



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

Tank Closure Progress

Sherri Ross

*Senior Program Manager for Waste
Removal and Tank Closure
DOE-Savannah River*

**Savannah River Site Citizens Advisory Board
March 25, 2014**

Purpose

- Provide update of Tank Closure Progress
 - Tanks 5 and 6 in F Tank Farm
 - Risk Reduction
 - Status of Tanks 12 and 16 in H Tank Farm
 - Regulatory Drivers
 - Field Activities
 - Path Forward

Acronyms

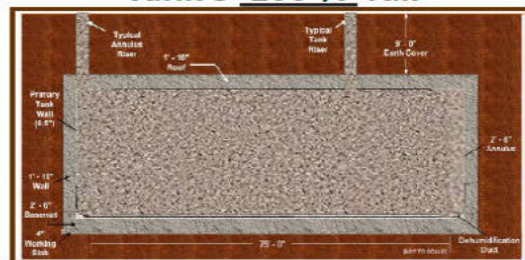
BWR	Bulk Waste Removal
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DOE	Department of Energy
EPA	Environmental Protection Agency
FFA	Federal Facility Agreement
HTF	H Tank Farm
NDAA	Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005
NEPA	National Environmental Policy Act
NRC	Nuclear Regulatory Commission
RAI	Request for Additional Information
RCRA	Resource Conservation and Recovery Act
SCDHEC	South Carolina Department of Health and Environmental Control
SRNL	Savannah River National Laboratory
TER	Technical Evaluation Report

Tanks 5 and 6 Status

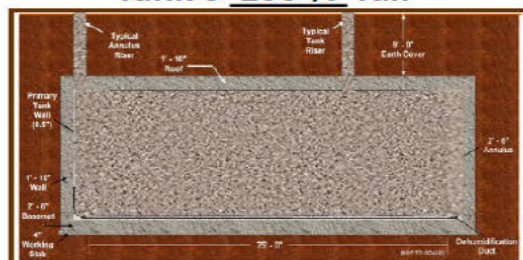
Tank 5 and 6 GROUTING PROGRESS

December 18, 2013, 125 calendar days

Tank 5 100 % full

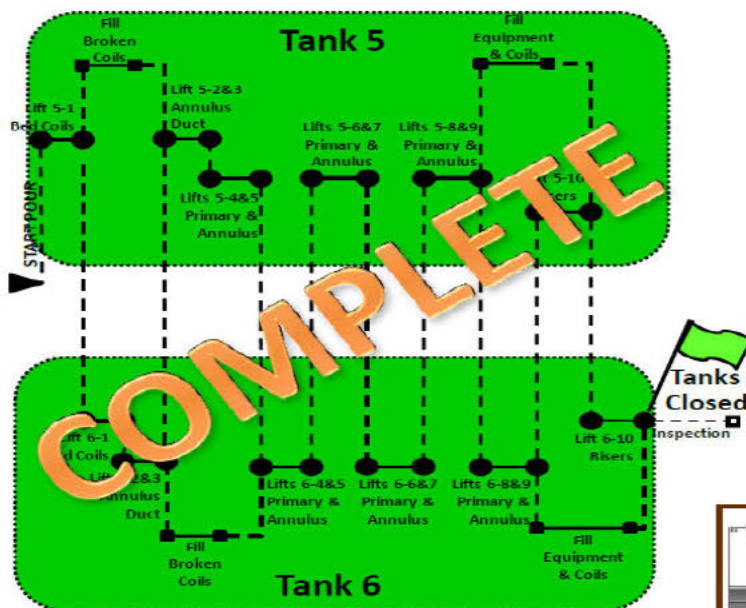


Tank 6 100 % full



GROUT DELIVERY NUMBERS

~ 4,800 Cubic Yards per Tank
8 yd³ per Truck
6 Trucks per Hour (max)
Pour 8 Hrs each 10 Hr Day (max)
≈ 400 yd³ per Day (max)
5 Days per Week



Grout Risk Tracking

- Weather Delays – minor rain delay
- Grout Delivery Issues – vendor fly ash shortage
- Readiness Rework – none to date
- Annulus / Coil Fill Issues – cooling coil hose replacement
- Equipment Issues – none to date
- Resource Limitations – recovery from lapse in appropriations
- In-process Inspections Delays – none to date

WEEKLY NOTES

No safety events to date
~1.8 million gallons of grout
~9000 cubic yards of grout
~1150 trucks
~4 months of grouting activity

Tank 5

Primary bulk fill is complete
Annulus bulk fill is complete
Equipment fill is complete
36 of 36 cooling coils complete
15 of 15 risers complete

Tank 6

Primary bulk fill is complete
Annulus bulk fill is complete
Equipment fill is complete
36 of 36 cooling coils complete
15 of 15 risers complete

GROUT LIFTS

Approximate Values per Tank

LIFT	Yds	Trucks	Gallons
1	320	40	66,000
2 & 3	40	5	7,000
4 & 5	945	118	138,000
6 & 7	1,840	230	376,000
8 & 9	1,625	203	337,000
10	30	4	3,000
Total:	4,800	600	921,000

Tanks 5 and 6 Grouting

Primary Tank Grouting



Tank Annulus Duct Grouting



Tank 5 Bulk Grouting

Grouting Command Center



Tank 5 Primary near 80% Full



Risk Reduction Progress

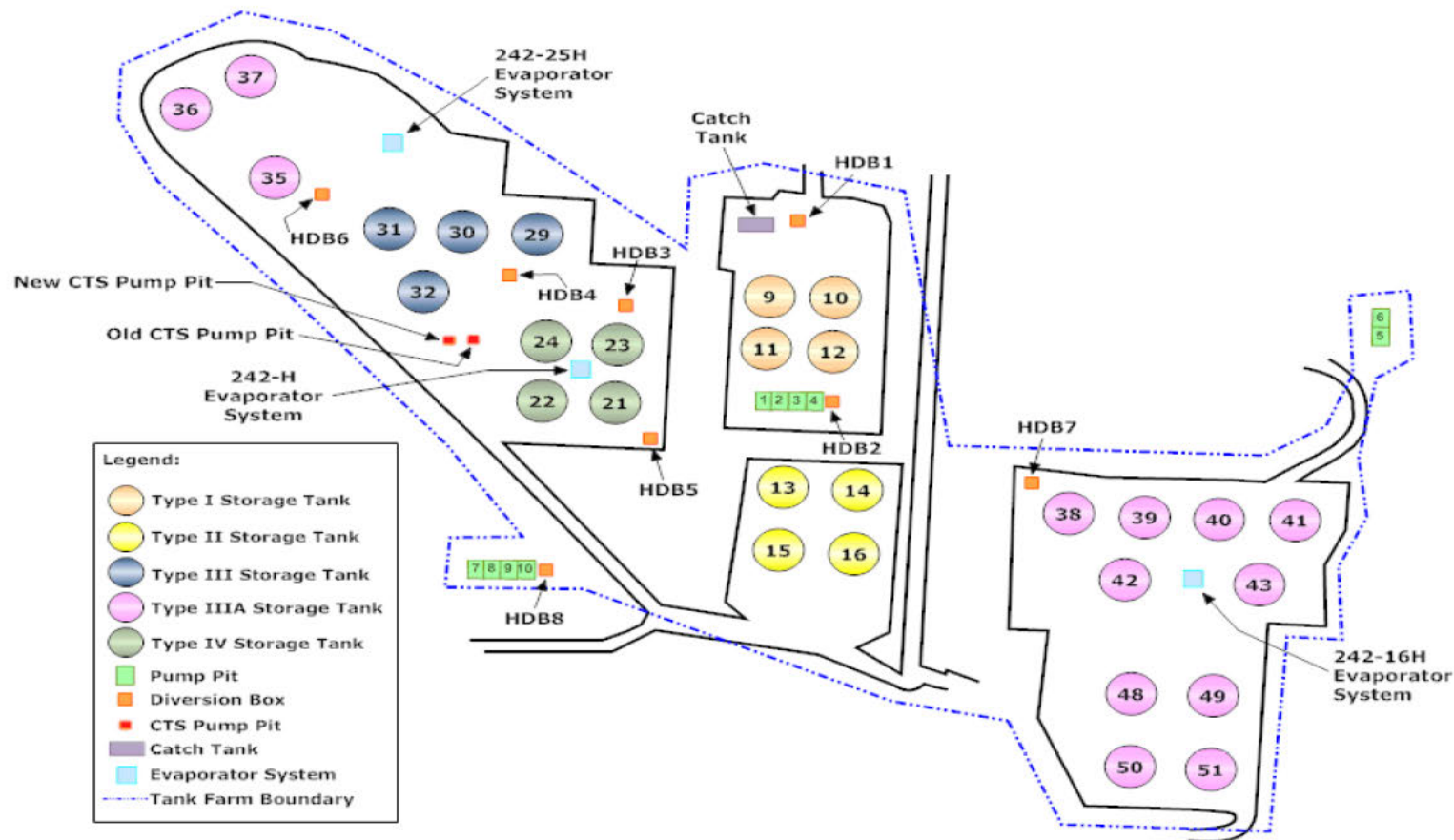
Reduce operational risk and the risk of leaks to the environment by removing waste from tanks, and closing the tanks. (DOE/SCDHEC/EPA Common Goal and Value #1)

- Curie work off from ~550 million curies in 1995 to 295 million curies in June 2013
- Of the 24 old style tanks
 - 6 are grouted (Tanks 17, 18, 19, 20, 5, and 6)
 - 1 cleaned and under characterization for closure – Tank 16
 - 1 cleaned and under evaluation – Tank 12
 - 4 completed bulk waste removal efforts – Tanks 4, 7, 8, 11
 - 1 undergoing bulk waste removal – Tank 13
 - 7 stable, containing immobile solids – Tanks 1, 2, 3, 9, 10, 14, 15
 - 4 supporting waste treatment – Tanks 21, 22, 23, 24

25% (6/24) of Old Style Tanks are Grouted
See Handout of Progress against all Goals and Values

7

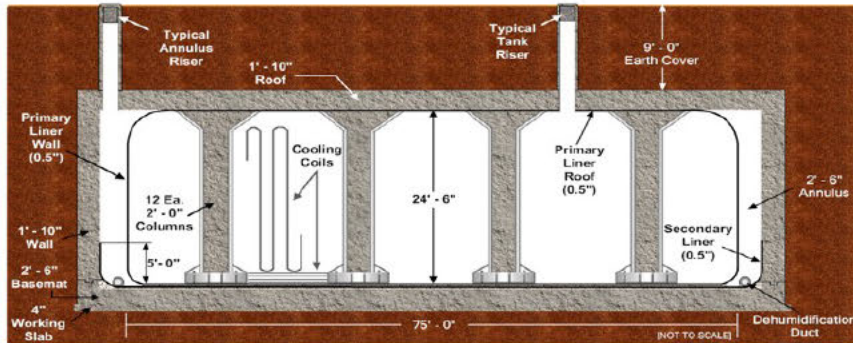
H-Tank Farm Layout



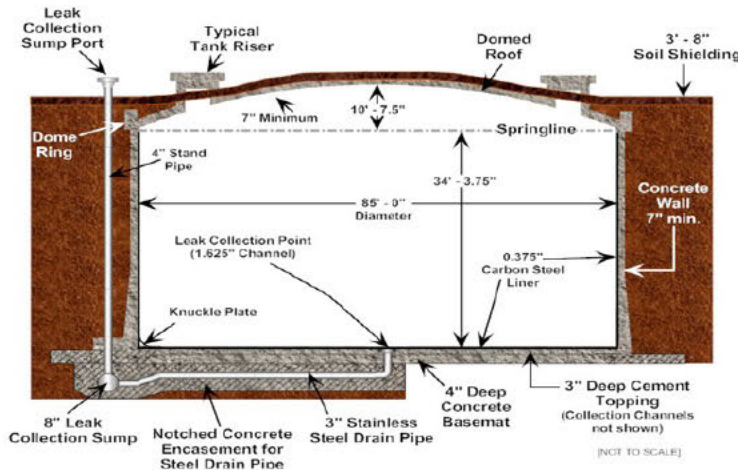
[NOT TO SCALE]

H Tank Farm Tank Types

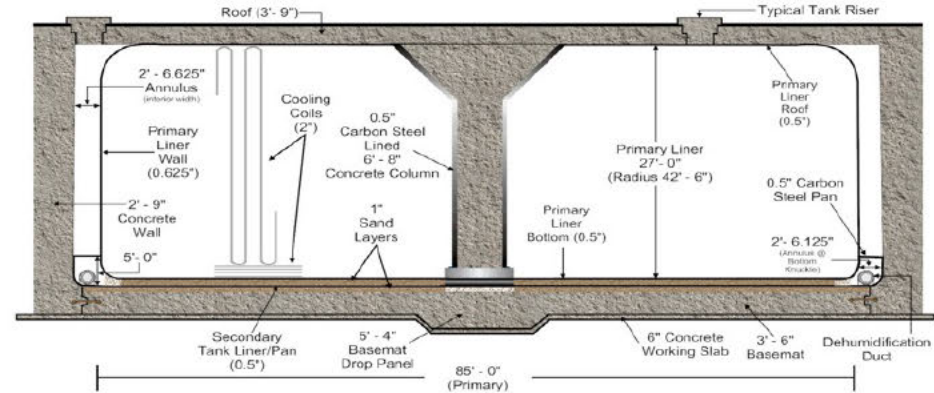
TYPICAL TYPE I WASTE TANK



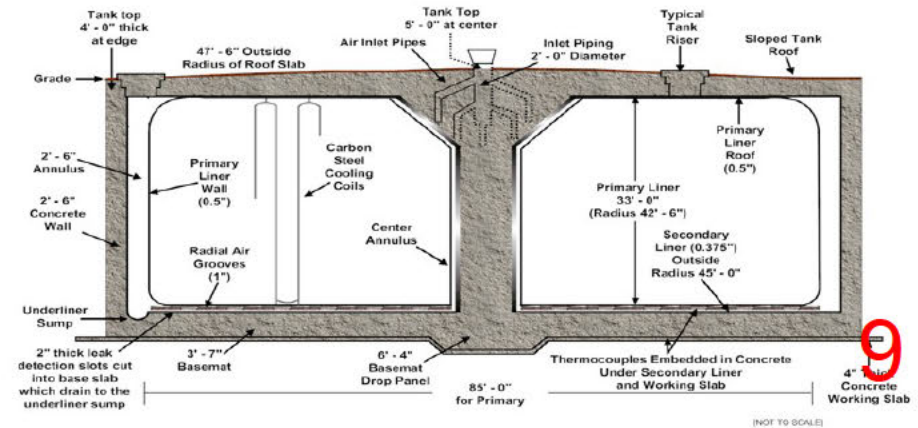
TYPICAL TYPE IV WASTE TANK



TYPICAL TYPE II WASTE TANK



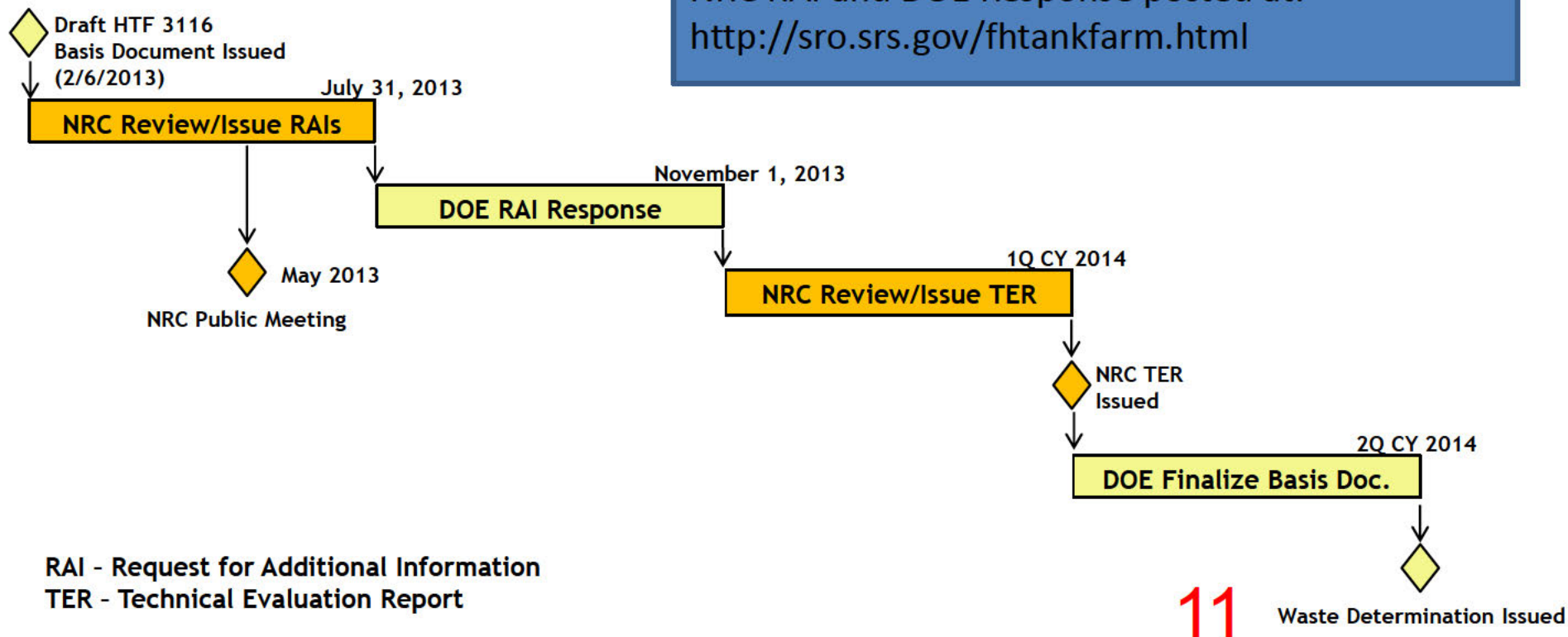
TYPICAL TYPE IIIA WASTE TANK



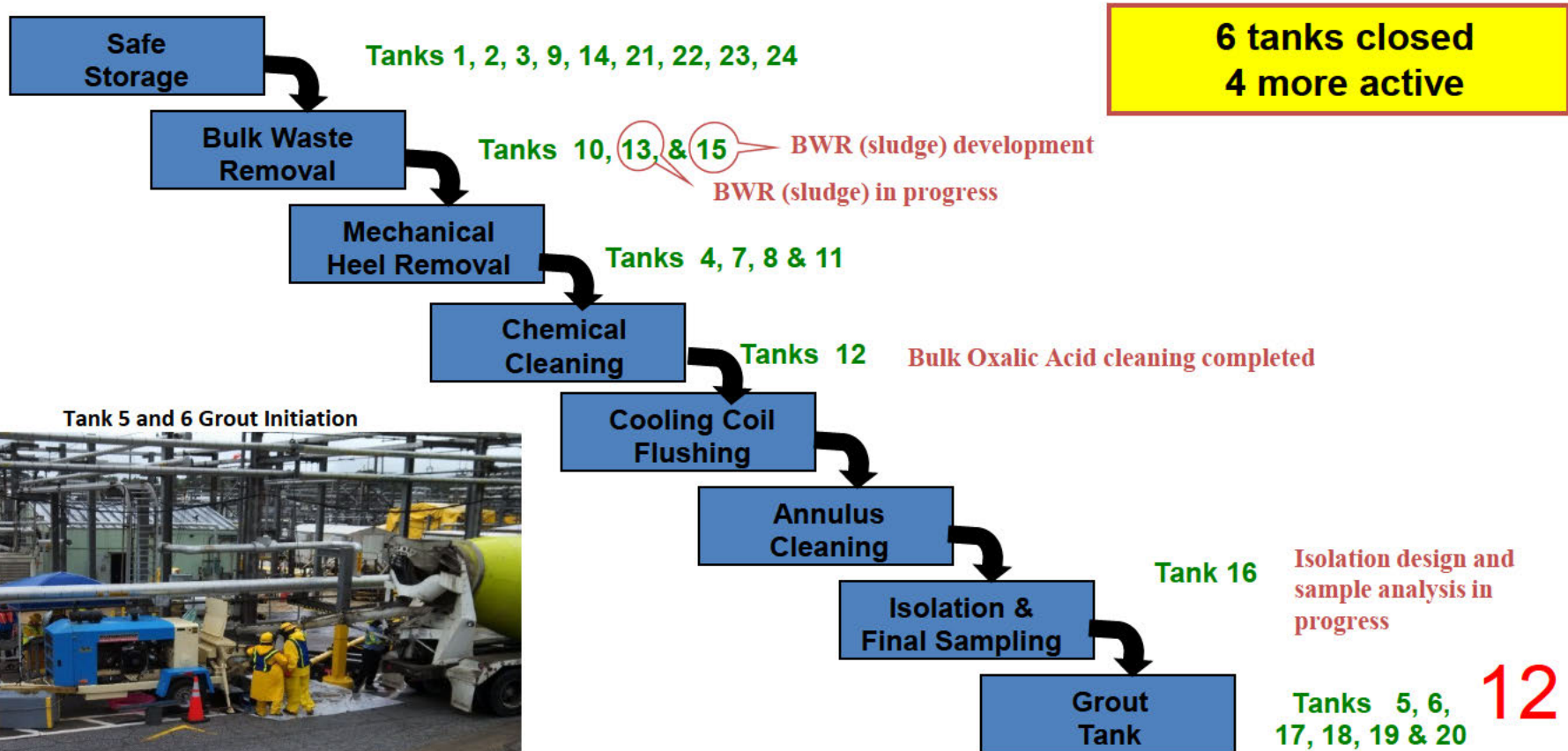


DOE and NRC Consultation

NRC RAI and DOE Response posted at:
<http://sro.srs.gov/fhtankfarm.html>



Tank Closure Progression

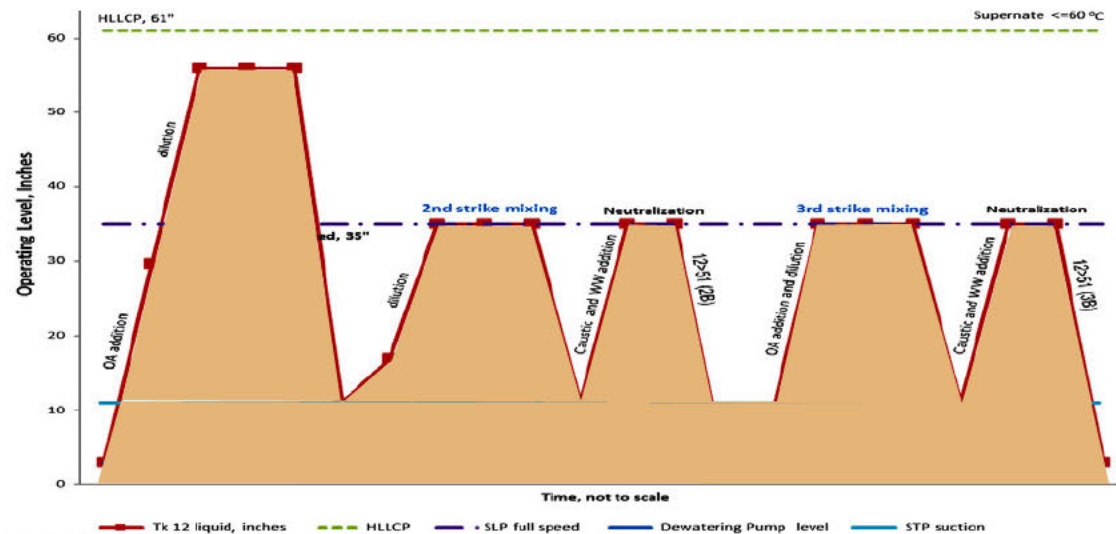


Tank 5 and 6 Grout Initiation



Tank 12

- Three bulk oxalic acid strikes completed
- No primary tank leakage
- Solids reduced from ~4,400 to ~<1,400 gallons
- Benefit may not be worth 'cost'

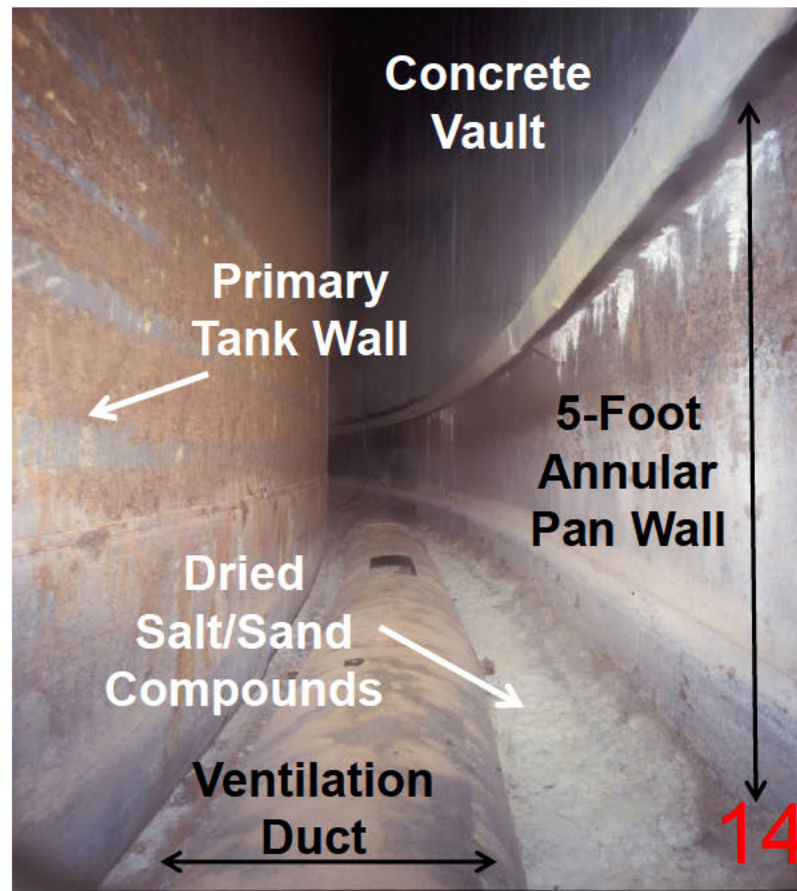


Tank 12 Internals – Post Acid Cleaning



Tank 16 - Annulus

- DOE, SCDHEC and EPA agreed to enter sampling and analysis phase - April 2013
- Primary and annulus sampling complete
- Sample analysis underway at SRNL



Tank 16 - Primary



15

- Complete closure of Tanks 5 and 6 including documentation to SCDHEC and EPA
- Tank 12 - DOE, SCDHEC, and EPA will discuss preliminary cease waste removal agreement
- Tank 16 – sample analysis and volume determination underway
- DOE will continue consultation with NRC to support a Secretarial Waste Determination for H Tank Farm ~ summer 2014
- Incorporate Lessons Learned into a future Tank Closure Strategy
- DOE, SCDHEC, and EPA discussions related to waste removal and tank closure regulatory commitments