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Revision 0

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Proposal to Cease Waste Removal Activities in Tank 14 and Enter Sampling and Analysis Phase

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Waste Disposal Authority

March 5, 2026

Presentation Outline

- Meeting Objective
- Summary/Recommendations
- Waste Removal History and Results
- Additional Cleaning Considerations
- Path Forward
- Request for Department of Energy (DOE), South Carolina Department of Environmental Services (SCDES), and Environmental Protection Agency (EPA) Concurrence
- Background

Acronyms

A-P	Annulus-to-Primary
BWRE	Bulk Waste Removal Efforts
CGCP	Consolidated General Closure Plan
CSMP	Commercial Submersible Mixing Pump
CTS	Contingency Transfer System
DOE	Department of Energy
DWPF	Defense Waste Processing Facility
EPA	Environmental Protection Agency
FFA	Federal Facilities Agreement
HEPA	High Efficiency Particular Air Filter
HHW	High Heat Waste
HM	H-Modified
HTF	H-Area Tank Farm
IP	Inspection Port
LHW	Low Heat Waste
LTAD	Low Temperature Aluminum Dissolution
MCL	Maximum Contaminant Level
NCRP	National Council on Radiation Protection and Management
PUREX	Plutonium-Uranium Extraction Process
SCDHEC	South Carolina Department of Health and Environmental Control[1]
SCDES	South Carolina Department of Environmental Services[1]
SPF	Saltstone Production Facility
SRNL	Savannah River National Laboratory
STP	Submersible Transfer Pump
SWPF	Salt Waste Processing Facility
THOREX	Thorium Extraction
NCRP	National Council on Radiation Protection and Management
PUREX	Plutonium-Uranium Extraction Process

[1]South 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.

Meeting Objective

Obtain mutual agreement among DOE, SCDES, and EPA to:

1. **Suspend waste removal activities in Tank 14; and**
2. **Enter the Sampling and Analysis phase in Tank 14 consistent with the *Consolidated General Closure Plan for F-Area and H-Area Waste Tank Systems* (CGCP) and *Liquid Waste Tank Residuals Sampling and Analysis Program Plan* (LWTRSAPP)**

Tank 14 Primary





Summary

- Over 99% of the waste volume in Tank 14 has been removed
- A qualitative assessment indicates that the CGCP performance objectives will not be challenged
- Additional waste removal in Tank 14 would have limited impact on estimated doses/performance objectives in the H-Area Tank Farm (HTF) Performance Assessment
- Additional waste removal activities in Tank 14 would have a negative impact on other Liquid Waste risk reduction activities
- A quantitative assessment utilizing final residual waste volumes and results of sampling and analysis will be included in the Closure Module covering Tank 14
- A formal discussion on the “practicability” of additional waste removal will be included in the Closure Module covering Tank 14

Performance Objectives

Based on the characteristics and estimated volume of the waste remaining in Tank 14, performance objectives are expected to be met.

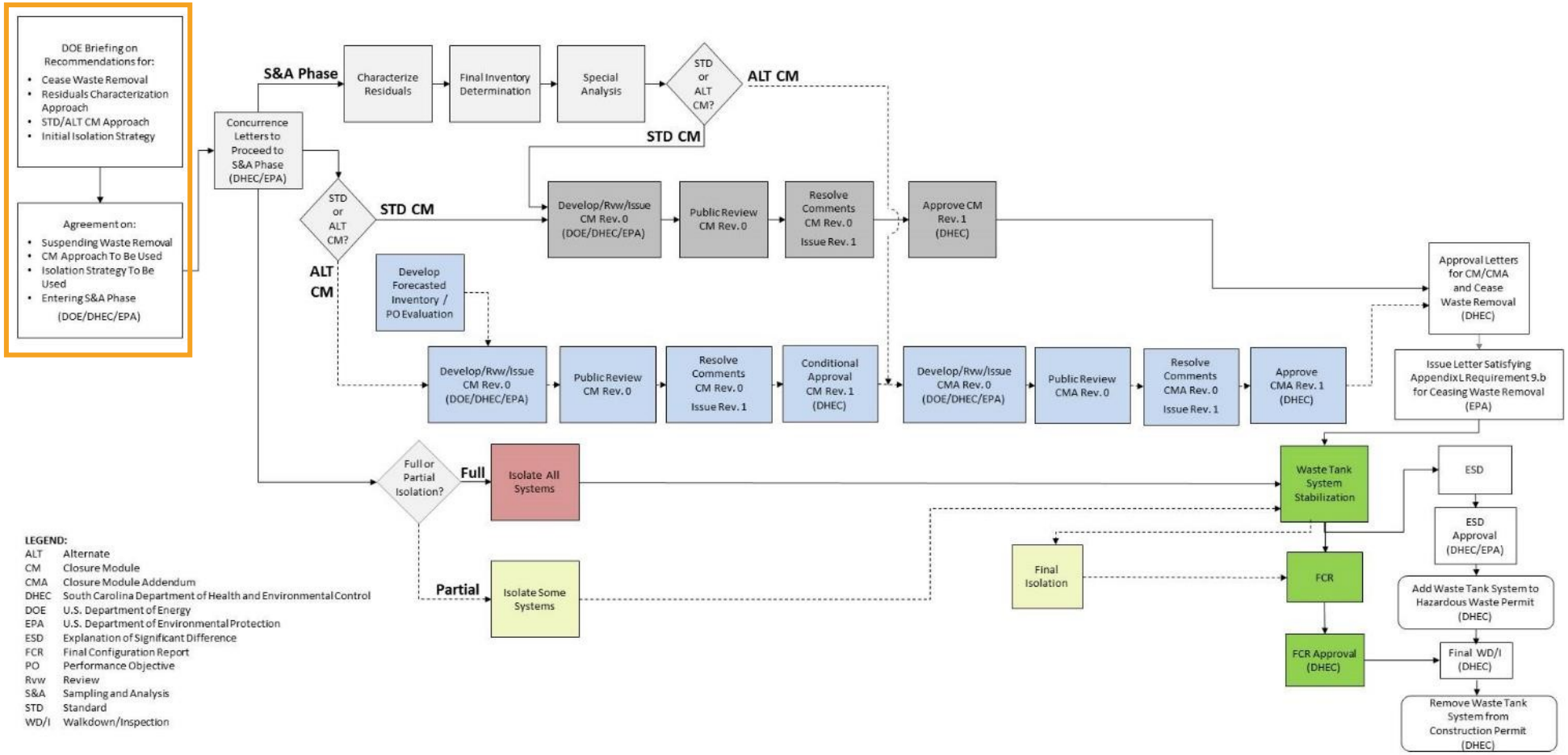
- **Anticipate that concentration values in the groundwater for HTF will be below the Maximum Contaminant Level (MCL) values for all the non-radiological inorganic constituents listed in Table 9.2-1 of the CGCP**
- **Anticipate that concentration values in the groundwater for HTF will be below the MCL values for radionuclides consistent with the State Primary Drinking Water Regulations including:**
  - *4 mrem/yr dose for beta- and gamma-emitting nuclides*
  - *15 picocuries per liter (pCi/L) for alpha-emitting nuclides (including Ra-226 but excluding radon and uranium)*
  - *5 pCi/L for radium (Ra-226 plus Ra-228)*
  - *30 micrograms per liter (µg/L) of uranium*

Radiation Dose Perspective

- **Anticipate that the peak dose from Tank 14 alone will be <8 mrem/year during both the 1,000 year and 10,000-year periods after HTF closure***
- **To put this radiological dose into perspective**
  - *Per NCRP-160, the average annual dose to a person in the United States is approximately 620 mrem primarily from:*
    - Approximately 310 mrem from naturally occurring background
    - Approximately 300 mrem from medical procedures

* Based on a preliminary estimate of the volume. Final inventories and dose impacts will be included in the Closure Module.

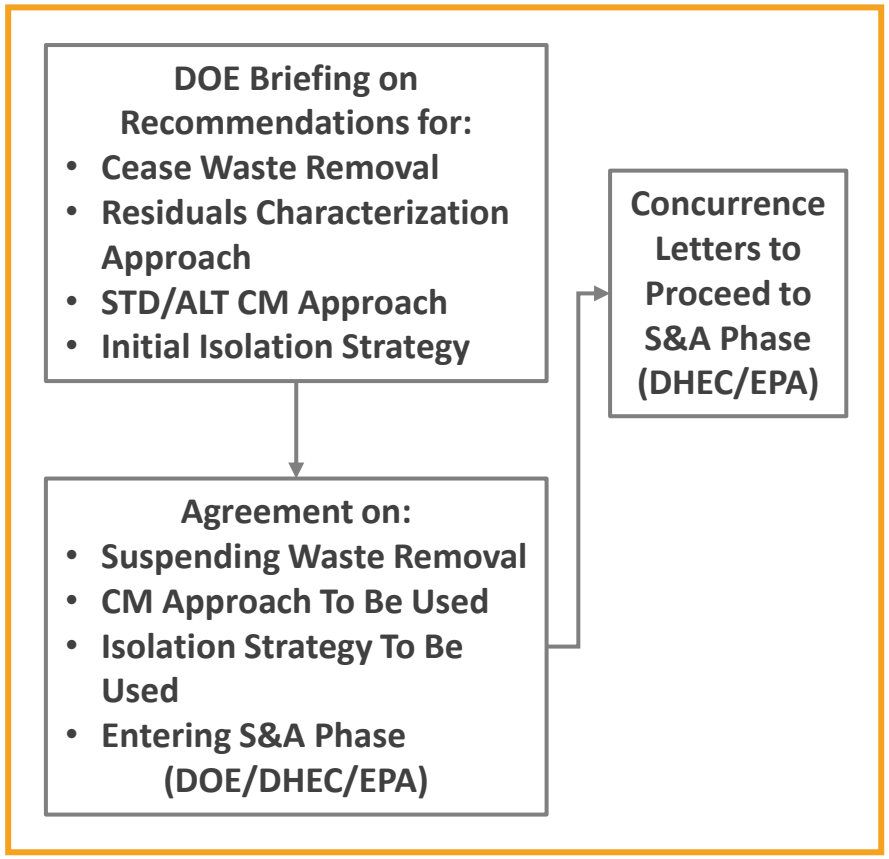
Pathway to Closure



Closure Module Approval and Waste Tank System Removal from Service Process (CGCP Figure 11.4-1)

[SRR-CWDA-2017-00015]

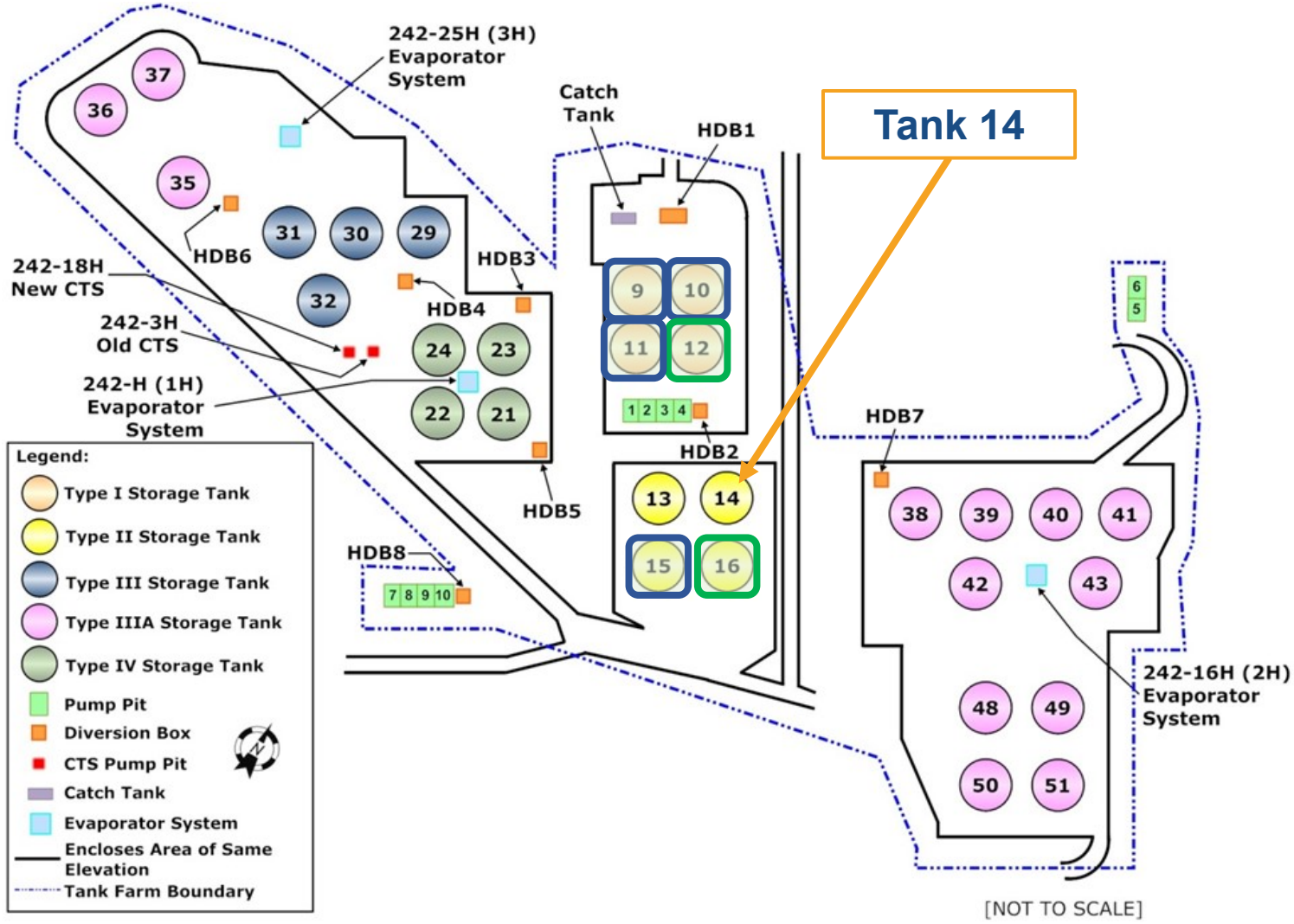
Recommendations



[SRR-CWDA-2017-00015]

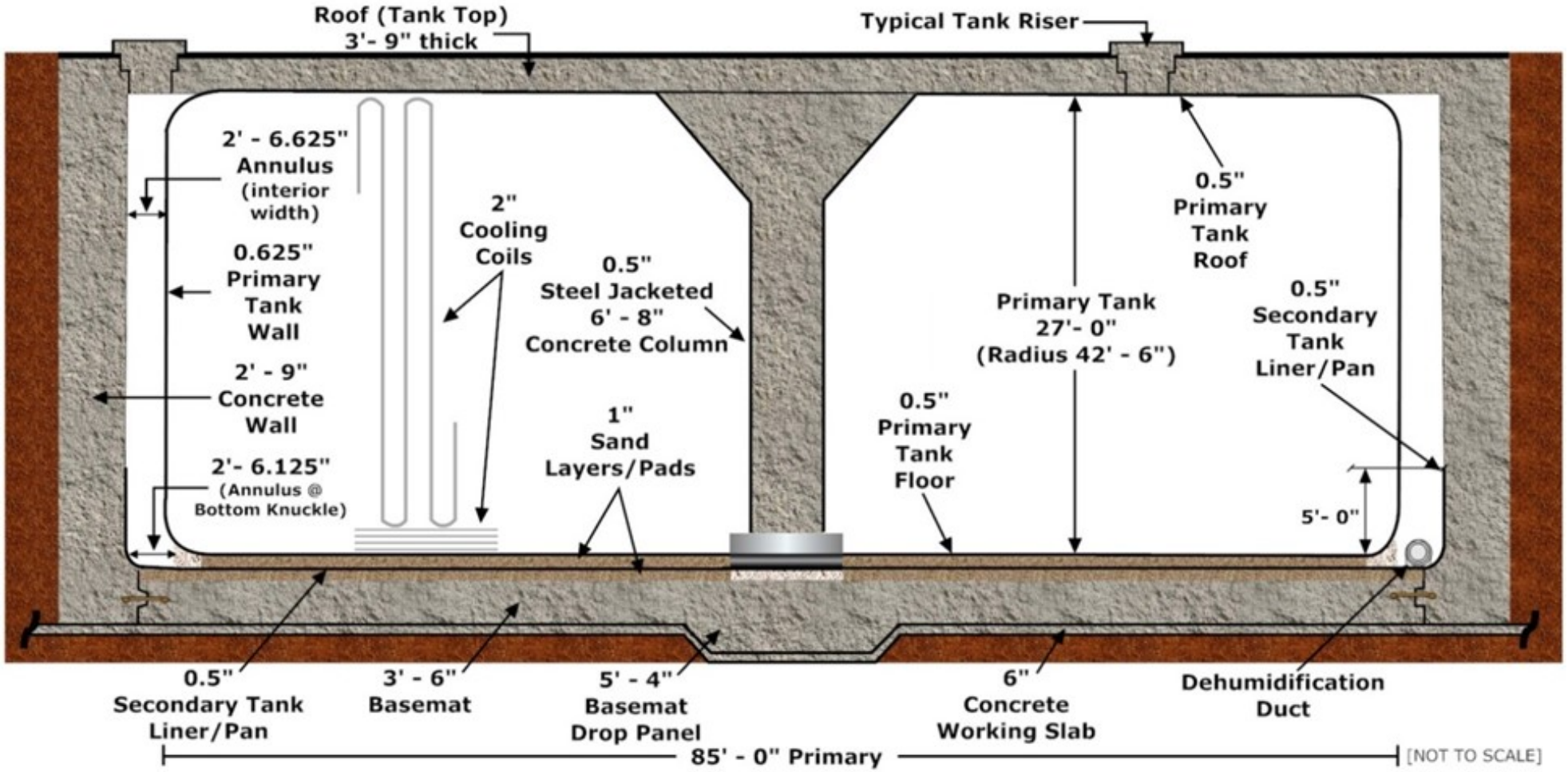
1. **Suspending waste removal activities and enter the Sampling and Analysis phase**
   - *Sampling and analysis to be performed per the LWTRSAPP*
2. **DOE will draft a Closure Module using the *Standard Closure Module* approach**
3. **The Closure Module will include appropriate isolation and stabilization provisions using the *Partial Isolation* approach**

H-Area Tank Farm Layout



[SRR-CWDA-2017-00015]

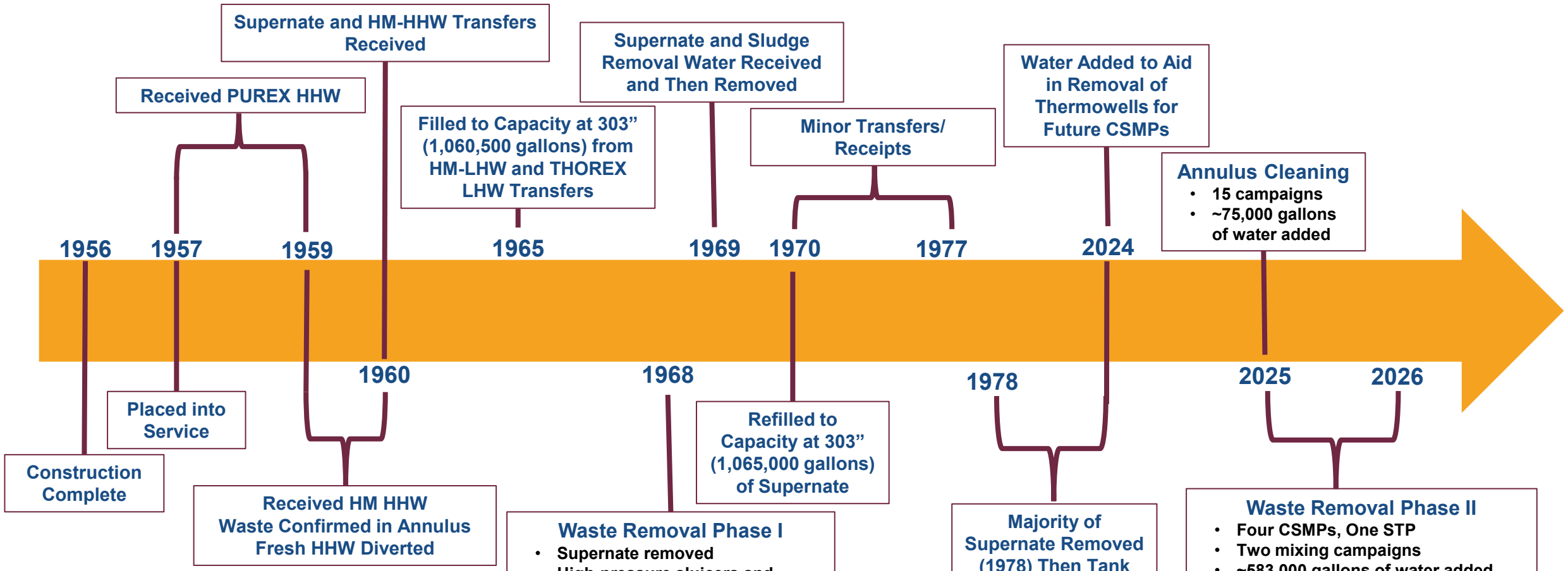
Tank 14 - Type II Tank Design



Nominal working capacity: 1,070,000 gallons
For a Type II Tank, 1" of waste equals 3,500 gallons

[SRR-CWDA-2017-00015]

Tank 14 Historical Timeline



CSMP – Commercial Submersible Mixing Pump
HHW – High Heat Waste
HM – H-Modified
LHW – Low Heat Waste
STP – Submersible Transfer Pump

Tank 14 Waste Removal

- **Waste removal from Tank 14 has occurred in several phases, beginning in the 1960s when most of the sludge was removed as part of sludge removal efforts from several tanks**
- **Waste Removal Phase I:**
  - *In 1968, ~864,000 gallons of supernate was decanted and transferred to Tank 13*
  - *High pressure water jets were then used to slurry the remaining sludge*
    - 377,000 gallons of water used
    - Approximately 80,000 gallons of sludge were removed
  - *At the conclusion of Waste Removal Phase I, Tank 14 was estimated to have approximately 5” of sludge remaining (~17,500 gallons)*
- **Waste Removal Phase II Starting Point:**
  - *Over the years transfers into and out of Tank 14 resulted in 8” (28,000 gallons) of sludge and 37” (129,500 gallons) of salt for a total of 157,000 gallons of solids in Tank 14 at the start of Waste Removal Phase II*
  - *Annulus salt level estimated to be approximately 15” (~7,000 gallons)*

Waste Removal Phase II – Campaign 1 Summary

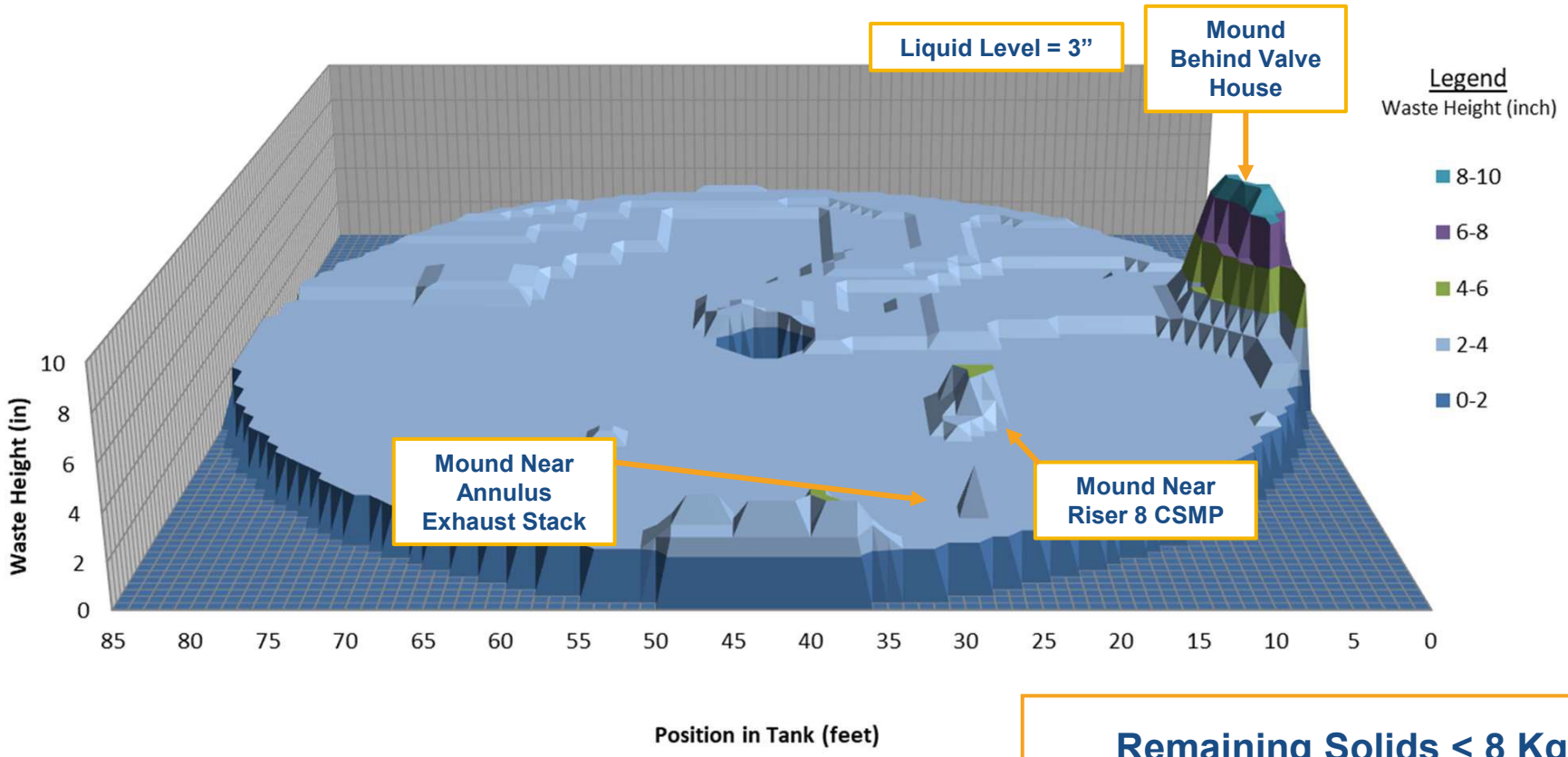
Waste Removal Phase II									
Campaign	Date	Water Added (Kgals)	Tank 13 Supernate Transferred In (Kgals)	Tank 14 Transferred Out (Kgals)	Riser 1 CSMP Elevation (in)	Riser 3 CSMP Elevation (in)	Riser 4A CSMP Elevation (in)	Riser 8 CSMP Elevation (in)	Riser 6 STP Elevation (in)
1	8/9/25 – 8/12/25	107.60	304.85	-	-	-	-	-	-
	8/14/25 – 8/15/25	0.10	-	31.85[1]	-	-	-	-	-
	8/16/25 – 8/19/25	4-Day Mixing Campaign			51	51	51	51	60[2]
	8/19/25	CSMPs Lowered (0.20 Kgal STP flush)			31	31	21	21	60[2]
	8/21/25 – 8/25/25	4-Day Mixing Campaign			31	31	21	21	60[2]
	8/26/25	CSMPs Lowered			11	11	11	11	60[2]
	8/27/25 – 9/8/25	13-Day Mixing Campaign			11	11	11	11	60[2]
	9/20/25 – 9/24/25	0.30	-	521.25	11[3]	11[3]	11[3]	11[3]	0[2]

[1]A transfer was made from Tank 14 to Tank 13 to lower the liquid level in Tank 14 to the intended height of 160 inches. The transfer was a Low Rem Sludge Slurry transfer and lowered the Tank 14 liquid level to the approximate intended height.
[2]The STP was initially installed at 60 inches but was never used at that height. It was lowered (right before the 9/20/25 – 9/24/25 transfer from Tank 14 to Tank 13) to what was thought to be 3 inches; however, after looking in the tank, it was on the bottom (0 inches).
[3]All four CSMPs operated during transfer until the liquid level in Tank 14 reached 35 inches.

[U-ESR-H-00260 Rev. 0, U-ESR-H-00260 Rev. 0-ADD-1, U-ESR-H-00260 Rev. 0-ADD-2]

Tank 14 Primary Tank After Phase II Campaign 1

Residual Solids 3-D Model
(height exaggerated to show detail)



Remaining Solids < 8 Kgal

[U-ESR-H-00266, Rev. 0]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
							15.0	7.0	Initial Conditions
1	10/15/25 – 10/16/25	~ 5.1	24	-	-	4.0	12.5	5.8	Installed downcomer in Riser 5.
2	10/16/25 – 10/17/25	~ 5.1	24	-	-	3.2	12.0	5.6	Salt dissolution was much less noticeable compared to Campaign 1.
3	10/17/25 – 10/18/25	~ 5.1	24	-	-	5.6	11.5	5.4	Minimal salt dissolution was observed.
4	10/19/25 – 10/20/25	~ 5.1	12	0.4	18	3.1	11.0	5.1	Partial A-P transfer had a duration of 1.5 hours. Minimal salt dissolution was observed.
5	10/21/25 – 10/23/25	~ 5.1	24 / 35	0.7	24	2.8	10.0	4.7	Partial A-P transfer occurred 24 hours into the campaign, with a duration of 9 minutes. An additional partial transfer occurred 35 hours into the campaign, with a duration of 1 hour. While still minimal, salt dissolution did improve compared to campaigns with shorter time durations.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
6	10/24/25 – 10/29/25	~ 4.0	48	1.2	48	2.2	9.5	4.4	CTS suction plugged by floating debris/salt, placing too much strain on the pump to transport the liquid from the annulus to the primary. Flush lance was used in the South Riser to disperse debris away from the CTS suction.
7	10/30/25 – 11/11/25	~ 4.5	96	0.4	168	2.8	9.25	4.3	Water addition downcomer moved from IP-108 to IP-151 to improve salt dissolution in that area. Raised CTS pump to drain sleeve. Lowered CTS pump after partial transfer.
8	11/12/25 – 11/20/25	~ 5.1	48	1.4 / 1.4 / 1.4	144 (partial transfer every 48 hours)	1.2	8.75	4.1	Multiple partial transfers intended to induce liquid movement during the campaign.
9	11/21/25 – 11/29/25	~ 5.1	48	2.0 / 3.0 / 0.9	144 (partial transfer every 48 hours)	2.0	8.0	3.7	
10	12/05/25 – 12/07/25	~ 5.1	48	-	-	3.3	7.75	3.6	Support pulling additional solids samples for SRNL and SWPF. Additional pump out needed 12/08/25.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
11	12/10/25 – 12/18/25	~ 5.1	48	1.3 / 0.8 / 1.1	144 (with partial transfer every 48 hours)	2.8	7.75[1]	3.6[1]	
12	12/19/25 – 12/20/25	~ 5.1	24	-	-	4.2	7.75[1]	3.6[1]	Water addition was heated to facilitate additional dissolution of salt.
13	12/20/25 – 12/22/25	~ 5.1	48	-	-	4.2	7.5	3.5	Results were inconclusive whether the heated water was effective in dissolving salt.
14	12/22/2025 – 12/30/25	~ 5.1	48	1.7 / 2.1 / 0.6	144 (with partial transfer every 48 hours)	5.0	7.0	3.3	Water added was ambient temperature.
15	12/30/25 – 01/07/26	~ 5.1	48	3.0 / 0.8 / 0.8	144 (with partial transfer every 48 hours)	0.2	7.0	3.3	3.3 Kgals based on liquid level, additional inspection indicated an additional 400 gallons above liquid for 3.7 Kgals total.

[1]Could not estimate salt volume due to liquid level being higher than the salt.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Tank 14 Annulus Cleaning Summary

- **Fifteen batches performed after Phase II Campaign 1**
  - *Each batch consisted of a water addition of ~5,000 gallons, followed by a soaking period before being pumped from the annulus to the primary tank*
  - *Batches were varied to identify most productive strategy*
    - Short soak times (as short as 24 hours)
    - Long soak times (as long as 11 days)
    - Partial transfers (to remove potential boundary layers)
    - Heated water
- **Annulus camera inspections showed no significant change following final batches and annulus cleaning considered complete after Batch 15 due to lack of progress and analysis results of solid sample obtained after campaign 10**
- **Residual annulus solids estimated to be approximately ~3,700 gallons (conservatively assumes volume below liquid level is all solids)**

Waste Removal Phase II – Campaign 2 Summary

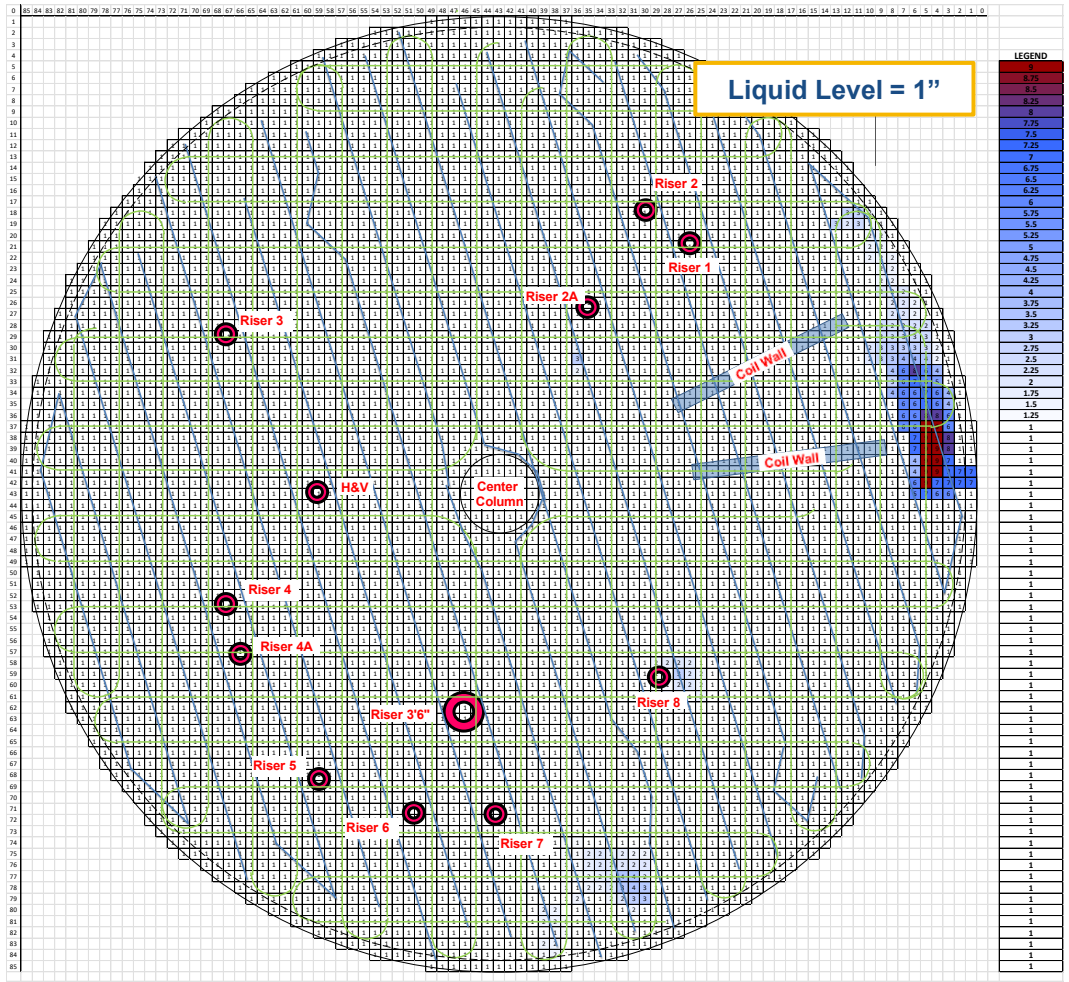
Waste Removal Phase II									
Campaign	Date	Water Added (Kgals)	Tank 13 Supernate Transferred In (Kgals)	Tank 14 Transferred Out (Kgals)	Riser 1 CSMP Elevation (in)	Riser 3 CSMP Elevation (in)	Riser 4A CSMP Elevation (in)	Riser 8 CSMP Elevation (in)	Riser 6 STP Elevation (in)
2	1/8/26 – 1/11/26	474.25	-	-	-	-	-	-	-
	1/12/26 – 1/16/26	4-Day Mixing Campaign			11	11	11	11	0[2]
	1/18/26 – 1/20/26	Continued Mixing Campaign Due to Transfer Pump Failure[1]			11	11	11	11	0[2]
	1/21/26	0.50	-	-	11	11	11	11	0[2]
	1/26/26	0.08	-	-	11	11	11	11	0[2]
	2/4/26 – 2/9/26	0.30	-	551.0	11[3]	11[3]	11[3]	11[3]	0[2]

[1]The STP was started for the Tank 14 to Tank 13 transfer on 1/17/26 and did not appear to be running as normal. The pump failed and was replaced on 1/28/26.
[2]The STP was on the bottom of the tank (0 inches).
[3]All four CSMPs operated during transfer until the liquid level in Tank 14 reached 35 inches.

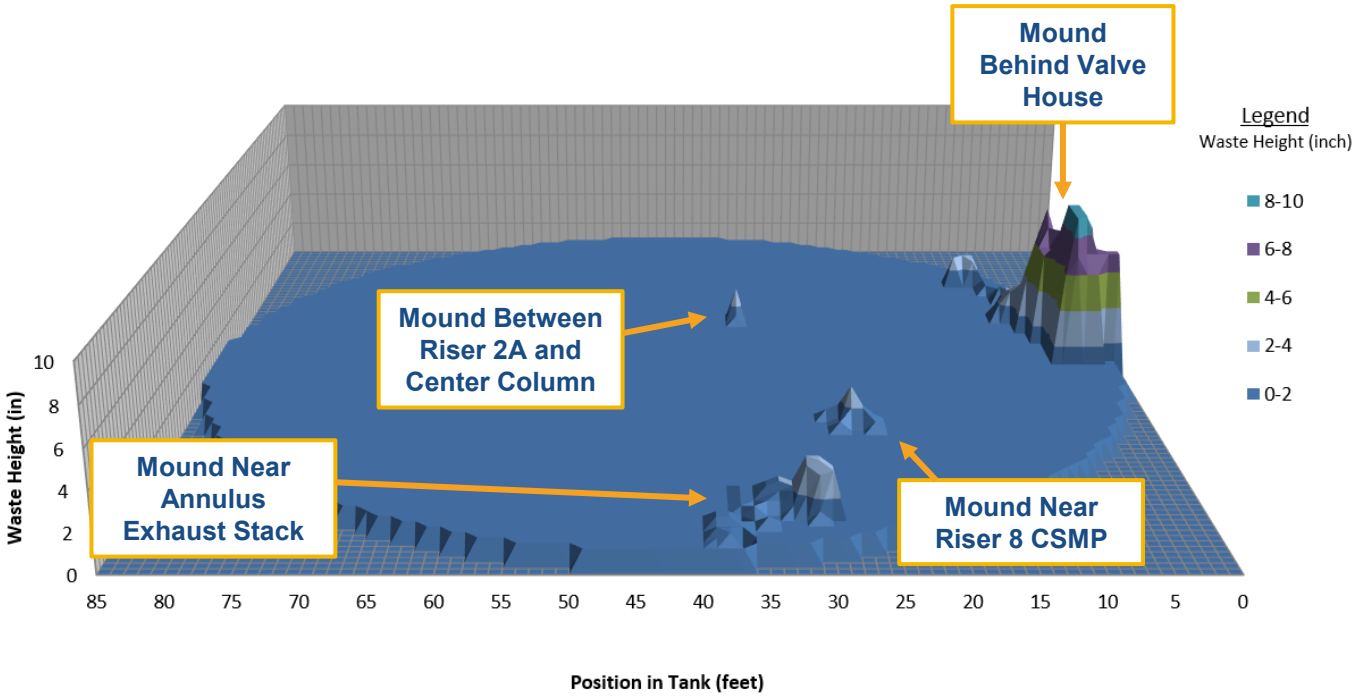
[U-ESR-H-00271, Rev. 0]

Current Status of Tank 14 Primary Tank

Residual Solids Map Plan View



Residual Solids 3-D Model (height exaggerated to show detail)



Remaining Solids < 3.8 Kgal

[U-ESR-H-00271, Rev. 0]

Tank 14 Prior to Sludge Rewet





Current Status of Tank 14

North



Northeast



East



Southeast



Current Status of Tank 14

South



Southwest



West



Northwest



Current Status of Tank 14

Mound Behind Valve House



Mound Near Riser 8 CSMP



Mound Near Annulus Exhaust Stack



Mound Between Riser 2A and Center Column



Tank 14 Annulus Cleaning

East Before/After





IP-65 Before/After









Overall Cleaning Results

Maximum Waste Volume (gal)	1,060,500
Maximum Sludge Volume (gal)	98,000
Total Solids Remaining (gal)	<3,800[1]
Total Waste Remaining (gal)	<7,500[2]

[1] Based on a preliminary estimate of the solids remaining in the primary. Final volume determination will be included in the Closure Module.
[2] Based on a preliminary estimate of the primary plus annulus. Final volume determination will be included in the Closure Module.

Total Percent Waste Removed Greater than 99%

Additional Removal Options

- **Additional Mixing Campaigns**
  - *Each new mixing or washing campaign requires a minimum of approximately 200-250K gallons of water be added to Tank 14 to allow for mixing pump operation followed by sustained mixing pump operation while transferring out slurry, creating additional new waste*
    - Additional new waste must be handled within the Liquid Waste System which is already challenged by available tank space to support Salt Batch compilation/qualification and Sludge Batch compilation/qualification necessary to feed Salt Waste Processing Facility (SWPF) and the Defense Waste Processing Facility (DWPF), respectively
    - Additional new waste must be run through an evaporator or must be processed through SWPF then subsequently DWPF or the Saltstone Production Facility (SPF), resulting in additional costs and impacts (i.e., extension) to the Liquid Waste System life-cycle
  - *Each new mixing or washing campaign would divert resources (i.e., funding and personnel) from other Liquid Waste System risk reduction activities*
    - E.g., impact ongoing waste removal activities in other tanks resulting in delays to waste removal (i.e., risk reduction) within those tanks
    - Waste removal from Tank 14 must go through Tank 13. Additional campaign(s) from Tank 14 would delay waste removal activities in Tank 13, one of the tanks in the water table
  - *Level of additional waste removal uncertain, but even removing the majority of the remaining material, if possible, would have a limited impact on final performance objective concentrations and doses*

Additional Removal Options

- **Chemical Cleaning**
  - *Any chemical cleaning campaign would require approximately 200-250k gallons of water/chemicals be added to Tank 14 to allow for mixing pump operation followed by sustained mixing pump operation while transferring out slurry, creating additional new waste*
    - Additional new waste must be handled within the Liquid Waste System which is already challenged by available tank space to support Salt Batch compilation/qualification and Sludge Batch compilation/qualification necessary to feed SWPF and DWPF, respectively
    - Additional new waste must be run through an evaporator or must be processed through SWPF then subsequently DWPF or SPF, resulting in additional costs and impacts (i.e., extension) to the Liquid Waste System life-cycle
  - *Each chemical cleaning campaign would divert resources (i.e., funding and personnel) from other Liquid Waste System risk reduction activities*
    - E.g., impact ongoing waste removal activities in other tanks resulting in delays to waste removal (i.e., risk reduction) within those tanks
    - Waste removal from Tank 14 must go through Tank 13. Additional campaign(s) from Tank 14 would delay waste removal activities in Tank 13, one of the tanks in the water table
  - *Level of additional waste removal uncertain, but even removing the majority of the remaining material, if possible, would have a limited impact on final performance objective concentrations and doses*
    - Low-Temperature Aluminum Dissolution (LTAD) anticipated to have a minimal impact due to low aluminum content in Tank 14
    - Bulk Oxalic Acid Cleaning would have additional adverse impact of introduction of additional oxalates into the system

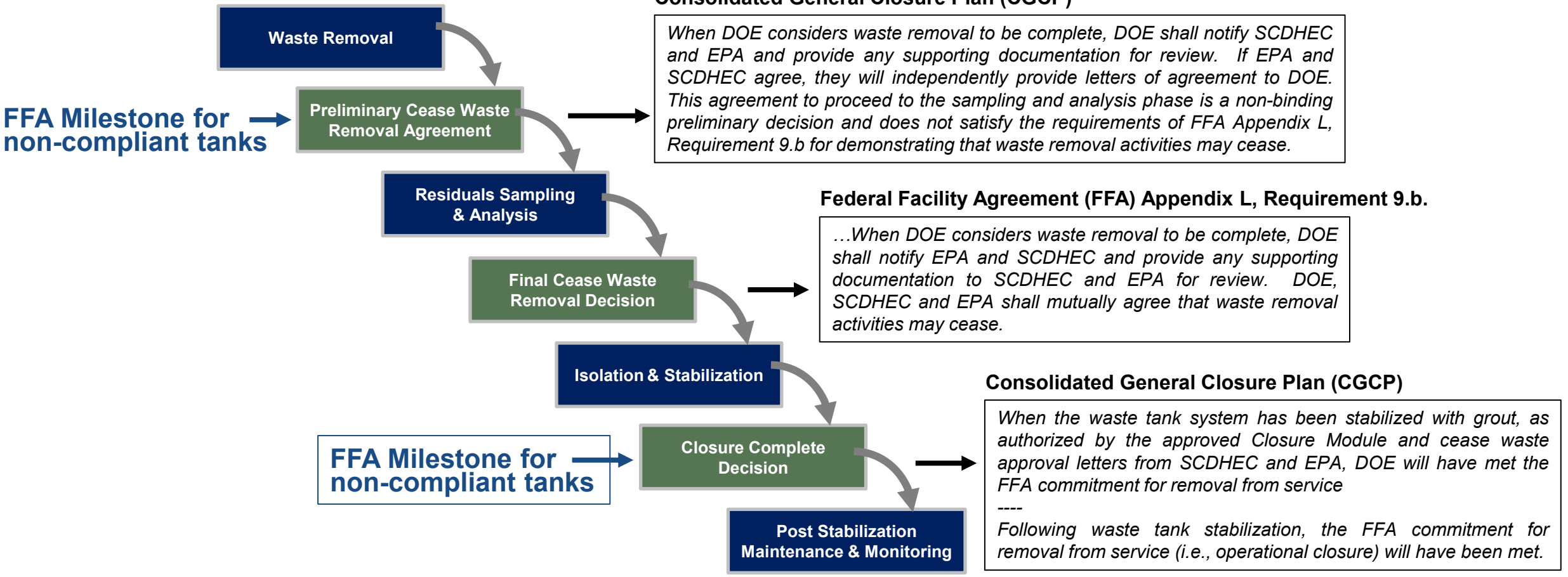
Additional Removal Options

- **Vacuum Technology**
  - *Proven Mantis technology that was utilized in Tanks 18 and 19 cannot be deployed due to in-tank obstructions*
  - *Alternate technology utilizing a smaller robotic platform with vacuum capability would require considerable development*
    - Very limited applicability at the time due to mobility around and over in-tank obstacles and associated tether management
    - Any water added to support removal, if required, would result in new waste and have same impact as previously described for additional mixing campaigns and chemical cleaning
    - Development/deployment of a new vacuum technology would divert resources (i.e., funding and personnel) from other Liquid Waste System risk reduction activities
  - *Level of additional waste removal uncertain, but even removing the majority of the remaining material, if possible, would have limited impact on final performance objective concentrations and doses*

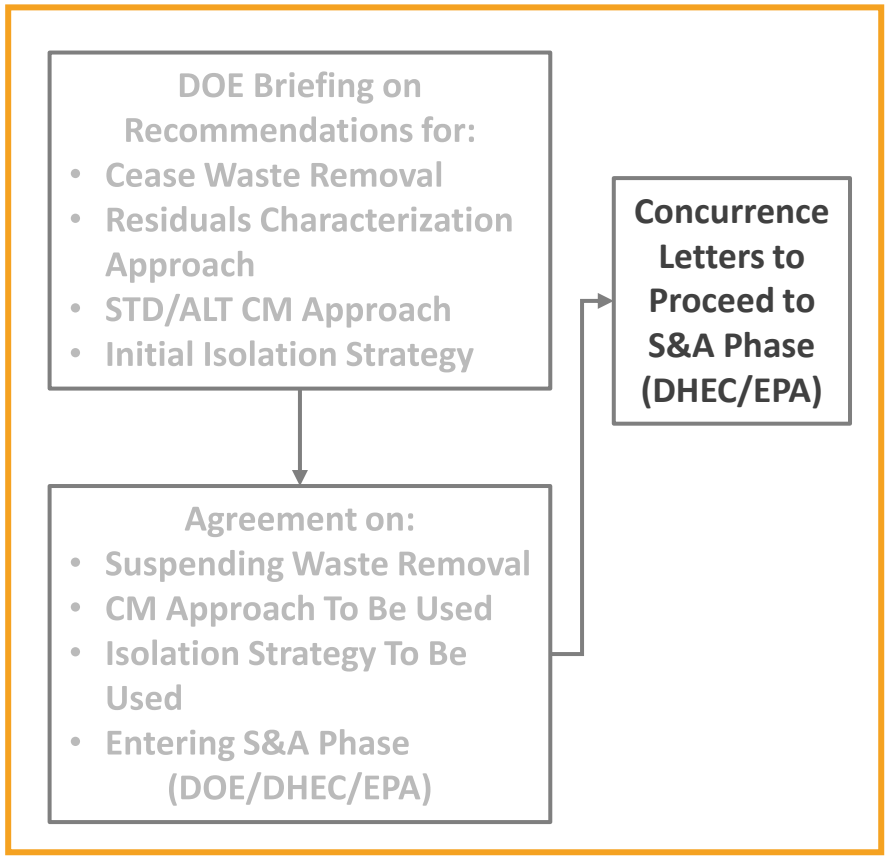
Additional Removal Options

- **Additional annulus waste removal**
  - *Based on results from annulus inspections and amount of material that may be remaining on the annulus pan floor or in the ventilation duct, additional water addition/removal campaigns would be expected to have minimal impact on performance objectives while generating additional new waste into the Liquid Waste System and delaying other Liquid Waste System risk reduction activities*
  - *Doses/concentrations associated with waste remaining within the annulus of Tank 14 are expected to contribute just a small portion to the overall doses/concentrations associated with all the waste remaining within the tank*
    - Removing even the majority of the remaining material within the annulus, if possible, would be expected to have a minimal impact on final performance objective concentrations and doses

Tank Closure Process



Requested Action



[SRR-CWDA-2017-00015]

The three agencies agree that, based upon the described qualitative assessment, there is reasonable assurance that it is appropriate to suspend waste removal activities and enter the Sampling and Analysis phase of the operational closure process for Tank 14

Next Steps

- **DOE will forward a letter to SCDES and EPA formally requesting concurrence to proceed to the Sampling and Analysis phase in Tank 14**
  - *This presentation will be attached as a primary reference*
  - *The requested action is a non-binding preliminary decision based on the qualitative information available at this time and presented today*
- **DOE and the Liquid Waste Contractor will proceed in developing the regulatory documentation necessary to operationally close Tank 14**
  - *DOE will coordinate with SCDES and EPA to establish a schedule for the development, review and approval of the Closure Module consistent with the approach described in the CGCP*

Common Goals & Values*

Values

1. Maintain transparency with open communication between regulators, DOE, and the contractor on program progress, and significant emerging issues.
2. Ensure DOE's strategy and plans are subject to stakeholder engagement and input, including SCDHEC permitting processes, and CERCLA, as appropriate.
3. Maximize the amount of curies (especially long-lived radionuclides) vitrified and ready for ultimate disposal out of state.
4. Limit disposal of curies onsite at SRS so that residual radioactivity is as low as reasonably achievable.

Goals

1. Reduce risk to the environment by removing waste and closing tanks with a goal of completion of the liquid waste program by 2037.
2. Reduce operational and environmental risk by aggressively removing curies from the waste tanks.
3. Reduce operational and environmental risk by optimizing operations to minimize liquid waste program total life cycle.
4. Complete waste removal and subsequent grouting of all waste tanks and ancillary structures with a risk-based priority order: first to tanks in the water table, followed by F Tank Farm tanks, followed by remainder of waste tanks, followed by ancillary structures, recognizing the potential for future emergent conditions or opportunities.

**From Federal Facility Agreement (FFA) 2022 High Level Waste Tank Milestones Agreement* [WSRC-OS-94-42]

Summary for Closed/PCWR Complete Tanks

Waste Tank	PCWR Date	Operational Closure Date	Max. Dose within 10,000 years[1] (mrem/yr)	Primary Tank Residual Solids Volume[2] (%)	Primary Tank Residual Solids Volume (Gallons)	Annulus Residual Volume (Gallons)	Annulus Cleaning
3[3]	09/2025	-	<3	<1	4,000	Negligible	No - negligible
4[3]	12/2024	-	<5	<1	<6,000	Negligible	No - negligible
5	11/2010	12/2013	3	0.26	1,900	<15	No – negligible
6	11/2010	12/2013	3	0.41	3,000	<50	Yes ~ 100 gal
8[3]	06/2025	-	<3	<1	<7,100	Negligible	No – negligible
9[3]	10/2024	-	<3	<1	<7,500	Negligible	Yes
10[3]	05/2024	-	<2	<0.40	<3,000	<400	Yes
11[3]	05/2025	-	<4	<1	<8,000	Negligible	No – negligible
12	01/2014	04/2016	6	0.20	1,500	30	No – negligible
15[3]	05/2025	-	<6	<1	<6,000	1,800	Yes
16	04/2013	09/2015	2	0.21	356	1,910	No – not practical
17	N/A	12/1997	3	0.18	2,400	N/A	N/A
18	10/2009	09/2012	3	0.30	3,900	N/A	N/A
19	10/2009	09/2012	3	0.15	2,000	N/A	N/A
20	N/A	07/1997	3	0.08	1,000	N/A	N/A

[1] Dose for closed FTF tanks represents maximum all sources dose utilizing actual inventories for Tanks 5, 6, and 17 – 20. Dose for other tanks represents maximum contribution from individual tanks. [SRR-CWDA-2012-00106, SRR-CWDA-2015-00073, SRR-CWDA-2014-00106]
[2] Based on historic maximum waste volume for each tank. [DOE/SRS-WD-2012-001, DOE/SRS-WD-2014-001]
[3] Tanks 3, 4, 8, 9, 10, 11, and 15 values are based on preliminary information.

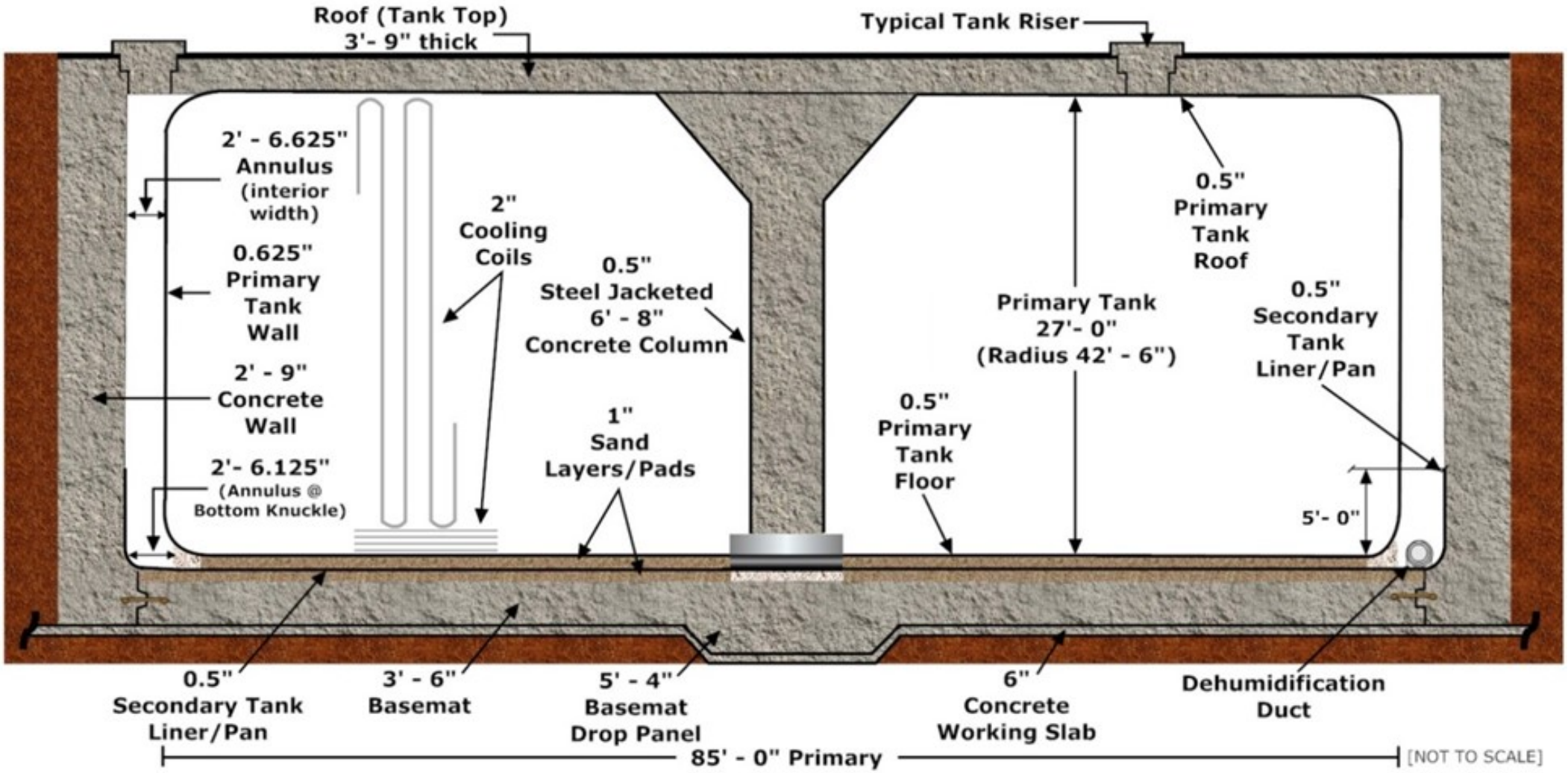
Tank 14

Background Information

Tank 14 Within H-Area Tank Farm



Tank 14 - Type II Tank Design



[SRR-CWDA-2017-00015]

Tank 14 - Type II Tank Design

- Carbon steel primary tank and secondary liner (annular pan) all contained in a concrete vault
- Nominal tank capacity: 1,070,000 gallons
- For a Type II Tank, 1” of waste equals 3,500 gallons
- Primary tank diameter: 85 feet
- Primary tank height: 27 feet
- Annular pan diameter: 90 feet
  - *2-foot 6.625-inch annular space surrounding primary*
- Annular pan height: 5 feet
- One central support column
  - *6-foot 8-inch diameter*
- 40 vertical cooling coils supported by rods welded to the roof and floor
- 4 horizontal cooling coil runs supported above the floor

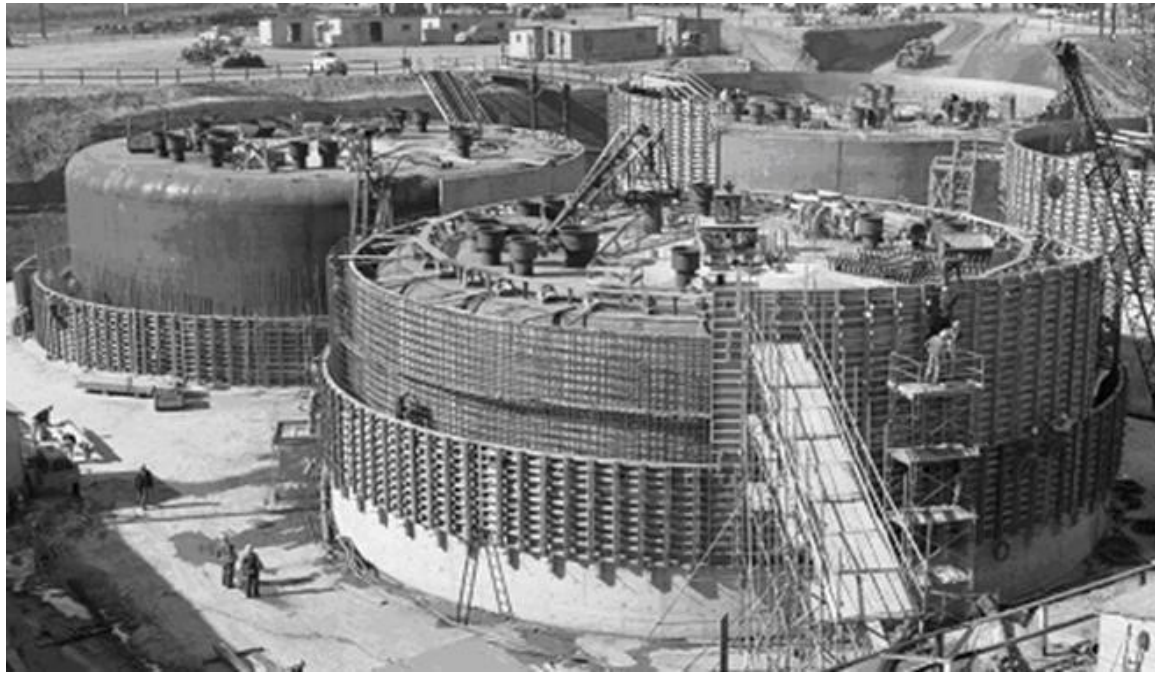
[SRR-CWDA-2017-00015]

HTF Type II Tank Construction

Type II Tank – Early Stage of Vault Construction



Type II Tank – Late Stage of Vault Construction

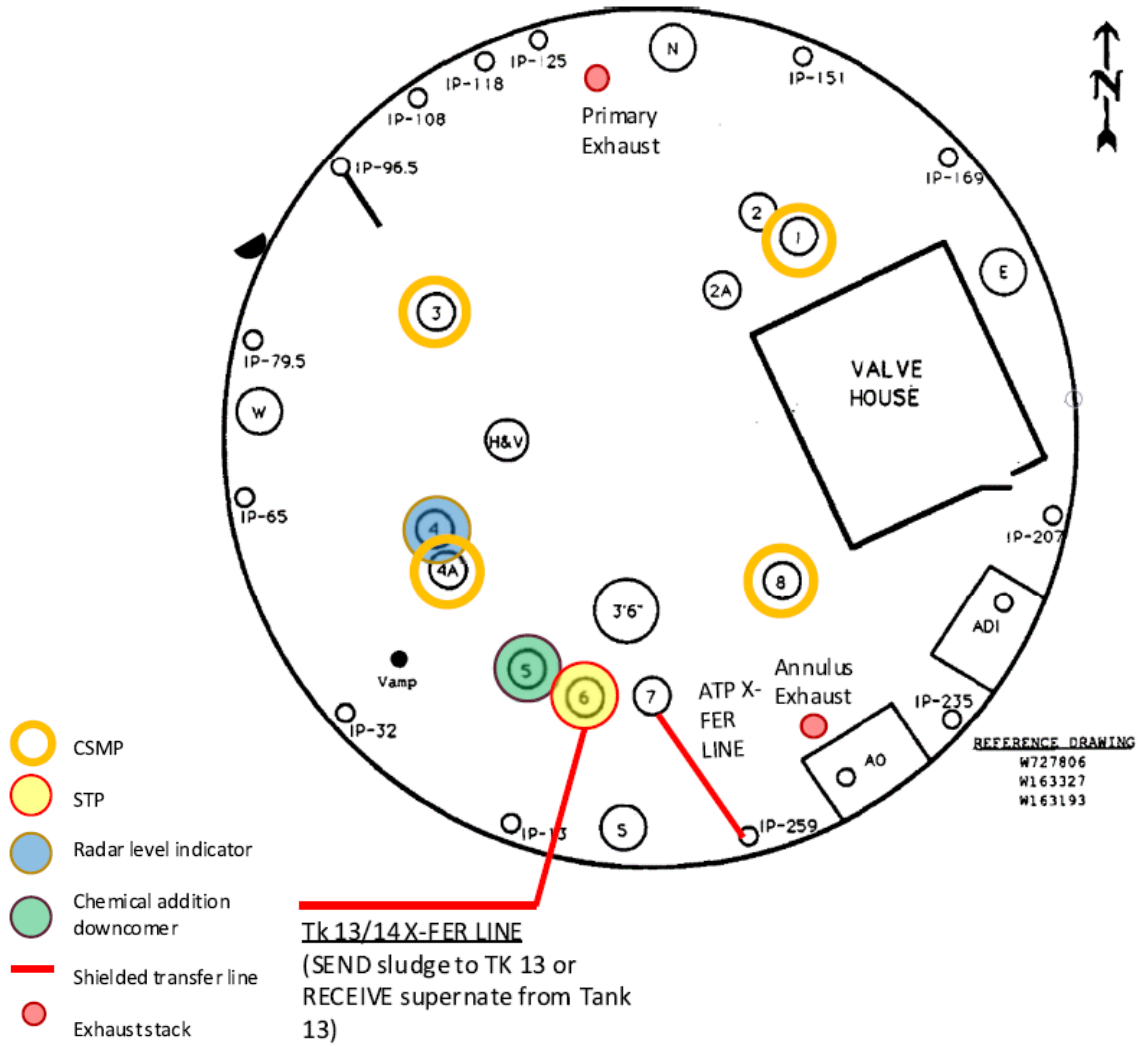


Typical Type II Tank Challenges

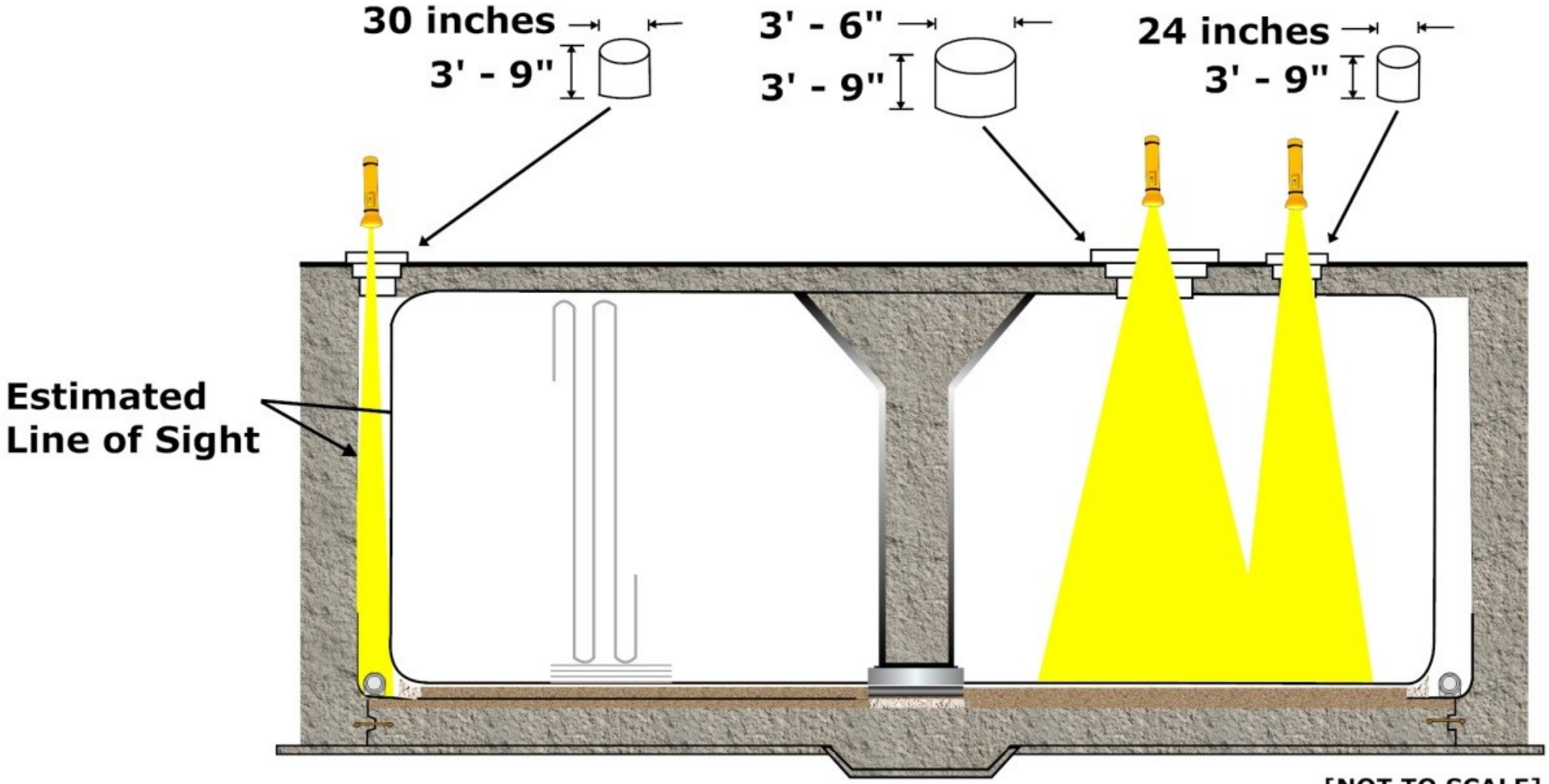
- **Challenges include:**
  - *Limited access ports (risers)*
  - *Approximately 29,400 linear feet of 2-inch diameter vertical and horizontal cooling coils*
  - *"Field-to-fit" horizontal cooling coil "fences"*
- **Tanks were not designed with waste removal in mind**

Type II Tank Riser Limitations

- **Primary access**
  - *Ten 24-inch risers*
  - *One 42-inch riser*
- **Annulus access**
  - *Four 30-inch risers*
  - *Tank 14 has an additional twelve 6-inch risers*
- **Limited riser entrances hinder:**
  - *Pump placement*
  - *Cleaning operations*
  - *Camera viewing*
  - *Sampling options*



Type II Tank Riser Limitations



[SRR-CWDA-2017-00015]

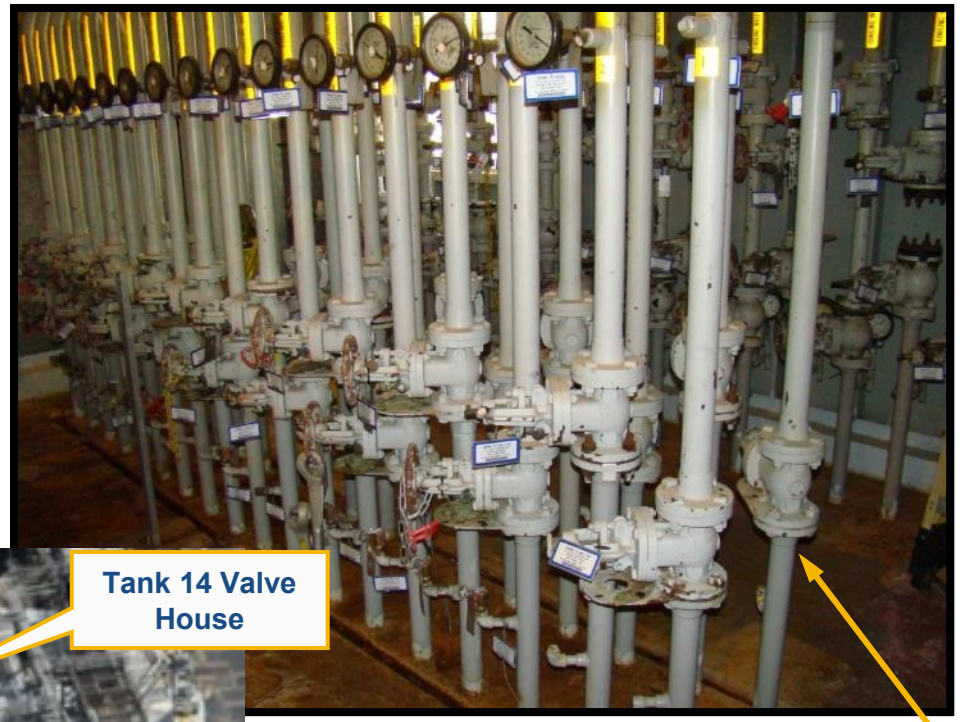
Type II Tank Columns and Cooling Coils

- **One central support column**
  - *Carbon steel reinforced with rebar and filled with concrete*
  - *6-foot 8-inch diameter*
  - *4-inch-thick steel base plate*
- **Type II tanks contain approximately 29,400 linear feet of 2-inch diameter cooling coils**
- **Horizontal coils were installed "field-to-fit"**
- **Columns and cooling coils together impact installation and/or operation of waste removal related equipment**
  - *Effective cleaning radius of pumps*
  - *Full installation of pumps*
  - *Sampling device deployment*



Cooling Coil Valve House

Valve House Interior





Tank 14 Valve House

View From Inside Tank (Under the Valve House)

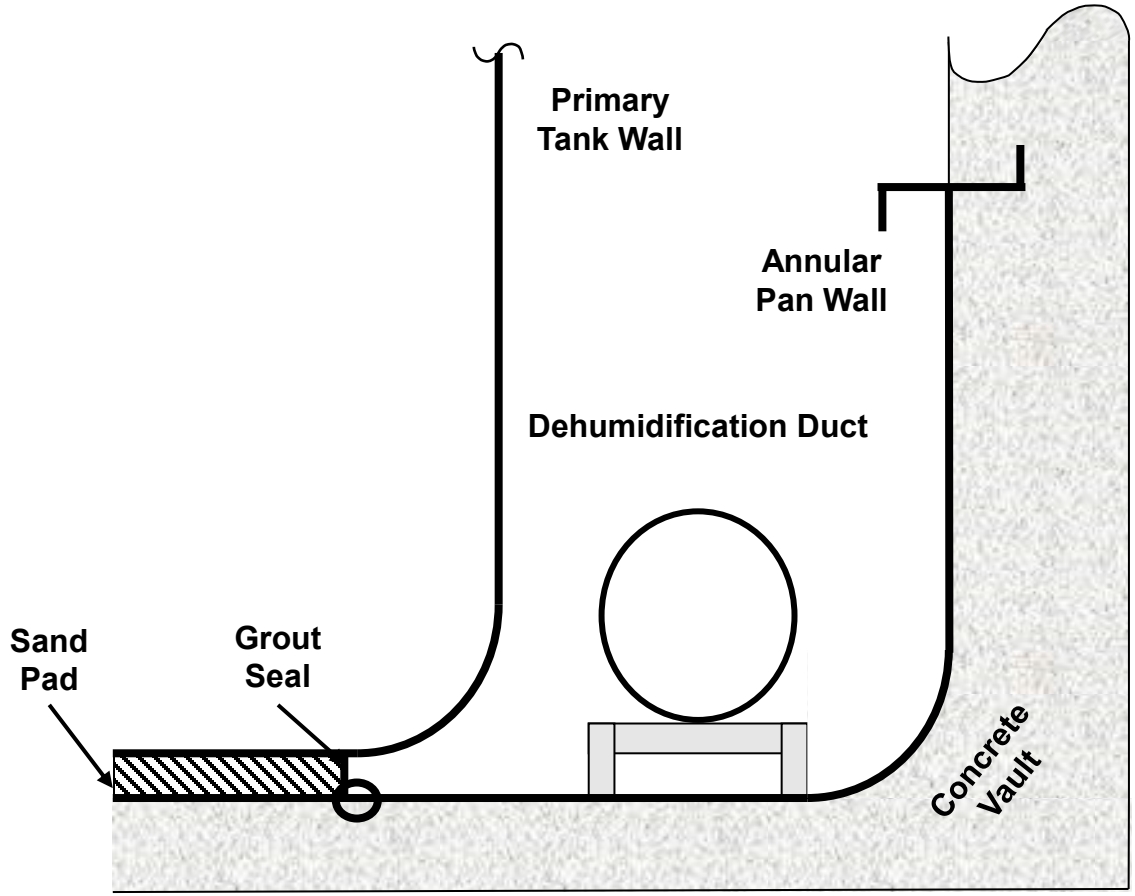


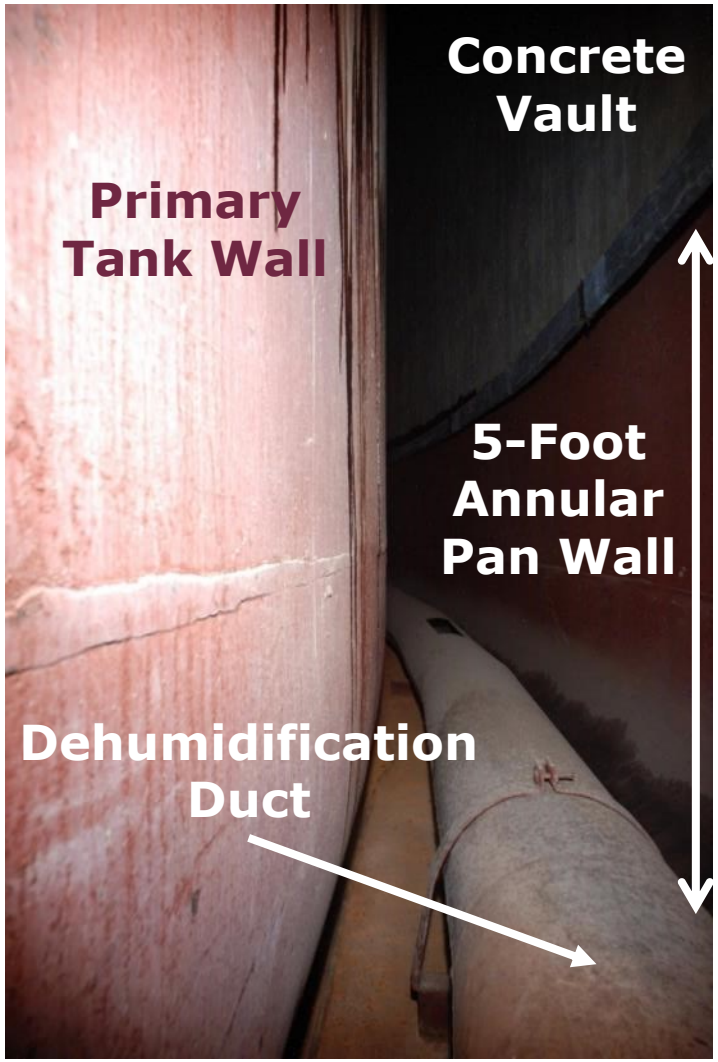
Example shown is from a Type I tank. Similar arrangement in Type II waste tanks

Cooling coil lines entering and exiting waste tank

Type II Tank Annular Region

5-foot high, 90-foot diameter annular pan provides secondary containment





Tank 14 Operational History

- **Constructed between 1955 and 1956**
- **Beginning in 1957, Tank 14 received H-Canyon HHW and Building 221-H HM process waste**
  - *Received ~461,000 gallons of PUREX HHW and ~129,000 gallons of HM HHW*
- **Leakage into the annulus detected in 1959**
  - *Transfers halted to Tank 14 and fresh HHW receipts were diverted to Tank 16*
  - *Small additions of water and fluorescein dye were added to Tank 14 to investigate leaks*
- **Tank 14 began receiving supernate again in 1960**
  - *~255,000 gallons received from a leakage in Tank 16*
  - *~92,000 gallons HM-HHW received*
- **Filled to capacity in 1965**
  - *~138,000 gallons HM-LHW received*
  - *~58,000 gallons THOREX LHW received*
- **Maximum historical waste level in 1965**
  - *303” (~1,060,500 gallons)*

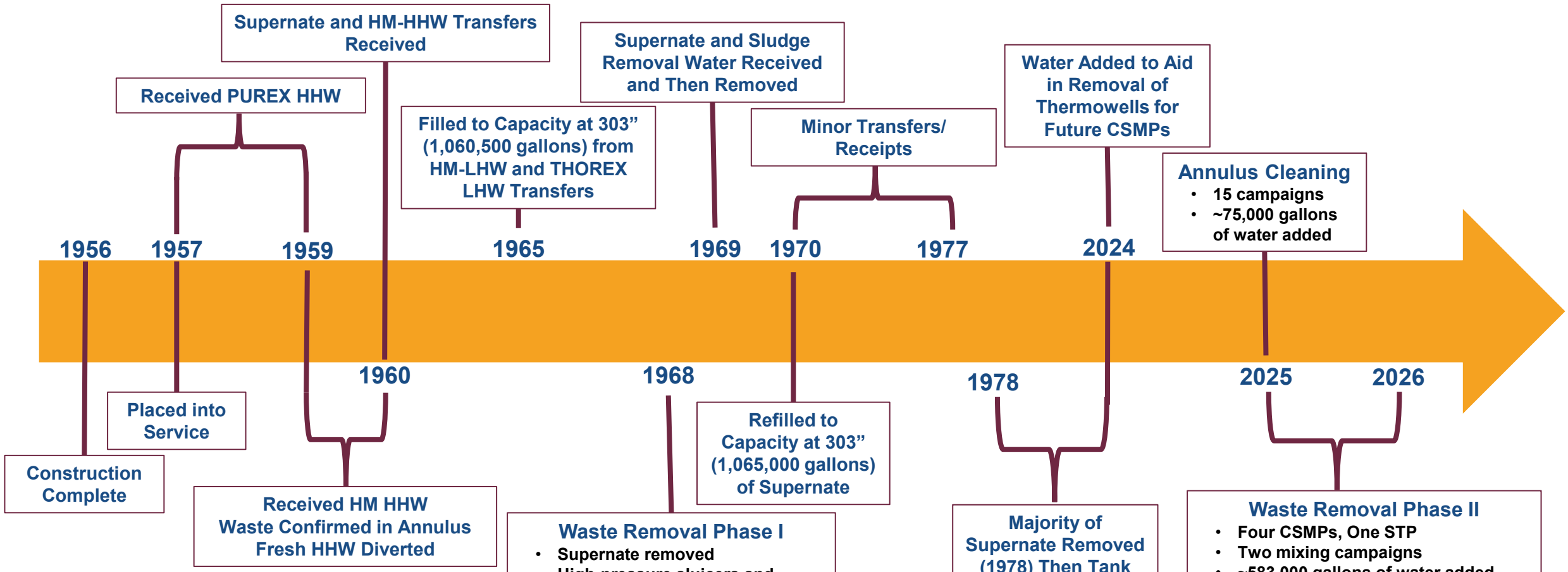
[X-ESR-H-01232, DPSPU 77-11-19]

Tank 14 Operational History

- **Sludge removal between 1968 and 1969**
  - *~5” or ~17,500 gallons of waste left in Tank 14*
- **Supernate receipts for Tank 14 restart in 1969**
  - *Transfer from Tank 9 to help inhibit corrosion of cooling coils, filling Tank 14 to ~29” or ~101,500 gallons*
  - *~658,000 gallons of sludge removal water from sludge removal in Tank 11 received by Tank 14 from Tank 13*
  - *~480,000 gallons returned to Tank 13*
  - *~27,000 gallons of sludge and ~510,000 gallons of supernate remained*
- **Supernate receipts continue through 1970**
  - *HLW-LLW supernate was transferred from Tank 13 to Tank 14*
  - *Hot concentrated supernate from Tank 10 was transferred to Tank 14*
  - *Tank 14 was refilled to capacity by 1970 with blends of concentrated material from Tanks 10 and 13*
- **Minor transfers were performed from 1970 to 1977**
  - *A minor transfer of Tank 16 annulus material was received*
  - *~42,000 gallons of supernate was received from Tank 13*
- **Supernate was transferred to Tank 13**
  - *Tank 14 waste tank level reduced from ~281.1” or ~983,850 gallons to ~68.6” or ~240,100 gallons*

[X-ESR-H-01232, DPSPU 77-11-19]

Tank 14 Historical Timeline



CSMP – Commercial Submersible Mixing Pump
HHW – High Heat Waste
HM – H-Modified
LHW – Low Heat Waste
STP – Submersible Transfer Pump

Waste Removal History – Starting Condition

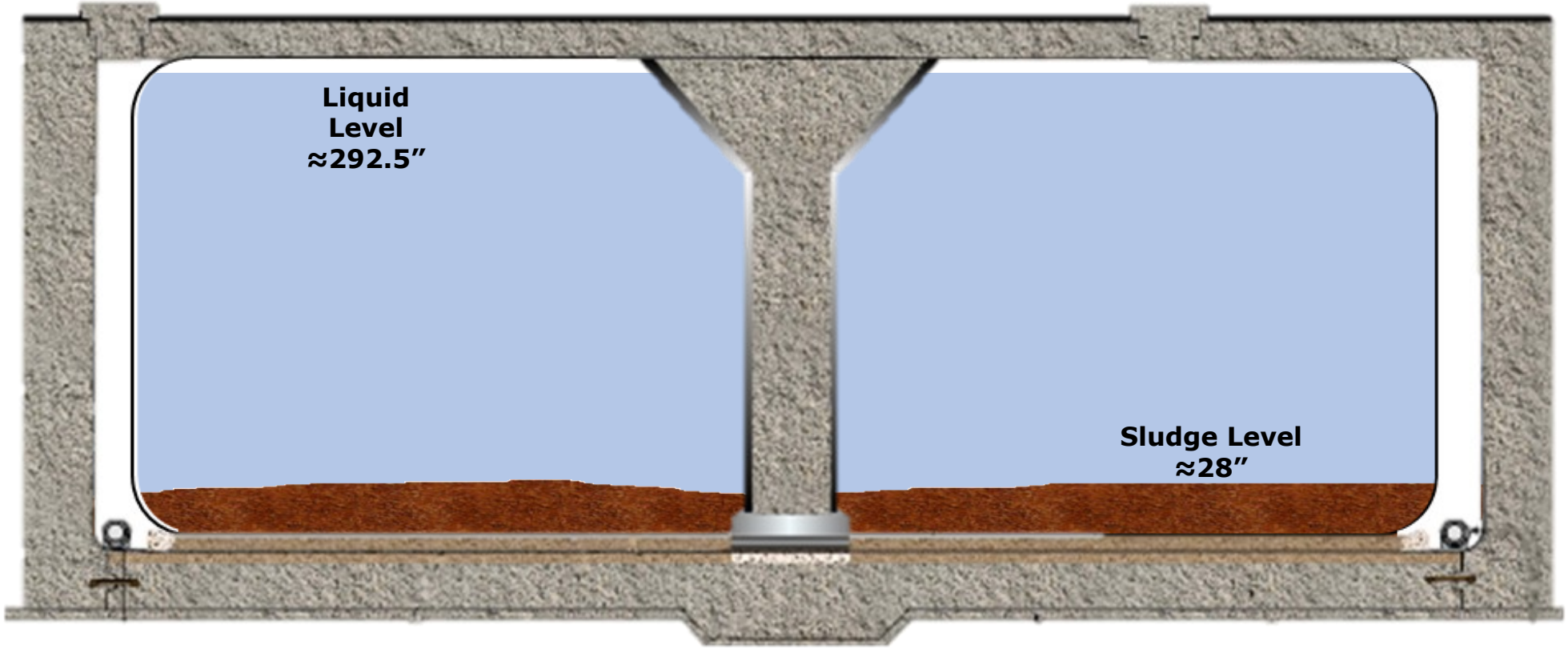
- **Maximum historical waste level in 1965 and 1970**
  - *303” or 1,060,500 gallons sludge and supernate combined*
- **PUREX and HHW receipts in concluded in 1959, with additional supernate transfers continuing (HM-HHW, HM-LHW, and THOREX LHW) until 1965 when Tank 14 was filled to capacity**
- **Maximum sludge volume was ~98,000 gallons when preparing for sludge removal in 1968**

[X-ESR-H-01232, DPSPU 77-11-19]

Waste Removal Phase I

Tank 14 Before the Start of Waste Removal Phase I

(1968)



[X-ESR-H-01232, DPSPU 77-11-19]

Waste Removal Phase I

- In preparation of sludge removal, ~864,000 gallons of supernate was moved from Tank 14 to Tank 13 in 1968.
- ~377,000 gallons of water was used to slurry the sludge within the tank, utilizing four high pressure water jets and four transfer pumps
  - *Two of the transfer pumps failed during operation*
- A total of ~452,000 gallons was transferred to Tank 13
- To attempt to mitigate potential for cooling coil leaks, ~58,000 gallons of HLW supernate was received from Tank 12
- Transfer pumps were removed, and transfer jets were used again
- Inspection of the tank after sludge removal indicated a large pile of sludge on the north side and some sludge above the 10-inch liquid surface along the wall below Riser 6, and large areas of sludge visible above the 8” liquid level
- At conclusion in 1969, ~80,000 gallons of sludge was removed, lowering the sludge volume to ~5” or ~17,500* gallons

High Pressure Water Jet



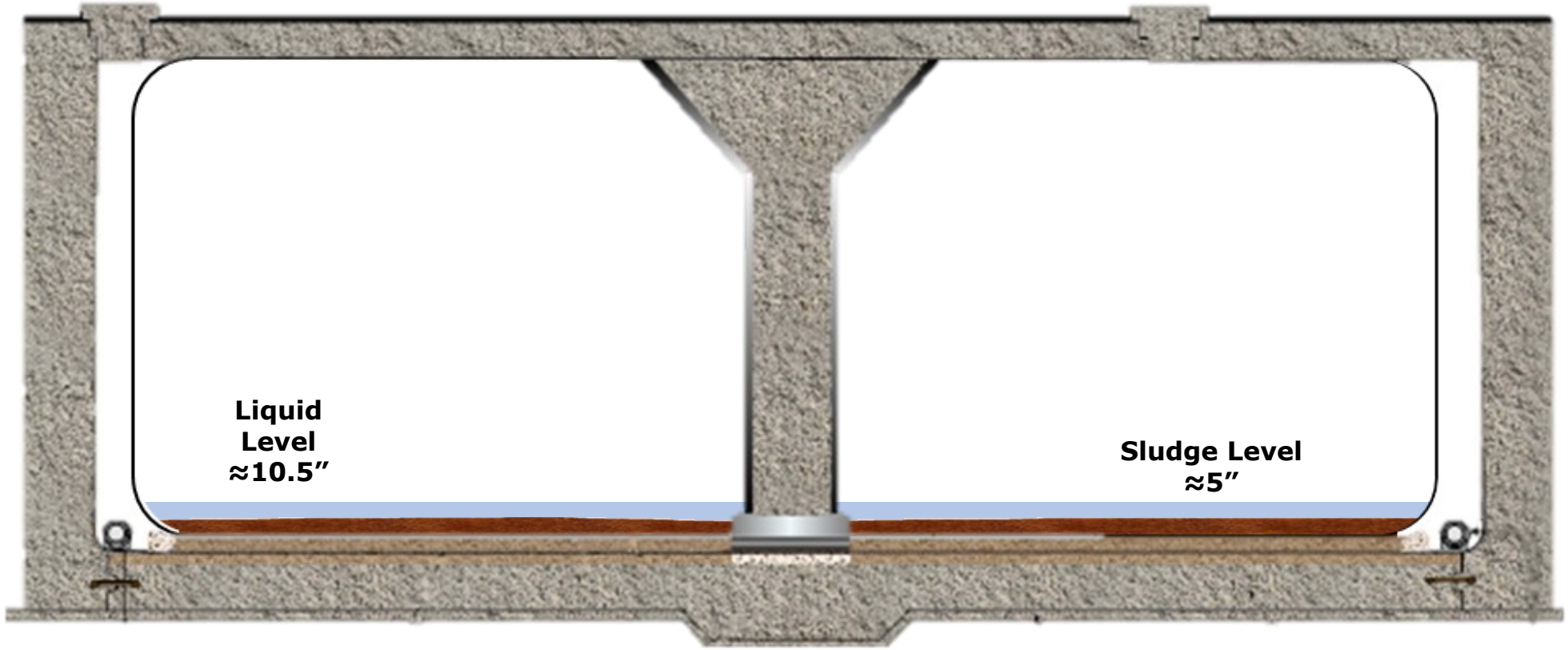
*Values come from historical documentation and should be considered approximate.

[X-ESR-H-01232, DPSPU 77-11-19]

Waste Removal Phase I

Tank 14 After Waste Removal Phase I

(1969)



[X-ESR-H-01232, DPSPU 77-11-19]

Evaporation and Rewetting

- After Waste Removal Phase I, additional sludge and supernate was received throughout 1969 resulting in volumes of ~27,000 gallons sludge and ~510,000 gallons supernate
- Used to store supernate material from Tanks 9, 10, and 13, and eventually reached maximum capacity (303”) again.
- At the conclusion of the supernate transfer to Tank 13 in 1977, waste levels were reduced to ~68.6” or ~240,100 gallons
- Evaporation of the free supernate resulted in a dry tank
- Remained idle until 2024, when water was added at localized points within the tank to aid in the removal of thermowells for future CSMPs
- Following water additions, visual inspections determined that the tank was not rewetted and still considered a dry tank
- Over the years transfers into and out of Tank 14 resulted in 8” (28,000 gallons) of sludge and 37” (129,500 gallons) of salt for a total of 157,000 gallons of solids in Tank 14 at the start of Waste Removal Phase II

[X-ESR-H-01232, DPSPU 77-11-19]

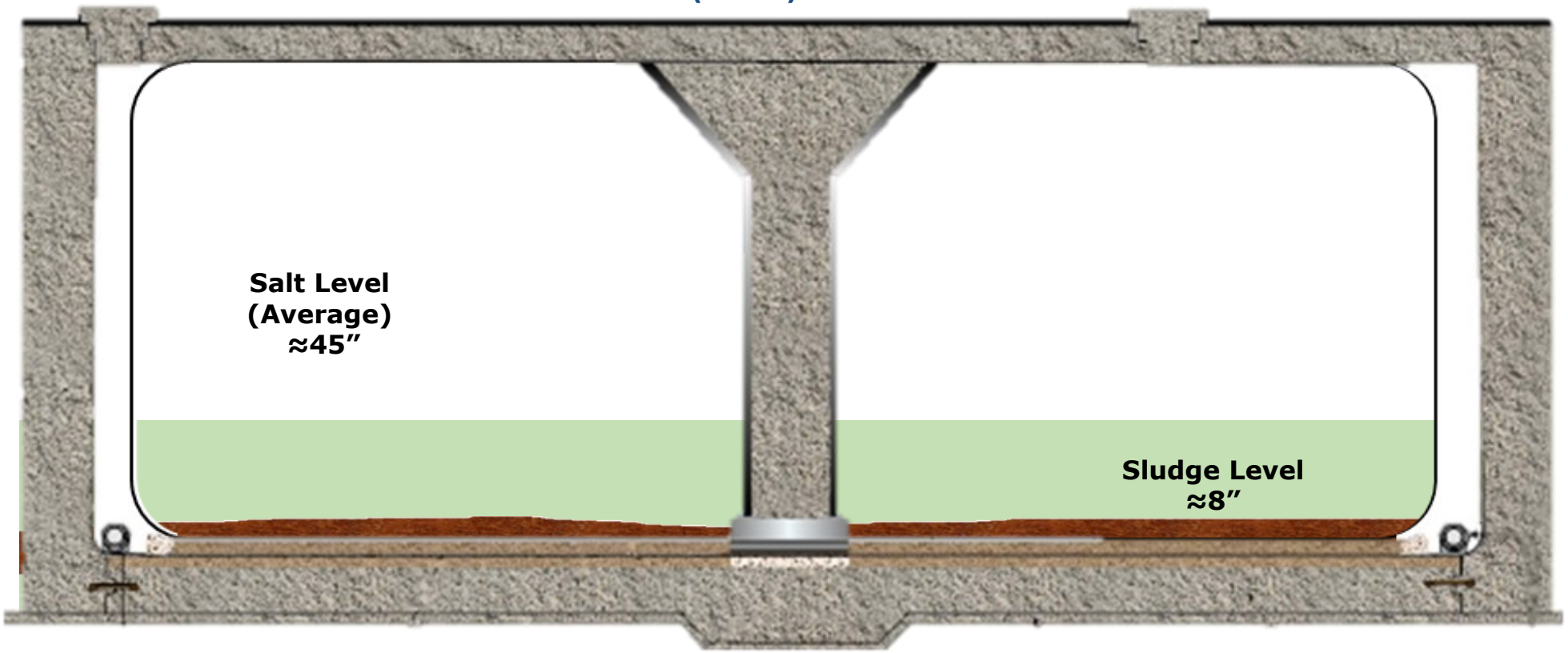
Waste Removal Phase II – Preparations

- **In preparation for future campaigns changes were made to Tank 14 to incorporate lessons learned**
  - *Four CSMPs and one STP were installed*
    - Provide additional mixing power and placement of an CSMP in each quadrant increased effective cleaning radius
    - The STP was tied-in to the Tank 13/14 transfer line
  - *Chemical addition downcomer installed for chemical receipt*
  - *Radar Level Indicator installed to monitor liquid level*
  - *A Contingency Transfer System (CTS) was installed to remove liquids from the annulus pan and transfer back to the primary tank*
  - *Additional alarms and interlocks installed to reduce CSMP failure risk due to blockage of intake screens*
  - *Modifications to address mercury hazards and to protect HEPA filters were installed*
  - *Leak tests were performed to allow for the use of additional cooling coils near the CSMPs to meet temperature requirements*
- **Began Waste Removal Phase II Campaign 1 in August 2025**

Mechanical Sludge Removal I

Tank 14 Before Waste Removal Phase II

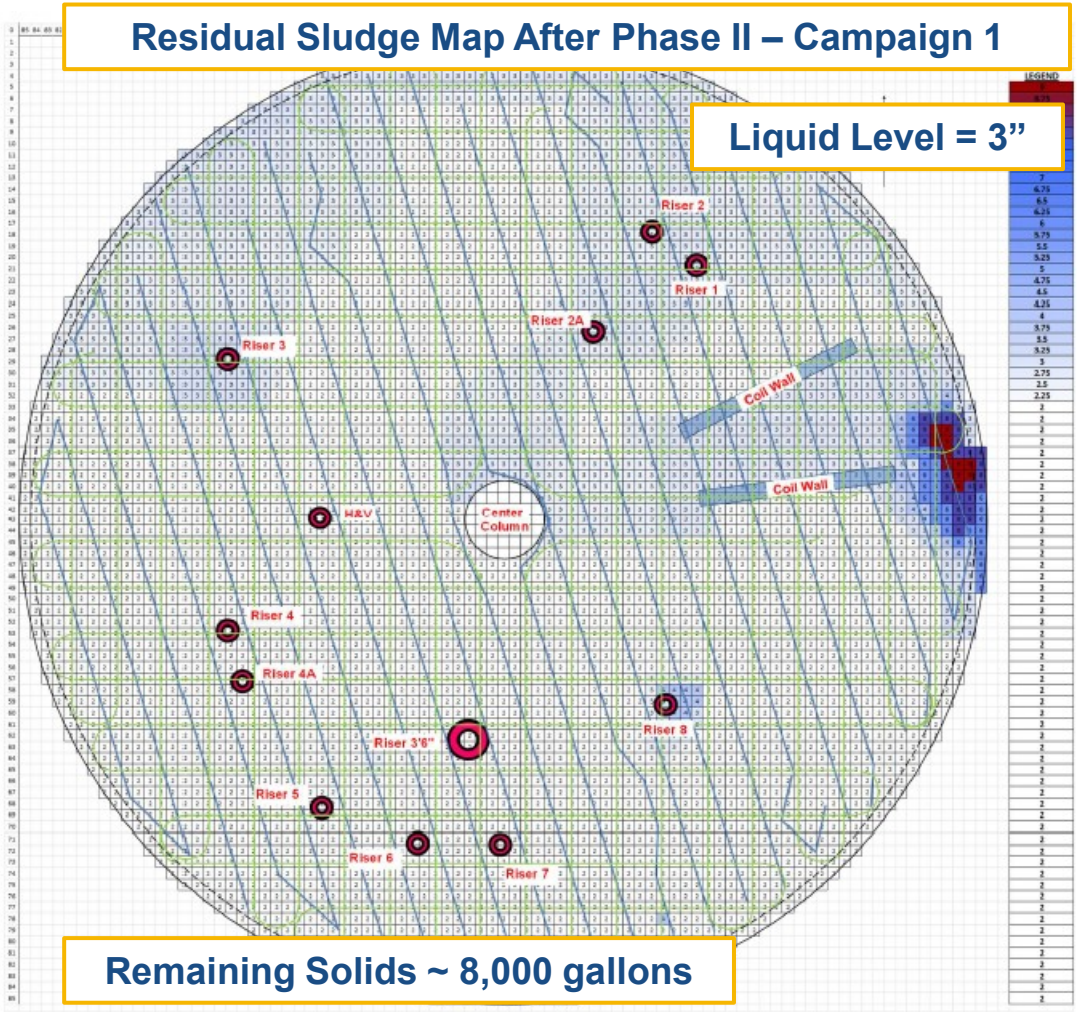
(2025)



[U-ESR-H-00260 Rev. 0]

Waste Removal Phase II – Campaign 1

- Prior to Waste Removal Phase II – Campaign 1, Tank 14 contained ~130,000 gallons of saltcake and ~28,000 gallons of sludge
- Transfer of supernate from Tank 13 to Tank 14 completed on August 12, 2025
- A transfer from Tank 14 to Tank 13 was performed on August 14, 2025, to lower the liquid level in Tank 14 to the intended height
- Four CSMPs operated for 96 hours (4-day mixing run) completed August 19, 2025
- CSMPs were lowered from 51 inches to 31 inches (Riser 1 and 3) and 21 inches (Riser 4A and 8) on August 19, 2025
- Four CSMPs operated for 96 hours (4-day mixing run) completed August 25, 2025
- CSMPs were lowered to 11 inches on August 26, 2025
- Four CSMPs operated for 13-days, mixing completed on September 8, 2025
- Transfer from Tank 14 to Tank 13 completed on September 24, 2025
- The final liquid level was documented as 3 inches (~10,500 gallons)
- The final solids volume was calculated to be ~8,000 gallons



[U-ESR-H-00260 Rev 0, U-ESR-H-00260 Rev. 0-ADD-1, U-ESR-H-00260 Rev. 0-ADD-2, U-ESR-H-00266, Rev. 0]

Waste Removal Phase II – Campaign 1 Summary

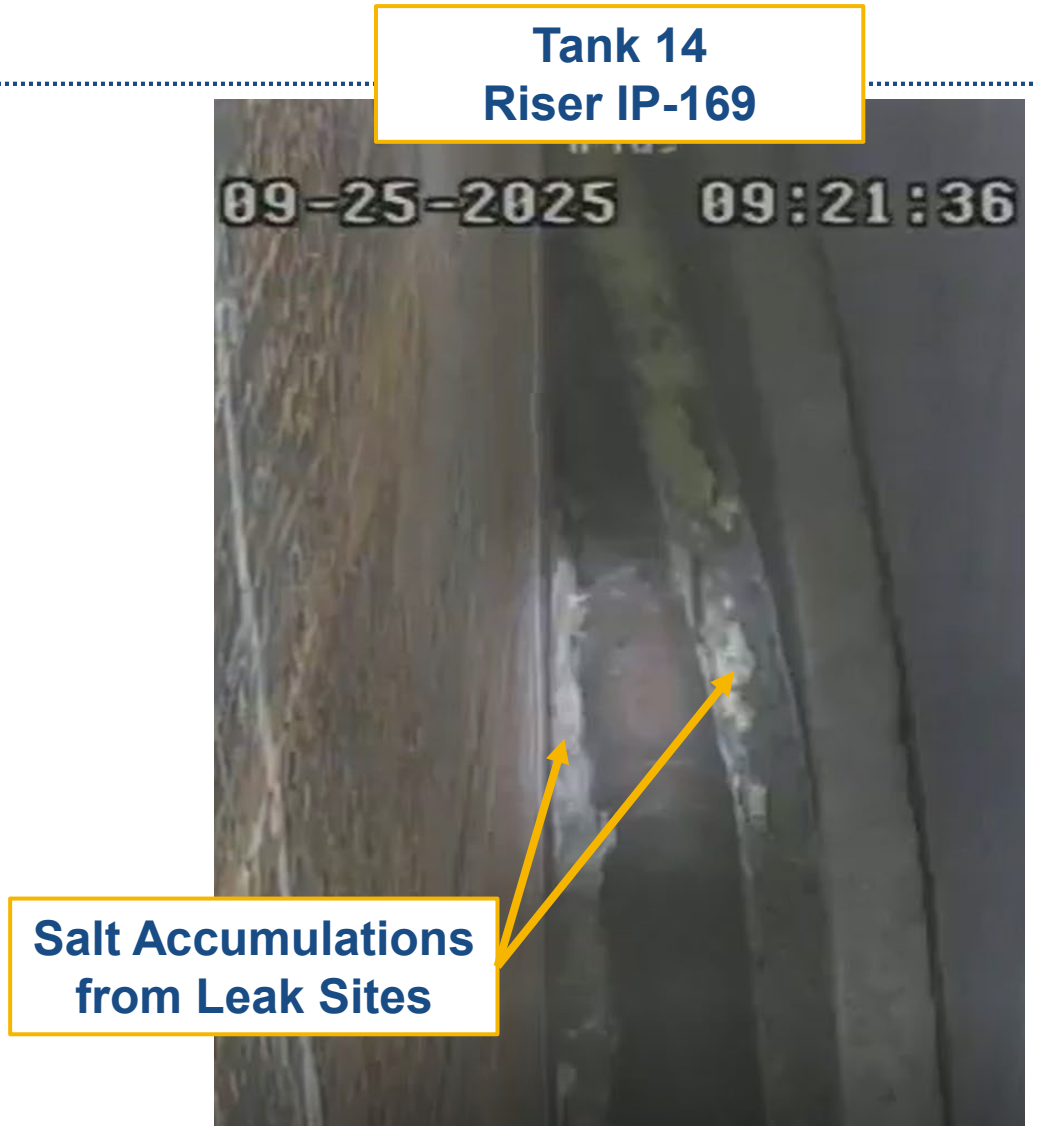
Waste Removal Phase II									
Campaign	Date	Water Added (Kgals)	Tank 13 Supernate Transferred In (Kgals)	Tank 14 Transferred Out (Kgals)	Riser 1 CSMP Elevation (in)	Riser 3 CSMP Elevation (in)	Riser 4A CSMP Elevation (in)	Riser 8 CSMP Elevation (in)	Riser 6 STP Elevation (in)
1	8/9/25 – 8/12/25	107.60	304.85	-	-	-	-	-	-
	8/14/25 – 8/15/25	0.10	-	31.85[1]	-	-	-	-	-
	8/16/25 – 8/19/25	4-Day Mixing Campaign			51	51	51	51	60[2]
	8/19/25	CSMPs Lowered (0.20 Kgal STP flush)			31	31	21	21	60[2]
	8/21/25 – 8/25/25	4-Day Mixing Campaign			31	31	21	21	60[2]
	8/26/25	CSMPs Lowered			11	11	11	11	60[2]
	8/27/25 – 9/8/25	13-Day Mixing Campaign			11	11	11	11	60[2]
	9/20/25 – 9/24/25	0.30	-	521.25	11[3]	11[3]	11[3]	11[3]	0[2]

[1]A transfer was made from Tank 14 to Tank 13 to lower the liquid level in Tank 14 to the intended height of 160 inches. The transfer was a Low Rem Sludge Slurry transfer and lowered the Tank 14 liquid level to the approximate intended height.
[2]The STP was initially installed at 60 inches but was never used at that height. It was lowered (right before the 9/20/25 – 9/24/25 transfer from Tank 14 to Tank 13) to what was thought to be 3 inches; however, after looking in the tank, it was on the bottom (0 inches).
[3]All four CSMPs operated during transfer until the liquid level in Tank 14 reached 35 inches.

[U-ESR-H-00260 Rev. 0, U-ESR-H-00260 Rev. 0-ADD-1, U-ESR-H-00260 Rev. 0-ADD-2]

Tank 14 Annulus Cleaning

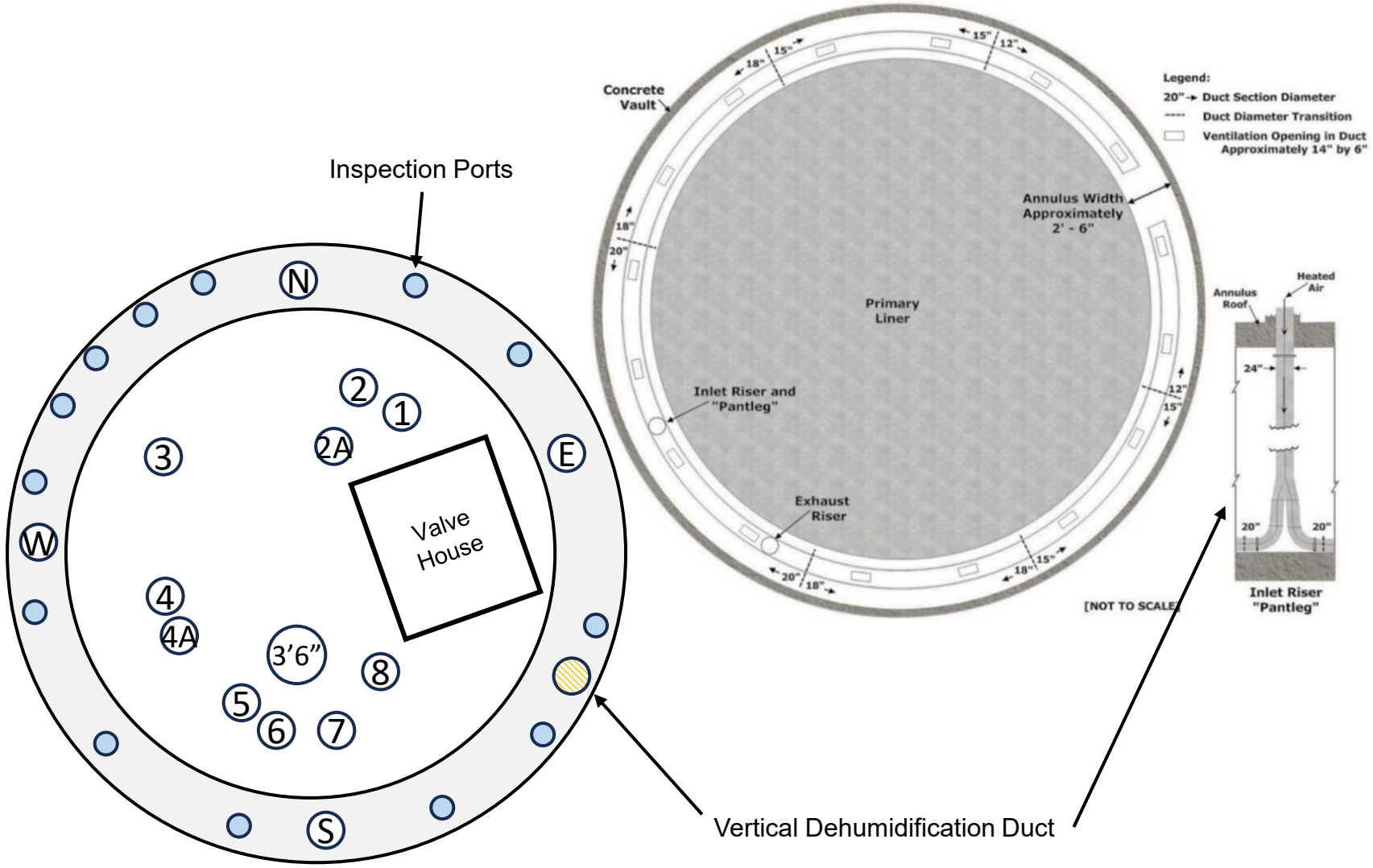
- **To reduce impacts to the overall Liquid Waste System, annulus cleaning occurred between Waste Removal Phase II Campaign 1 and Campaign 2**
  - *Minimized new waste added to the Liquid Waste System by utilizing liquid from the annulus cleaning process to reach liquid levels in the primary tank required to operate CSMPs*
- **Tank 14 Annulus State Before Cleaning**
  - *Leaks into the annulus discovered in several instances between May 1959 through 1974, and in October 2012.*
  - *In addition to the original four annulus risers, other access openings (13 additional openings) have been core-drilled into the annulus)*
  - *To date, 50 leak sites have been identified*



[DPSPU 77-11-19, C-ESR-G-00003_R25, SRMC-STI-2024-00076]

Tank 14 Riser Access

- **Primary access**
  - *Ten 24-inch risers*
  - *One 42-inch central riser*
- **Annulus access**
  - *Four 24-inch risers*
  - *Tank 14 has an additional twelve 6-inch risers added as inspection ports*



Tank 14 Annulus Before Cleaning*

***Pictures of Tank 14 annulus taken in March 2024**

East Riser Facing South



East Riser Facing North



IP 65 Facing South



IP 65 Facing North



Tank 14 Annulus Before Cleaning*

***Pictures of Tank 14 annulus taken in February & March 2024**

North Riser Facing East



North Riser Facing West



IP 259 Facing East

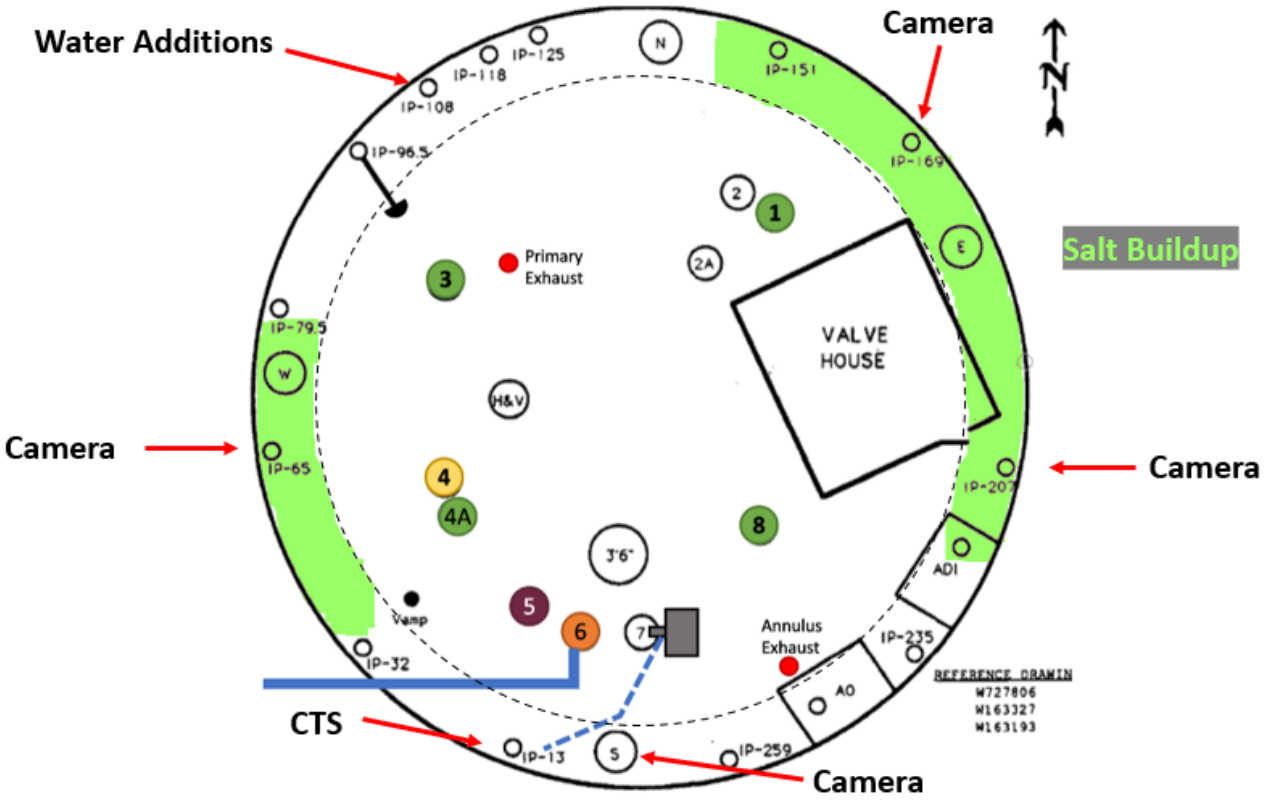


IP 259 Facing West



Annulus Cleaning

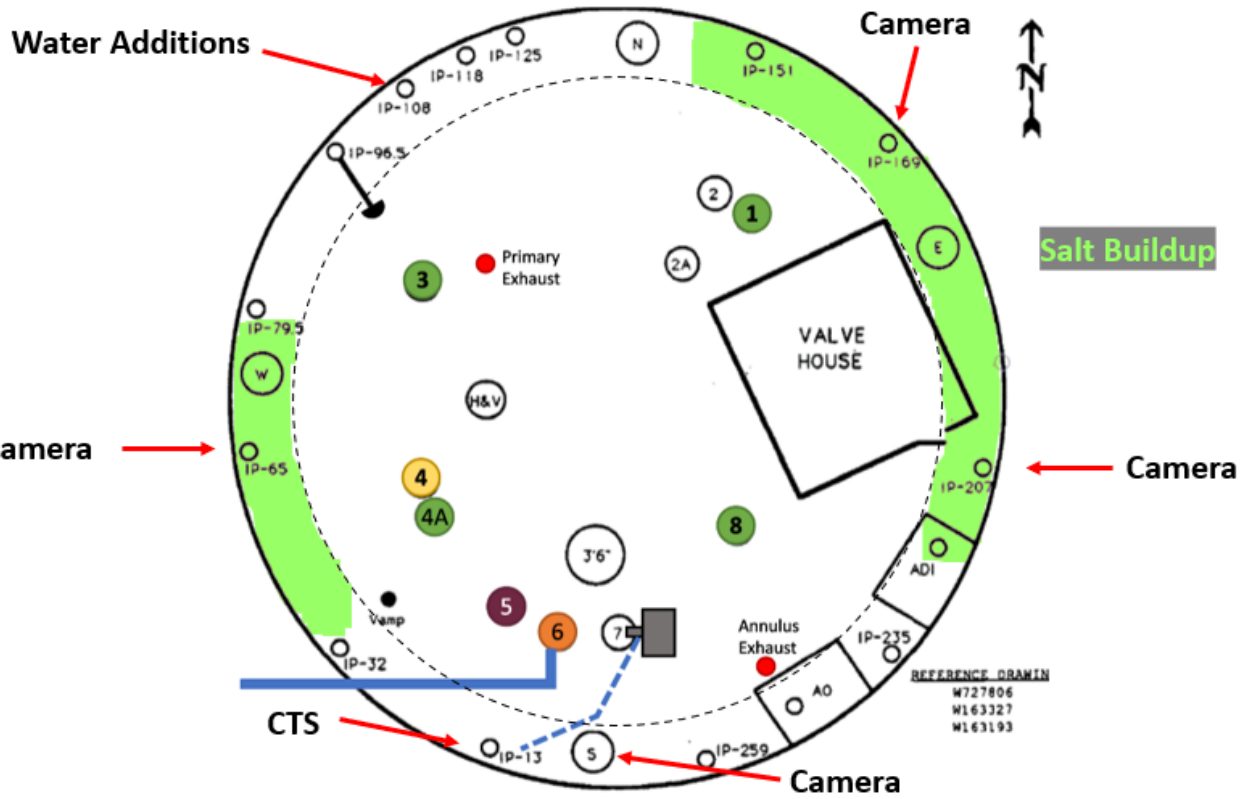
- **Batch #1**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
    - Salt in annulus pan submerged
  - *24-hour soak period*
- **Batch #2**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *24-hour soak period*
- **Batch #3**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *24-hour soak period*
- **Batch #4**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *30-hour soak period with a partial A-P transfer (1.5-hour duration) 12 hours into campaign*



[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning

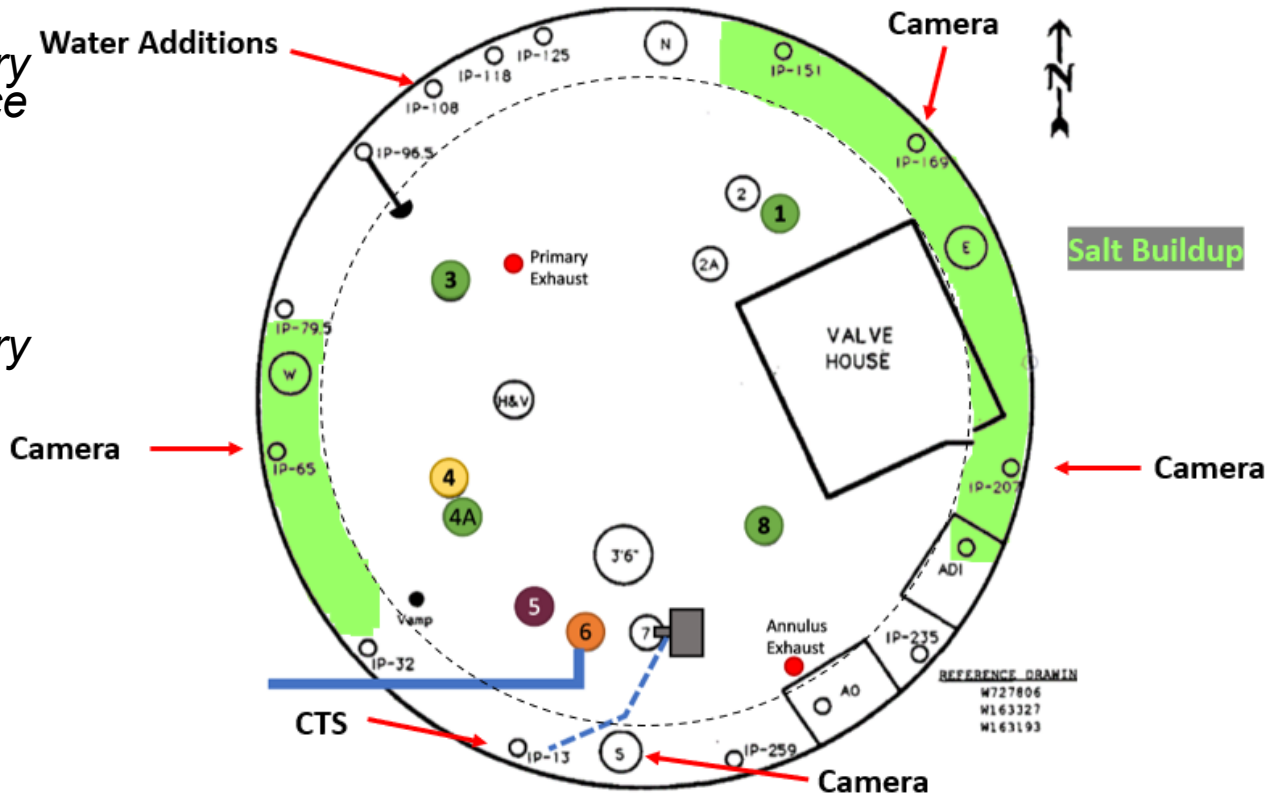
- **Batch #5**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *48-hour soak period with a partial A-P transfer 24 hours into the campaign (9-minute duration)*
  - *Another partial transfer occurred 35 hours into the campaign (1-hour duration)*
- **Batch #6**
  - *~4,000 gallons of water added into the annulus via water addition downcomer*
  - *96-hour soak period with a partial A-P transfer 48 hours into the campaign*
  - *CTS suction plugged by floating debris/salt, placing too much strain on the pump to transport the liquid from the annulus to the primary*
  - *Flush lance used in South Riser to disperse debris away from CTS suction*
- **Batch #7**
  - *Water addition downcomer moved from IP-108 to IP-151*
  - *~4,500 gallons of water added into the annulus via water addition downcomer*
  - *96-hour soak period followed by a partial A-P transfer*
  - *Additional 168-hour soak period prior to final A-P transfer*



[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning

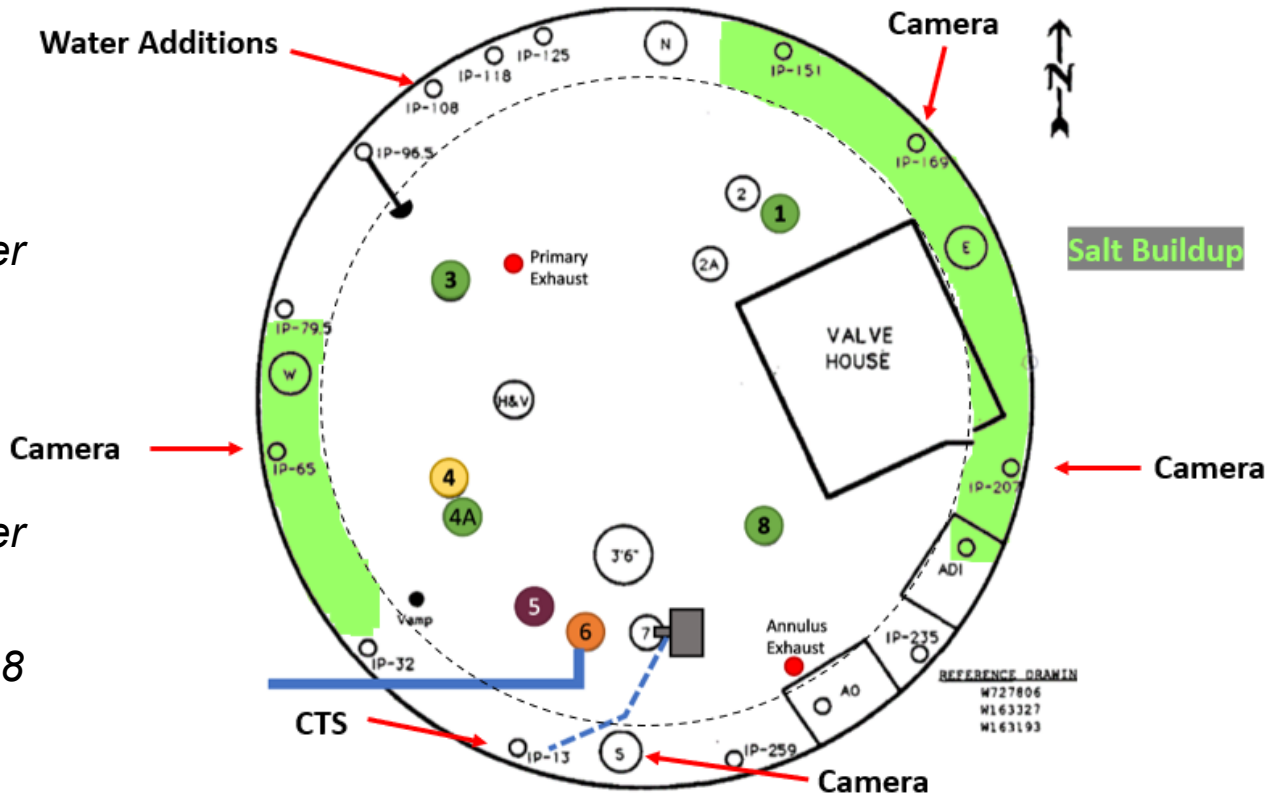
- **Batch #8**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *192-hour soak period with a partial A-P transfer every 48 hours (multiple partial transfers intended to induce liquid movement)*
- **Batch #9**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *192-hour soak period with a partial A-P transfer every 48 hours*
- **Batch #10**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *48-hour soak period followed by A-P transfer*
  - *Additional pump out required on December 8, 2025, to support pulling solids samples for SRNL and SWPF.*
- **Batch #11**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *192-hour soak period with a partial A-P transfer every 48 hours*



[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning

- **Batch #12**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *Water addition was heated to facilitate additional dissolution of salt.*
  - *24-hour soak period followed by A-P transfer*
- **Batch #13**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *Water addition was heated; results inconclusive on effectiveness*
  - *48-hour soak period followed by A-P transfer*
- **Batch #14**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *Water added at ambient temperature*
  - *192-hour soak period with a partial A-P transfer every 48 hours*
- **Batch #15**
  - *~5,100 gallons of water added into the annulus via water addition downcomer*
  - *192-hour soak period with a partial A-P transfer every 48 hours*



[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
							15.0	7.0	Initial Conditions
1	10/15/25 – 10/16/25	~ 5.1	24	-	-	4.0	12.5	5.8	Installed downcomer in Riser 5.
2	10/16/25 – 10/17/25	~ 5.1	24	-	-	3.2	12.0	5.6	Salt dissolution was much less noticeable compared to Campaign 1.
3	10/17/25 – 10/18/25	~ 5.1	24	-	-	5.6	11.5	5.4	Minimal salt dissolution was observed.
4	10/19/25 – 10/20/25	~ 5.1	12	0.4	18	3.1	11.0	5.1	Partial A-P transfer had a duration of 1.5 hours. Minimal salt dissolution was observed.
5	10/21/25 – 10/23/25	~ 5.1	24 / 35	0.7	24	2.8	10.0	4.7	Partial A-P transfer occurred 24 hours into the campaign, with a duration of 9 minutes. An additional partial transfer occurred 35 hours into the campaign, with a duration of 1 hour. While still minimal, salt dissolution did improve compared to campaigns with shorter time durations.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
6	10/24/25 – 10/29/25	~ 4.0	48	1.2	48	2.2	9.5	4.4	CTS suction plugged by floating debris/salt, placing too much strain on the pump to transport the liquid from the annulus to the primary. Flush lance was used in the South Riser to disperse debris away from the CTS suction.
7	10/30/25 – 11/11/25	~ 4.5	96	0.4	168	2.8	9.25	4.3	Water addition downcomer moved from IP-108 to IP-151 to improve salt dissolution in that area. Raised CTS pump to drain sleeve. Lowered CTS pump after partial transfer.
8	11/12/25 – 11/20/25	~ 5.1	48	1.4 / 1.4 / 1.4	144 (partial transfer every 48 hours)	1.2	8.75	4.1	Multiple partial transfers intended to induce liquid movement during the campaign.
9	11/21/25 – 11/29/25	~ 5.1	48	2.0 / 3.0 / 0.9	144 (partial transfer every 48 hours)	2.0	8.0	3.7	
10	12/05/25 – 12/07/25	~ 5.1	48	-	-	3.3	7.75	3.6	Support pulling additional solids samples for SRNL and SWPF. Additional pump out needed 12/08/25.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Annulus Cleaning Campaigns Summary

Tank 14 Annulus Cleaning									
Campaign	Date (water add to final pump out)	Water Added (Kgals)	Initial Soak Time (hrs)	Partial Transfer Estimated Volume (Kgals)	Additional Soak Time (hrs)	Final Transfer Estimated Volume (Kgals)	Estimated Average Salt Height (in)	Solid Salt Volume Estimation (Kgals)	Notes
11	12/10/25 – 12/18/25	~ 5.1	48	1.3 / 0.8 / 1.1	144 (with partial transfer every 48 hours)	2.8	7.75[1]	3.6[1]	
12	12/19/25 – 12/20/25	~ 5.1	24	-	-	4.2	7.75[1]	3.6[1]	Water addition was heated to facilitate additional dissolution of salt.
13	12/20/25 – 12/22/25	~ 5.1	48	-	-	4.2	7.5	3.5	Results were inconclusive whether the heated water was effective in dissolving salt.
14	12/22/2025 – 12/30/25	~ 5.1	48	1.7 / 2.1 / 0.6	144 (with partial transfer every 48 hours)	5.0	7.0	3.3	Water added was ambient temperature.
15	12/30/25 – 01/07/26	~ 5.1	48	3.0 / 0.8 / 0.8	144 (with partial transfer every 48 hours)	0.2	7.0	3.3	3.3 Kgals based on liquid level, additional inspection indicated an additional 400 gallons above liquid for 3.7 Kgals total.

[1]Could not estimate salt volume due to liquid level being higher than the salt.

[U-ESR-H-00260 Rev. 0-ADD-3, U-ESR-H-00260 Rev. 0-ADD-4, U-ESR-H-00260 Rev. 0-ADD-5]

Tank 14 Annulus Cleaning

East Before/After





IP-65 Before/After









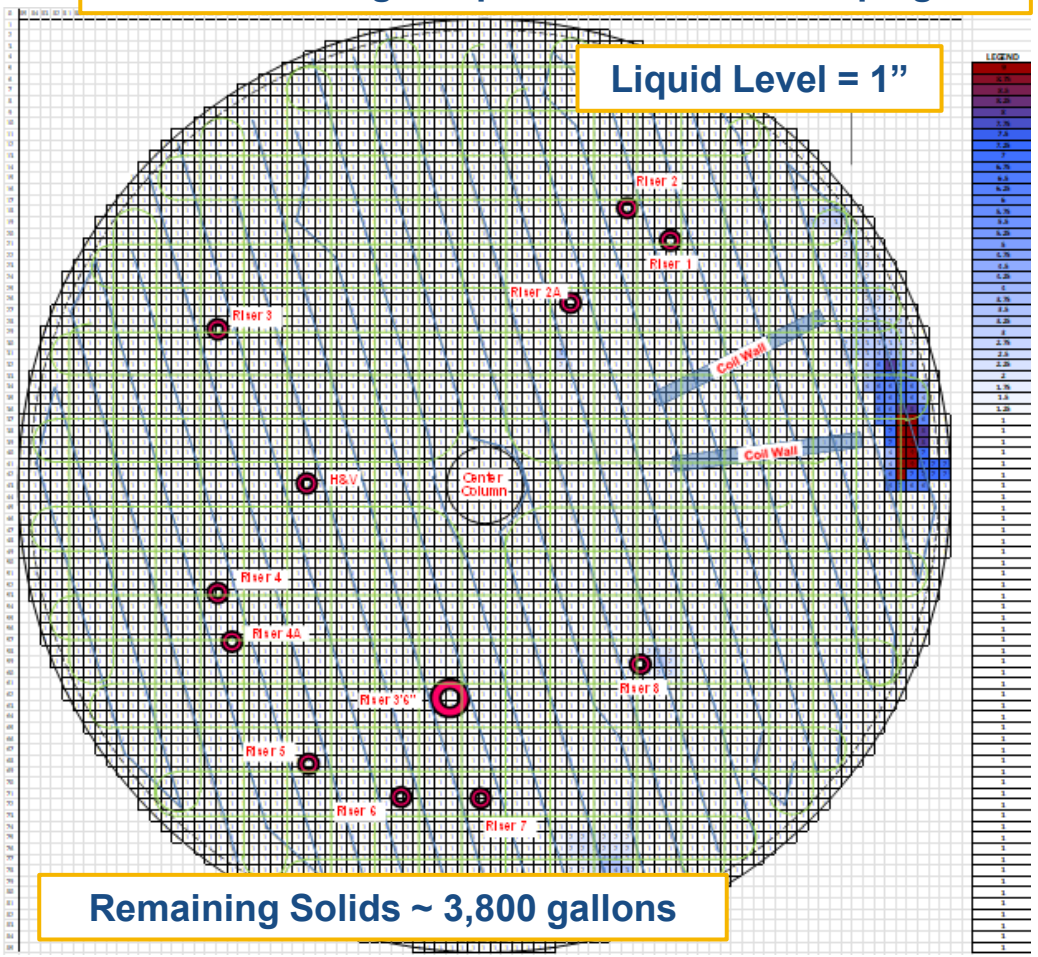
Tank 14 Annulus Cleaning Summary

- **Fifteen batches performed after Phase II Campaign 1**
  - *Each batch consisted of a water addition of ~5,000 gallons, followed by a soaking period before being pumped from the annulus to the primary tank*
  - *Batches were varied to identify most productive strategy*
    - Short soak times (as short as 24 hours)
    - Long soak times (as long as 11 days)
    - Partial transfers (to remove potential boundary layers)
    - Heated water
- **Annulus camera inspections showed no significant change following final batches and annulus cleaning considered complete after Batch 15 due to lack of progress and analysis results of solid sample obtained after campaign 10**
- **Residual annulus solids estimated to be approximately ~3,700 gallons (conservatively assumes volume below liquid level is all solids)**

Waste Removal Phase II – Campaign 2

- Prior to Waste Removal Phase II– Campaign 2, Tank 14 contained a liquid level of 24 inches (~84,000 gallons) after annulus cleaning
- Total water additions of 474,250 gallons was completed from January 8, 2026, to January 11, 2026
- Four CSMPs operated for 96 hours (4-day mixing run) completed January 16, 2026
- On January 17, 2026, the transfer pump failed while attempting a transfer from Tank 14 to Tank 13
- Four CSMPs continued operated for an additional 48 hours completed August January 20, 2026, due to STP failure
- The STP was replaced, mixing restarted and a Transfer from Tank 14 to Tank 13 occurred between February 4, 2026 and February 9, 2026
- The final liquid level was documented as 1-inch (~3,500 gallons)
- The final solids volume was calculated to be ~3,800 gallons

Residual Sludge Map After Phase II– Campaign 2



[U-ESR-H-00271 Rev. 0]

Waste Removal Phase II – Campaign 2 Summary

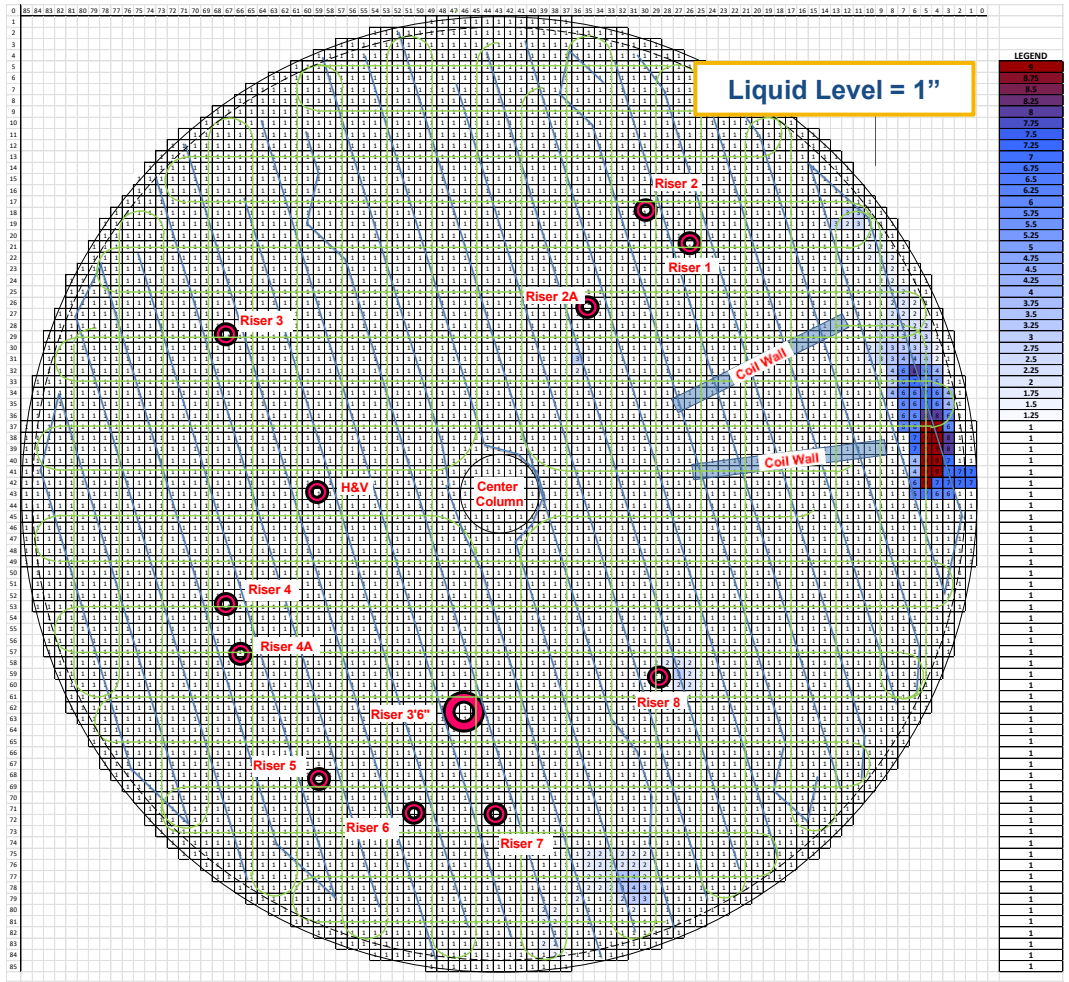
Waste Removal Phase II									
Campaign	Date	Water Added (Kgals)	Tank 13 Supernate Transferred In (Kgals)	Tank 14 Transferred Out (Kgals)	Riser 1 CSMP Elevation (in)	Riser 3 CSMP Elevation (in)	Riser 4A CSMP Elevation (in)	Riser 8 CSMP Elevation (in)	Riser 6 STP Elevation (in)
2	1/8/26 – 1/11/26	474.25	-	-	-	-	-	-	-
	1/12/26 – 1/16/26	4-Day Mixing Campaign			11	11	11	11	0[2]
	1/18/26 – 1/20/26	Continued Mixing Campaign Due to Transfer Pump Failure[1]			11	11	11	11	0[2]
	1/21/26	0.50	-	-	11	11	11	11	0[2]
	1/26/26	0.08	-	-	11	11	11	11	0[2]
	2/4/26 – 2/9/26	0.30	-	551.0	11[3]	11[3]	11[3]	11[3]	0[2]

[1]The STP was started for the Tank 14 to Tank 13 transfer on 1/17/26 and did not appear to be running as normal. The pump failed and was replaced on 1/28/26.
[2]The STP was on the bottom of the tank (0 inches).
[3]All four CSMPs operated during transfer until the liquid level in Tank 14 reached 35 inches.

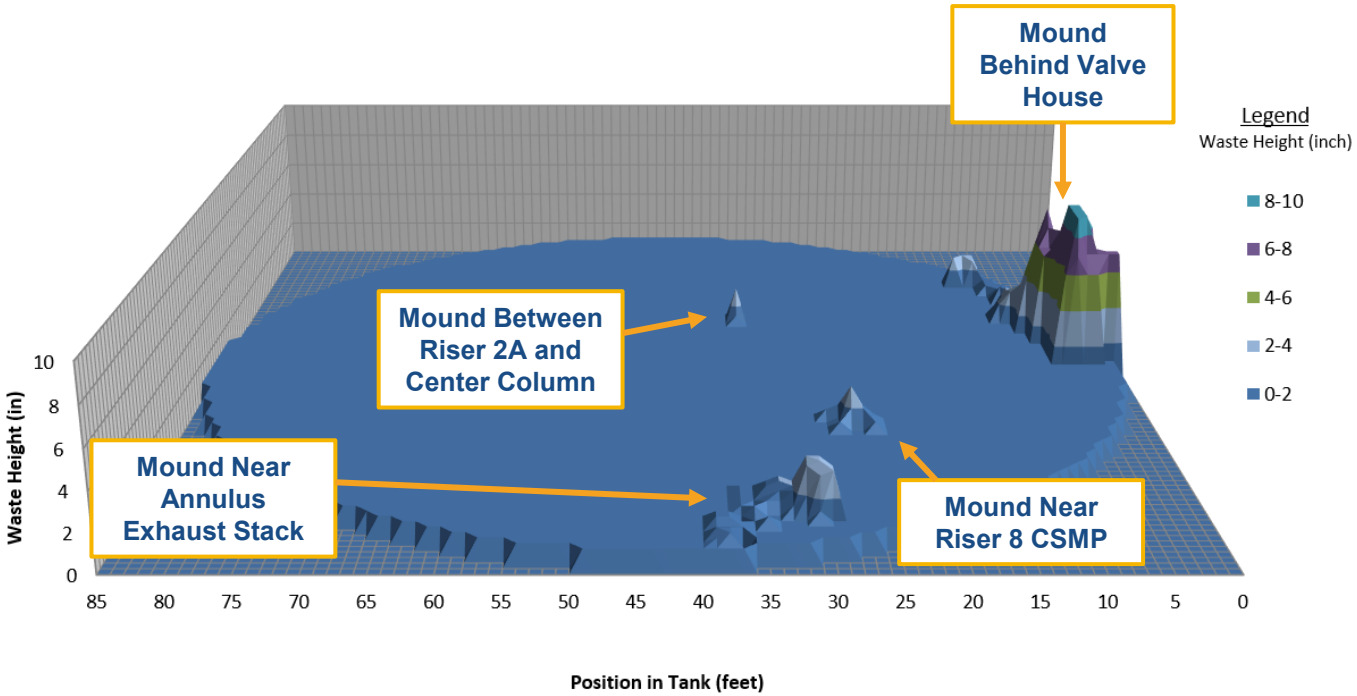
[U-ESR-H-00271, Rev. 0]

Current Status of Tank 14 Primary Tank

Residual Solids Map Plan View



Residual Solids 3-D Model (height exaggerated to show detail)



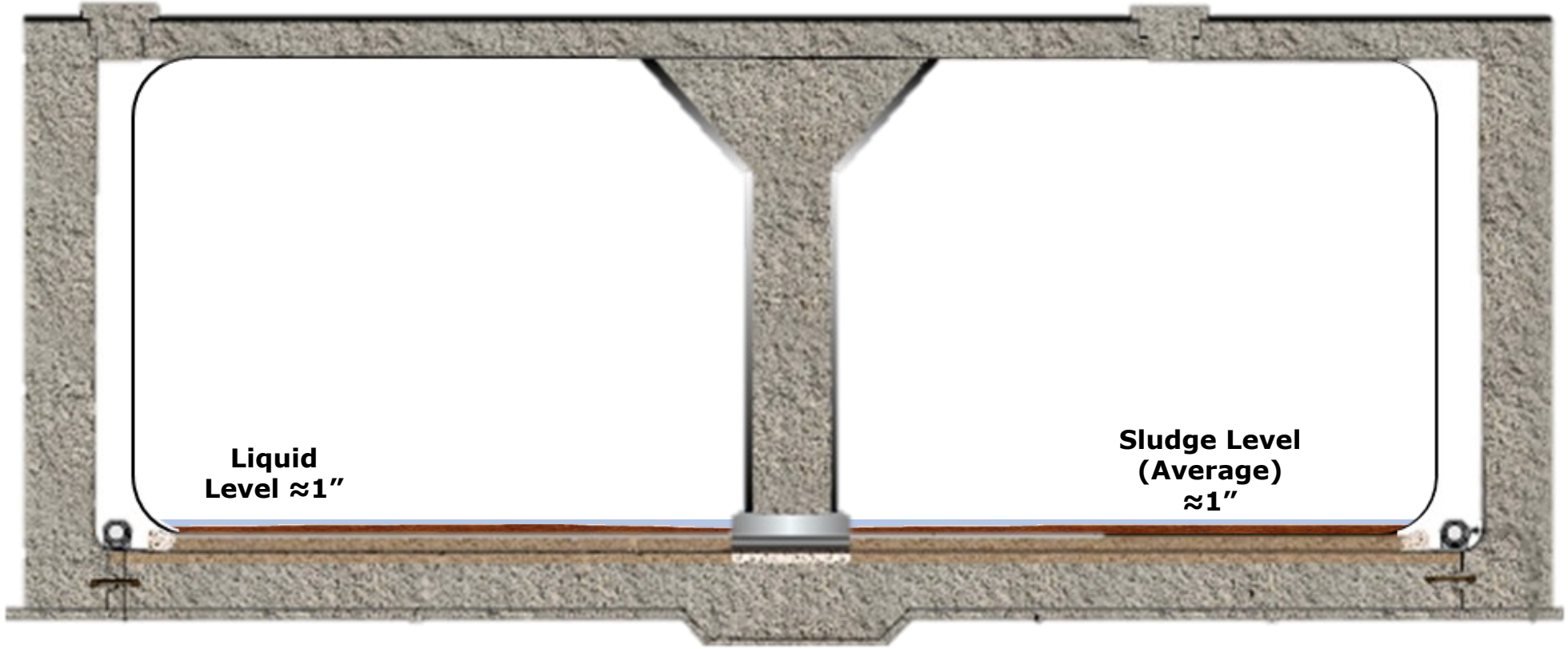
Remaining Solids < 3.8 Kgal

[U-ESR-H-00271, Rev. 0]

Waste Removal Phase I

Tank 14 After Waste Removal Phase II

(2026)



[U-ESR-H-00271, Rev. 0]

Current Status of Tank 14 – From Drone Inspection

North



North-Center



Current Status of Tank 14 – From Drone Inspection

Northwest Facing North



Northwest



Current Status of Tank 14 – From Drone Inspection

Northeast-East



East



Current Status of Tank 14 – From Drone Inspection

East Facing West



East Facing South



Current Status of Tank 14 – From Drone Inspection

Riser 1 CSMP



Riser 3 Facing East



Current Status of Tank 14 – From Drone Inspection

Southeast



Southeast Riser 8



Current Status of Tank 14 – From Drone Inspection

South

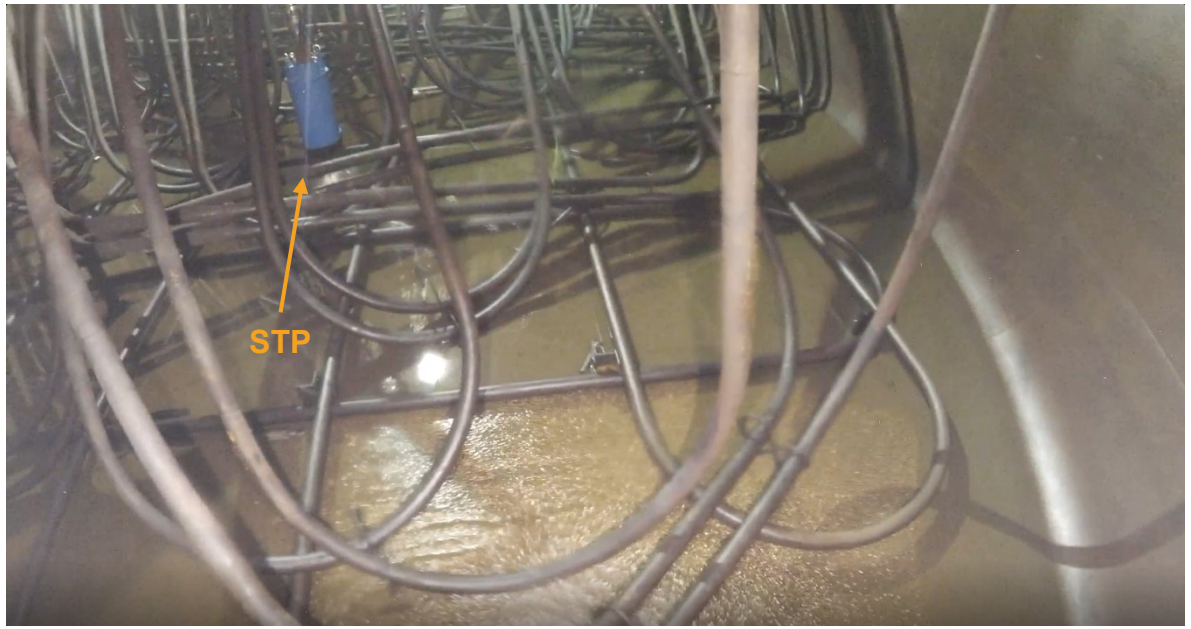


South Wall



Current Status of Tank 14 – From Drone Inspection

Southwest Facing South



Southwest

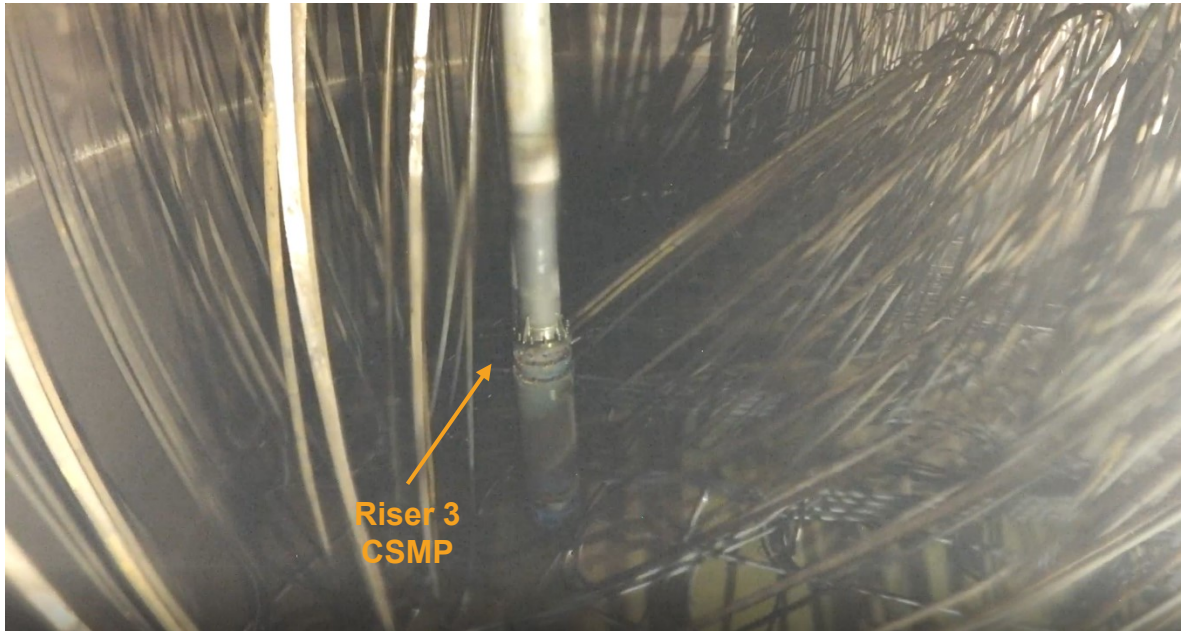


Current Status of Tank 14 – From Drone Inspection

West

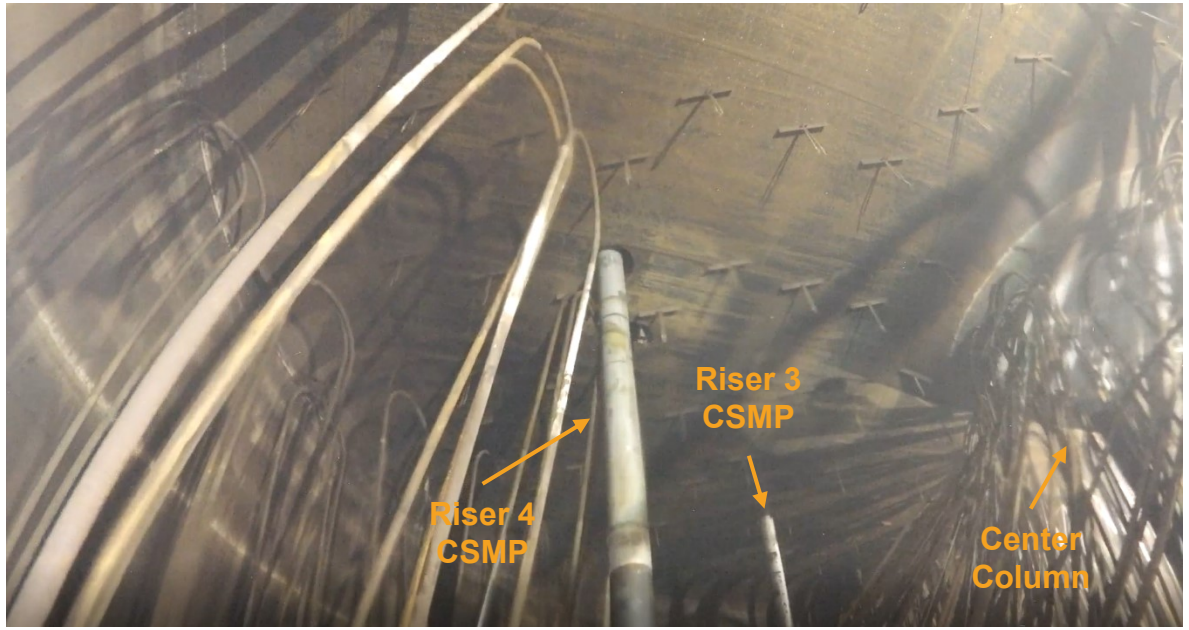


West facing Northwest



Current Status of Tank 14 – From Drone Inspection

Roof from Southwest

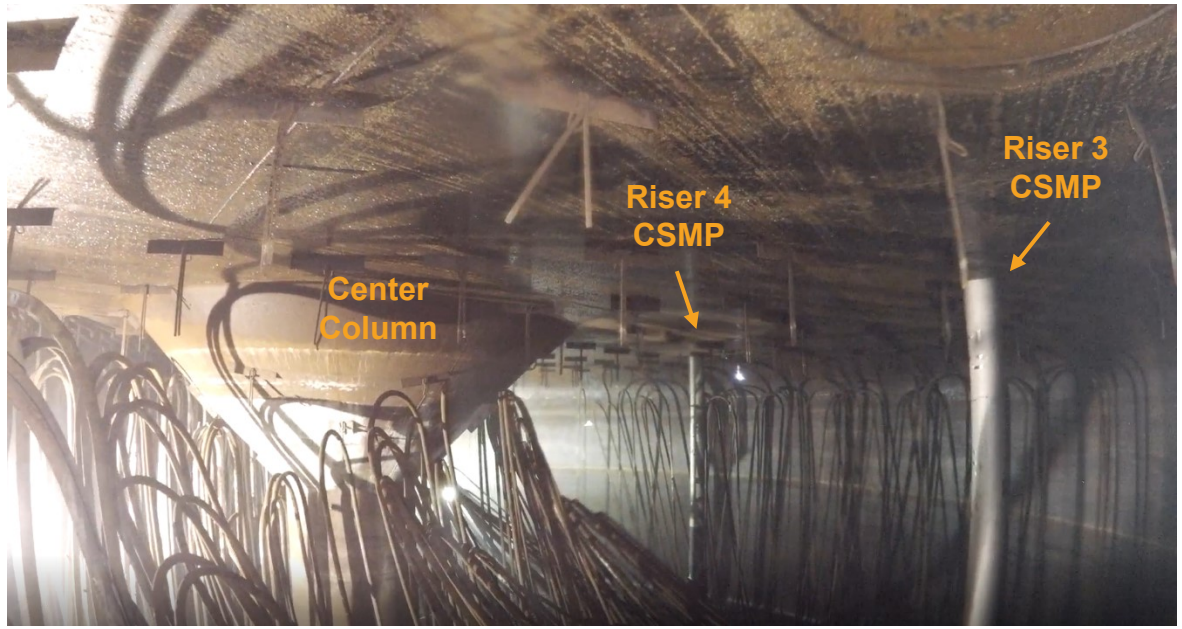


Roof from North



Current Status of Tank 14 – From Drone Inspection

Roof from North Facing Southwest



Mound Between Riser 2A and Center Column



Current Status of Tank 14 – From Drone Inspection

Mound Behind Valve House Facing South

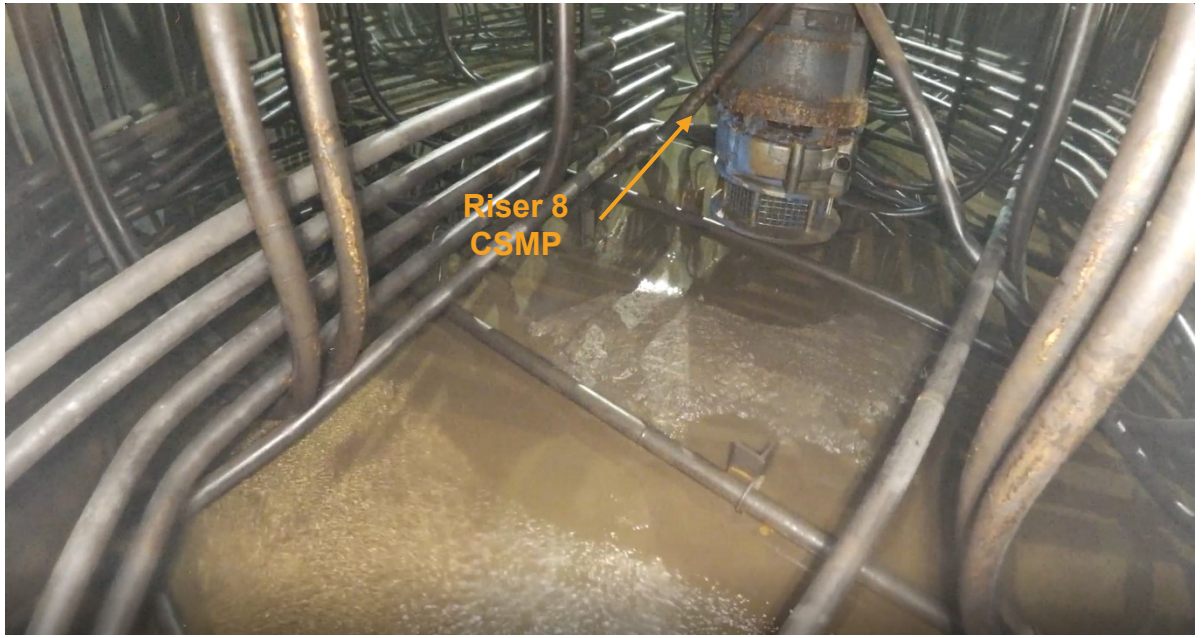


Mound Behind Valve House Facing North



Current Status of Tank 14 – From Drone Inspection

Mound Near Riser 8 CSMP



Mound Near Annulus Exhaust Stack Facing East



Current Status of Tank 14 – From Drone Inspection

Mound Near Annulus Exhaust Stack Facing South Wall



East from Riser 3



Current Status of Tank 14 Annulus

East Riser





Current Status of Tank 14 Annulus

East Riser Facing South





Current Status of Tank 14 Annulus

IP-207 Facing East



South Riser



Current Status of Tank 14 Annulus

South Riser





Current Status of Tank 14 Annulus

South Riser Facing East



IP-65 Aerial View



Current Status of Tank 14 Annulus

IP-65 Facing South





Current Status of Tank 14 Annulus

IP-65 Facing North





Current Status of Tank 14 Annulus

Material in Ventilation Duct







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