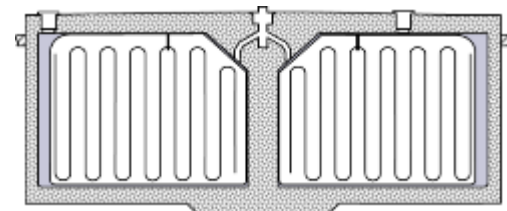
Tank Farms



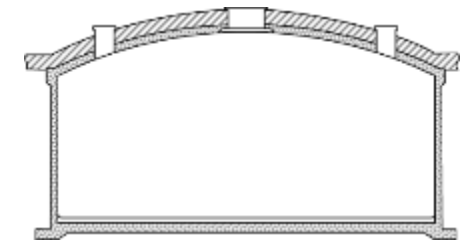
Type I (~ 0.75 Mgal)



Type II (~ 1.07 Mgal)



Type III/IIIA (~ 1.3 Mgal)



Type IV (~ 1.33 Mgal)

Closure of Tank Farms

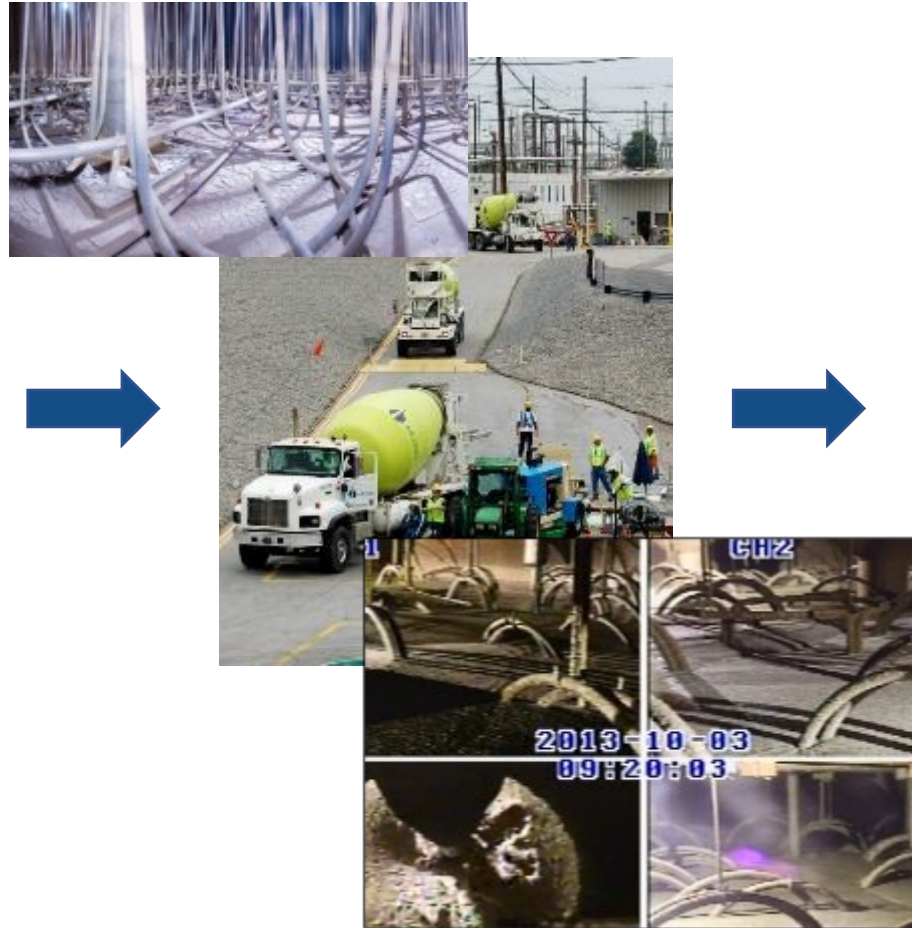
F-Area Tank Farm Today



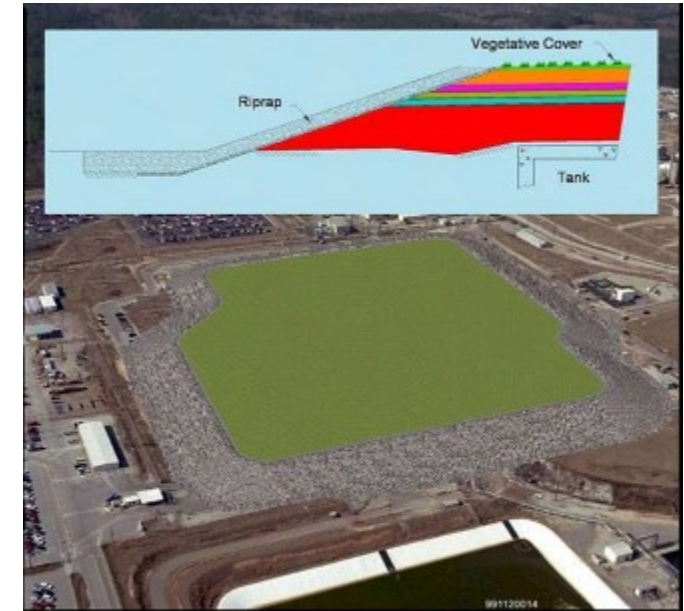
Tank Closures

- Tanks 17F & 20F operationally closed in 1997
- Tanks 18F & 19F operationally closed in 2012
- Tanks 5F & 6F operationally closed in 2013
- Tank 16H operationally closed in 2015
- Tank 12H operationally closed in 2016

Cleaning/Grouting of Waste Tanks and Ancillary Structures



Closure Cap Concept

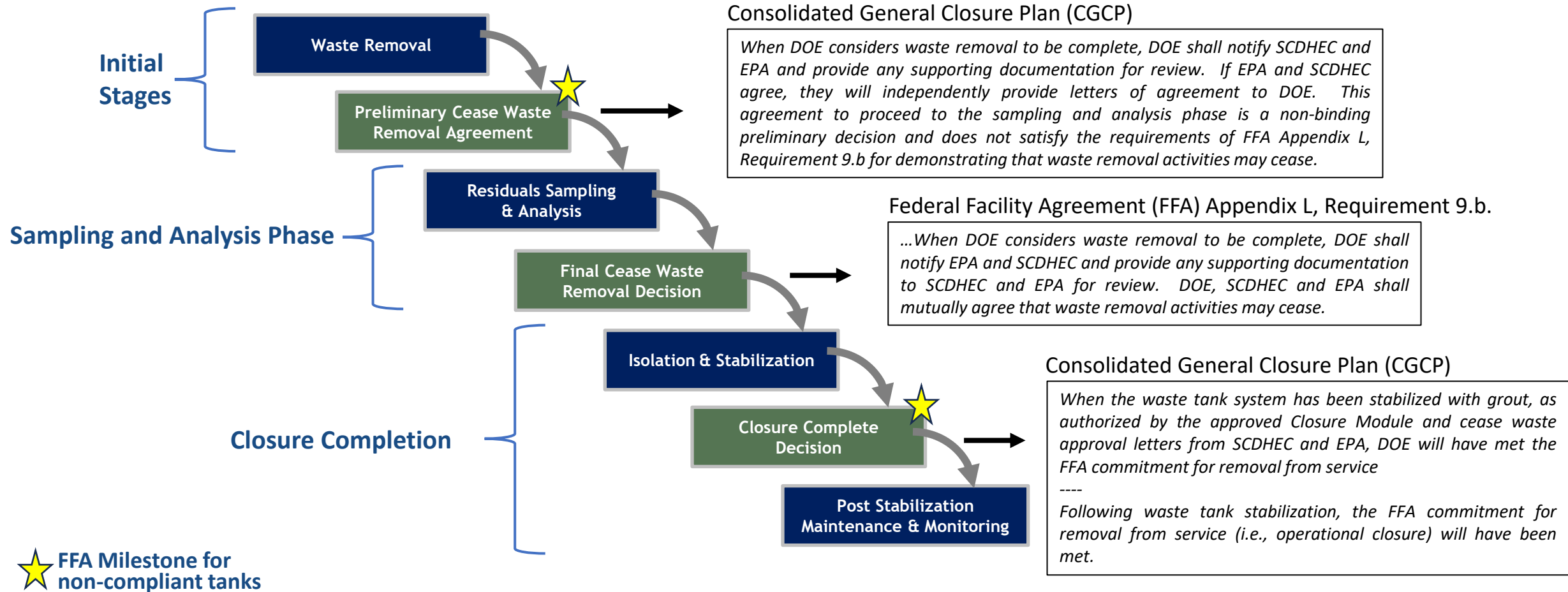


2022 High Level Waste Tank Milestones Agreement

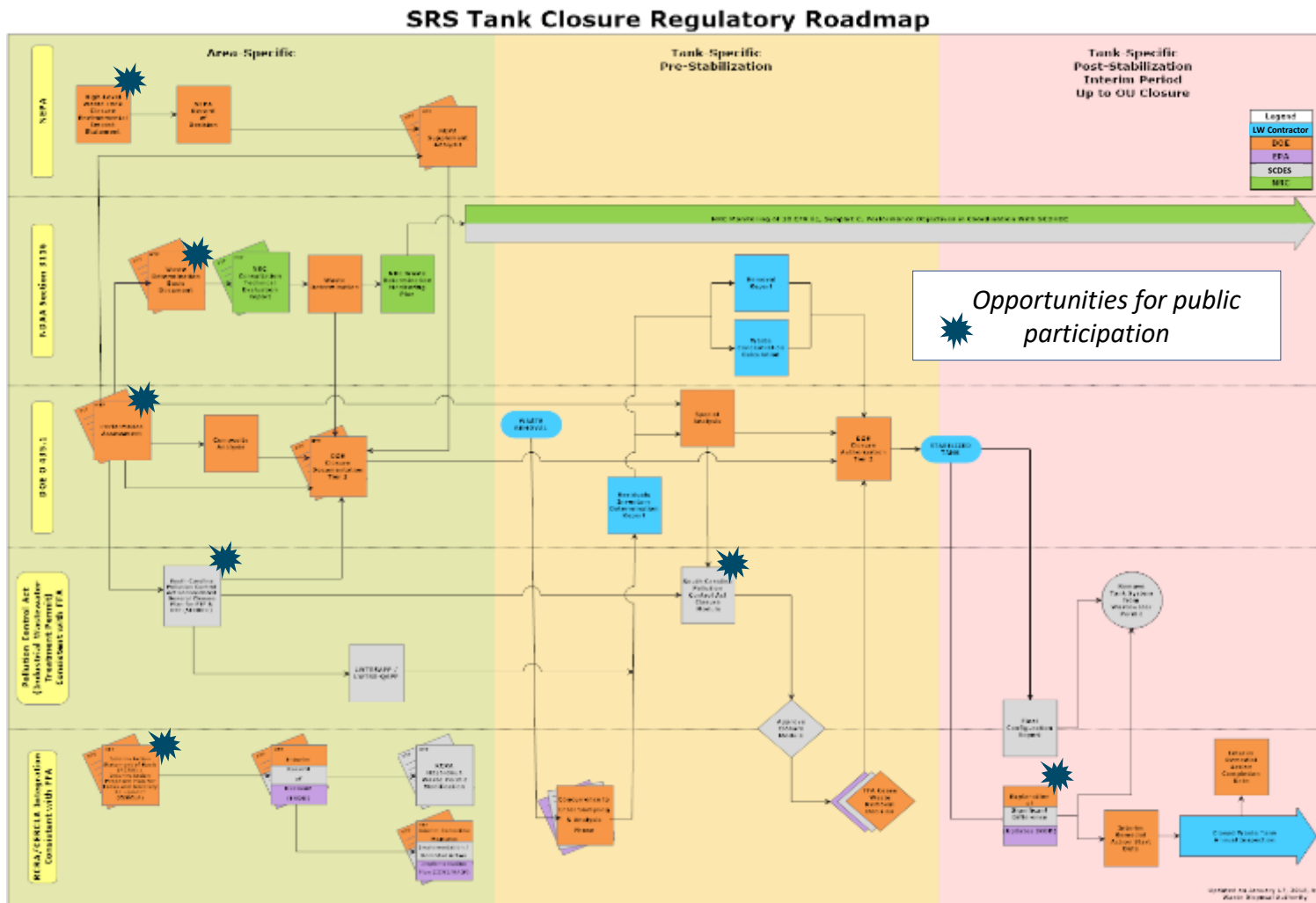
- In December 2022, the U.S. Department of Energy (DOE), South Carolina Department of Environmental Services (SCDES), and U.S. Environmental Protection Agency (EPA) signed the *2022 High Level Waste Tank Milestones Agreement*, which has since been incorporated into the Federal Facility Agreement (FFA)
 - Updated “Common Values and Goals”
 - Among other things, provides milestone dates for Preliminary Cease Waste Removal (PCWR) (i.e., risk reduction) and new Operational Closure dates for the remaining Type I, II, and IV waste tanks.

2022 High Level Waste Tank Milestones Agreement		
On December 20, 2022, the United States Department of Energy (DOE) – Savannah River Operations Office (SRO), the South Carolina Department of Environmental Services (SCDES), and the United States Environmental Protection Agency (EPA) signed the 2022 High Level Waste Tank Milestones Agreement (Agreement) with the exception of Paragraph Appendix L (incorporated below). The Agreement shall be incorporated into the FFA by actions are consistent with and Goals, included as Attachment A waste and closing tanks with a go		
Inclusion of FFA Milestones and		
A. The Parties agree to include in FFA Appendix L, except for paragraph Appendix L, incorporated into the		
Paragraphs 9 b and 18 from the		
Paragraph 5.b states, “The Parties agree to involve SCDEEC in the processes to explain the activities steps. DOE shall consider and report next steps. These interactions are as agreed to by the participating waste removal to be complete, DOE documentation to SCDEEC and B removal activities may cease.”		
Paragraph 18 states, “In connection with the service due by March 9 th of each the status of bulk waste and has been Performance Assessments, closure of groups of tanks in 7 and Reagan National Defense Authority tanks.”		
Attachment A SRS Liquid Waste Program Common Values and Goals (2022 – 2037) June 20, 2022		
VALUES		
1. Maintain transparency with on program progress, and		
2. Ensure DOE’s strategy and SCDEEC permitting process		
3. Maximize the amount of ultimate disposal out of site		
4. Limit disposal of curies on achievable.		
GOALS (in priority order)		
1. Reduce risk to the environment of the liquid waste program		
2. Reduce operational and environmental tanks.		
3. Reduce operational and environmental program total life cycle.		
4. Complete waste removal with a risk-based priority or followed by remainder of waste for future emergent conditions.		
Attachment B Schedule for Remaining Non-Compliant Tanks		
Milestone Date	Preliminary Cease Waste Removal (# of Tanks)	Operational Closure (# of Tanks)
12/31/2023	0	0
12/31/2024	1	0
12/31/2025	3	0
12/31/2026	2	0
12/31/2027	2	0
12/31/2028	0	3
12/31/2029	2	0
12/31/2030	1	2
12/31/2031	0	3
12/31/2032	0	1
12/31/2033	0	2
12/31/2034	1	0
12/31/2035	1	0
12/31/2036	1	1
12/31/2037	2	4
Total	16	16

Tank Closure Process



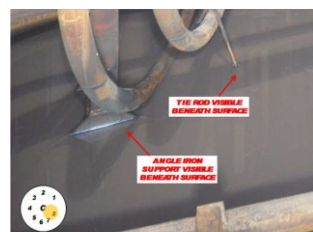
Pathway to Closure



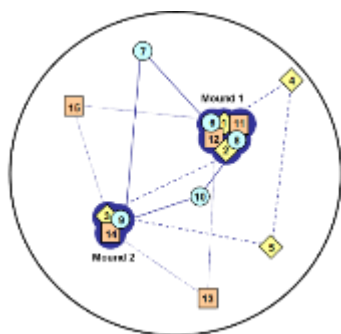
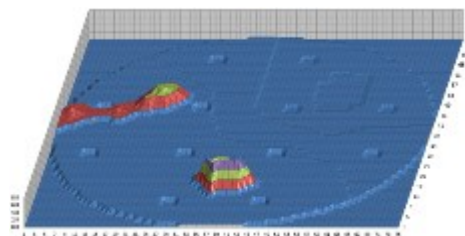


Final Inventory Determination & Modeling

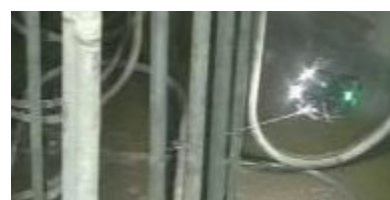
Tank Mapping of Residuals



Volume Determination & Sampling Plan



Sampling



Analysis

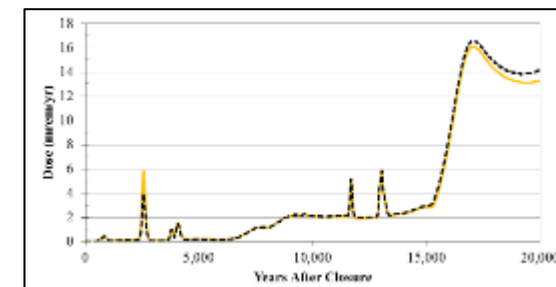


Final Inventory & Modeling

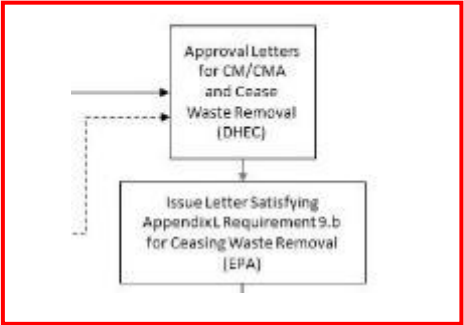
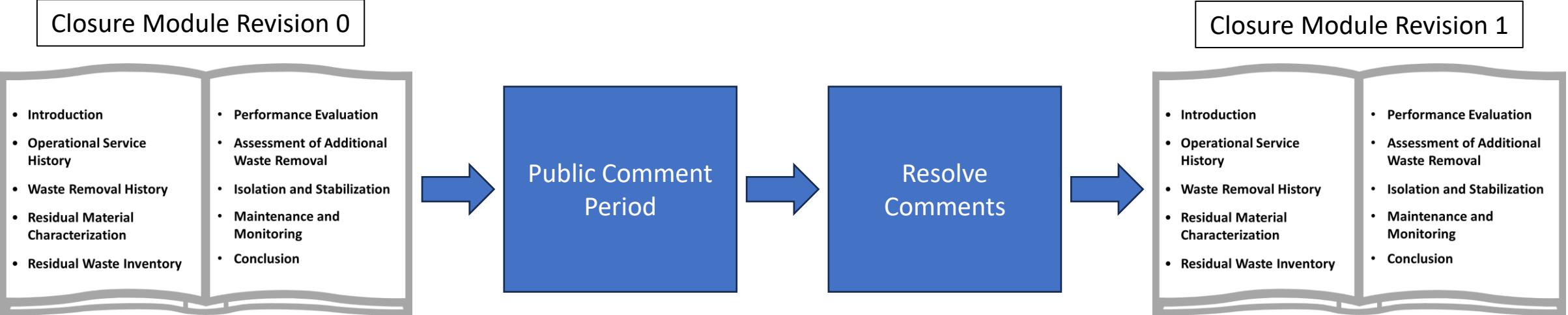
Table 4.8-1: Key Performance Objectives

Requirement	All Pathways Dose	Intruder Dose	Air Pathway Dose	Radon Dose	Groundwater Protection
MDAA Section 711.1: 10 CFR 61.41 and 61.42	25 mrem/yr	500 mrem/yr	N/A	N/A	N/A
DOE M 405.1-1	25 mrem/yr	100 mrem/yr - acute 100 mrem/yr - chronic	10 mrem/yr	20 mrem/yr at ground surface	< 10 mrem/yr and < 4 mrem/yr below ground surface
SCDHEM Primary Drinking Water Regulations (80,301.01, 80,301.02)	N/A	N/A	N/A	N/A	< 500 µCi/L and < 4 mrem/yr below ground surface

N/A = Not Applicable/Not Available
 10 CFR = Title 10 Code of Federal Regulations
 DOE M = Manual Construction Level
 SCDHEM = South Carolina Department of Health and Environmental Control



Closure Module Process / Final Cease Waste Decision

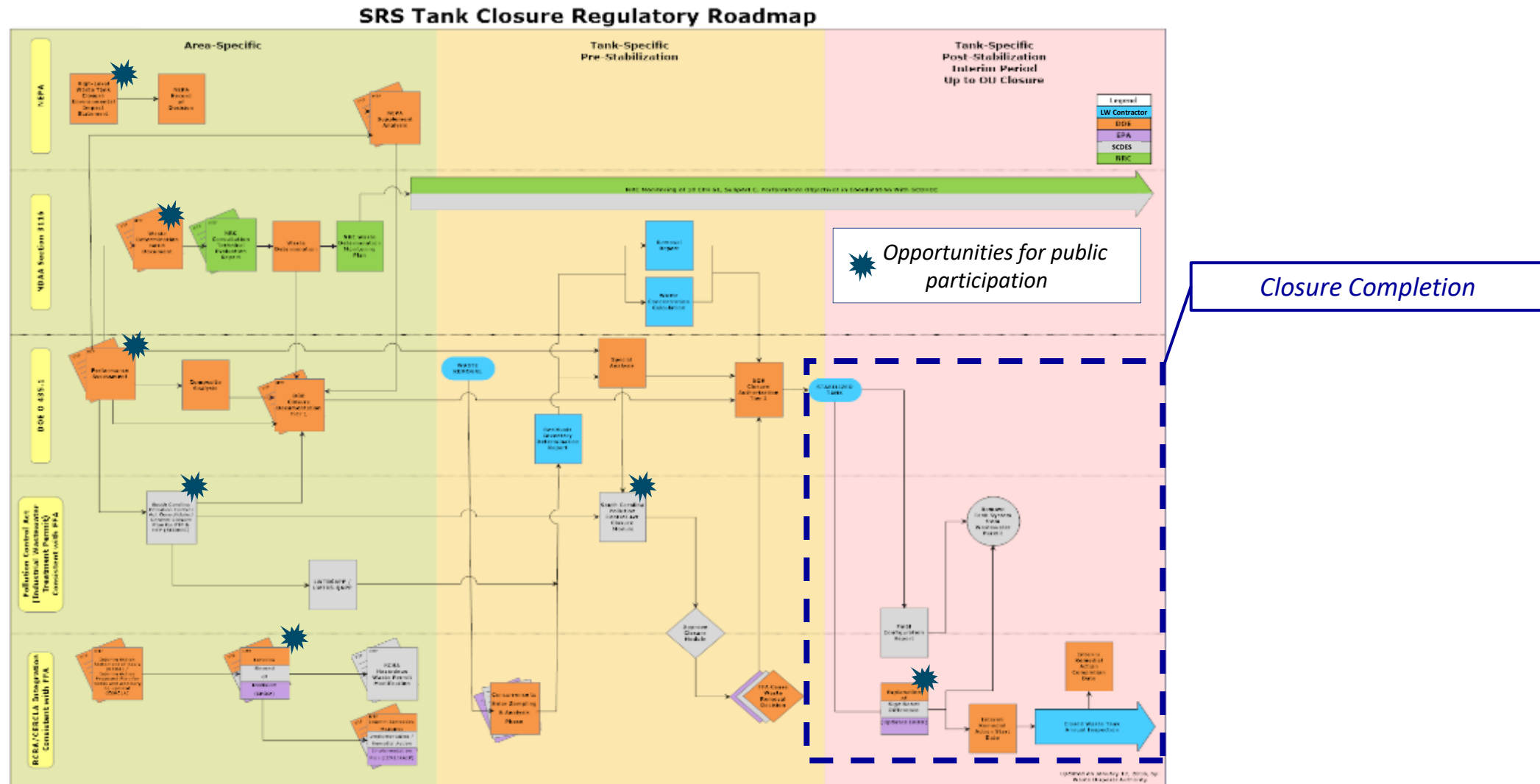


Federal Facility Agreement (FFA) Appendix L, Requirement 9.b.

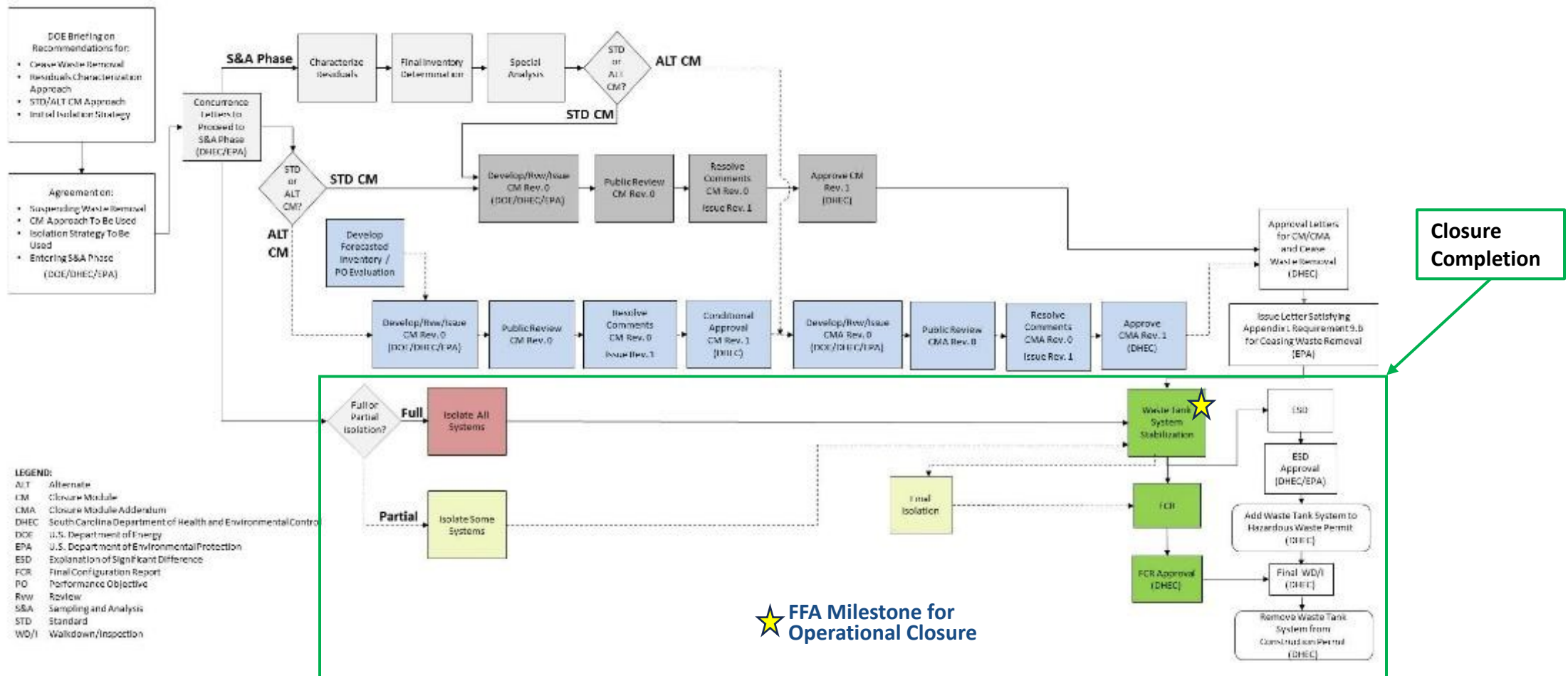
...When DOE considers waste removal to be complete, DOE shall notify EPA and SCDHEC and provide any supporting documentation to SCDHEC and EPA for review. DOE, SCDHEC and EPA shall mutually agree that waste removal activities may cease.

 **Next Step is Isolation and Stabilization (i.e., grouting)**

Pathway to Closure

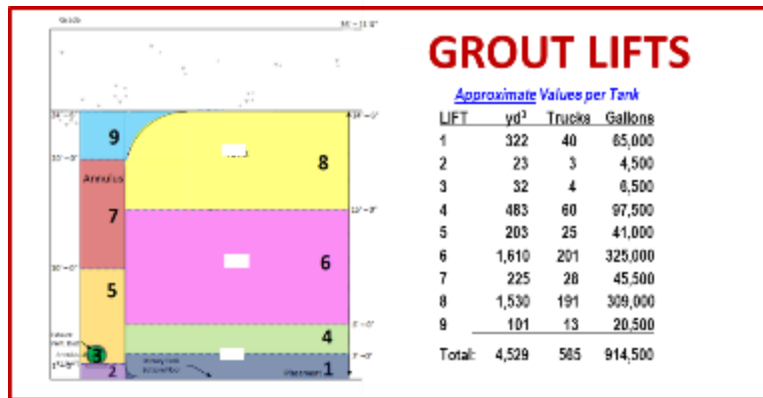
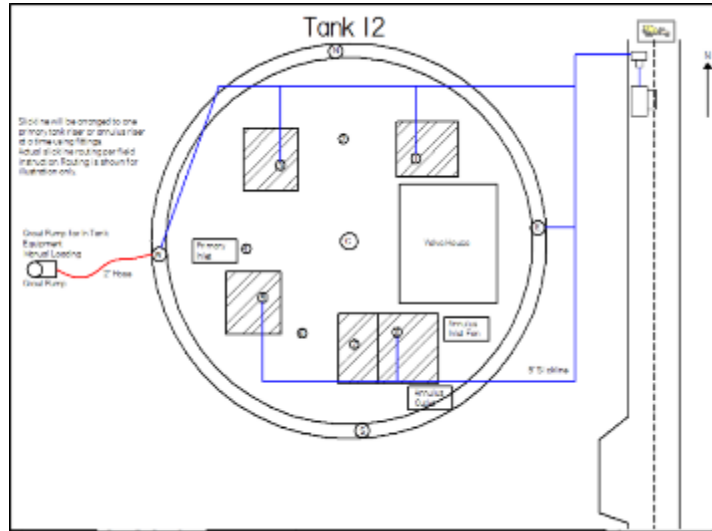


Pathway to Closure



Protocols to be followed to ultimately result in the operational closure of waste tank systems and ancillary structures

Stabilization



Stabilization

Annulus Fill



Riser Fill



Riser Capping



RECEIVED
JUL 28 2015
SITE ASSESSMENT,
SARASOTA
FLORIDA

United States Department of Energy
Savannah River Site

Interim Record of Decision
Remedial Alternative Selection for the
H-Area Tank Farm, Waste Tank 16

CERCLIS Number: 89

SRR-CWDA-2015-00157

Revision: 1

July 2016

Prepared by: Savannah River Remediation LLC
Waste Disposal Authority
AECOM 547-9800

 Savannah River
Remediation LLC
"Cleaning up our past, creating our future"

Prepared for: U.S. Department of Energy Under Contract No. DE-AC05-00OR22465

This collage displays 12 photographs of different parts of a closed-loop tank system. The images are arranged in a grid-like fashion, with some overlapping. Each photograph is labeled with a tank number and a base number, indicating the specific component being shown. The labels include:

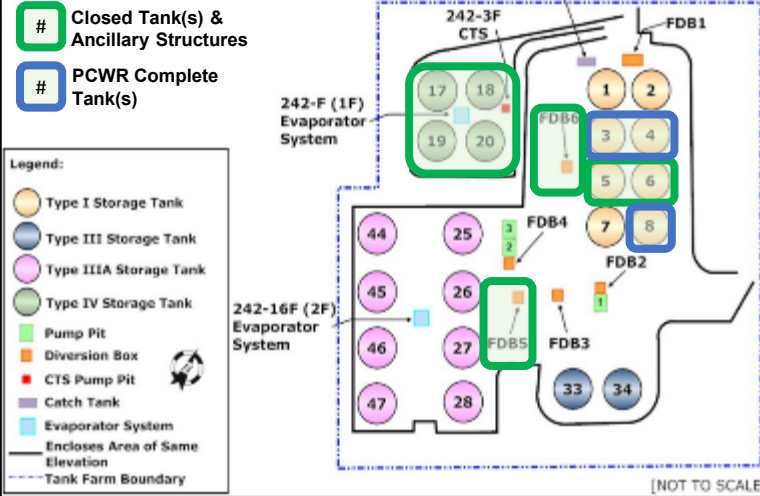
- Tank 1, Base 1
- Tank 2, Base 1
- Tank 3, Base 1
- Tank 4, Base 1
- Tank 5, Base 1
- Tank 6, Base 1
- Tank 7, Base 1
- Tank 8, Base 1
- Tank 9, Base 1
- Tank 10, Base 1
- Tank 11, Base 1
- Tank 12, Base 1

 The photographs show various views of the tanks, including their bases, sides, and connections to other parts of the system. Some images show the tanks in a dry state, while others show them with liquid inside. The labels are placed directly on or near the corresponding photographs.

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HTF/FTF Closure Activities Summary

F-Area Tank Farm (FTF)



Status of non-compliant tanks

- Eight (8) closed
 - Tanks 5, 6, 17-20, 12 and 16
- Eight (8) PCWR Complete
 - Tanks 3, 4, 8, 9, 10, 11, 14 and 15
- Two (2) w/ongoing waste removal
 - Tanks 2 and 13
- Two (2) w/ongoing field modifications
 - Tanks 1 and 7
- Four (4) supporting waste removal and processing (e.g., hub tank, recycle receipt)
 - Tanks 21-24

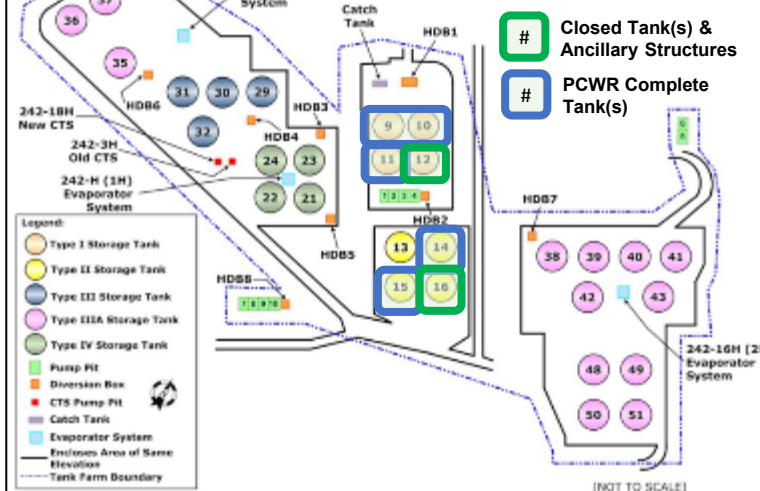
Schedule for Remaining Non-Compliant Tanks

Milestone Date	Preliminary Cease Waste Removal	Operational Closure
	(No of Tanks)	(No of Tanks)
12/31/2023	—	—
12/31/2024	1 ✓	—
12/31/2025	3 ✓	—
12/31/2026	2 ✓	—
12/31/2027	2 ✓	—
12/31/2028	—	3
12/31/2029	2	—
12/31/2030	1	2
12/31/2031	—	3
12/31/2032	—	1
12/31/2033	—	2
12/31/2034	1	—
12/31/2035	1	—
12/31/2036	1	1
12/31/2037	2	4

Complete

Tracking ahead of schedule

H-Area Tank Farm (HTF)



Questions ?