

Liquid Waste System Plan Revision 18



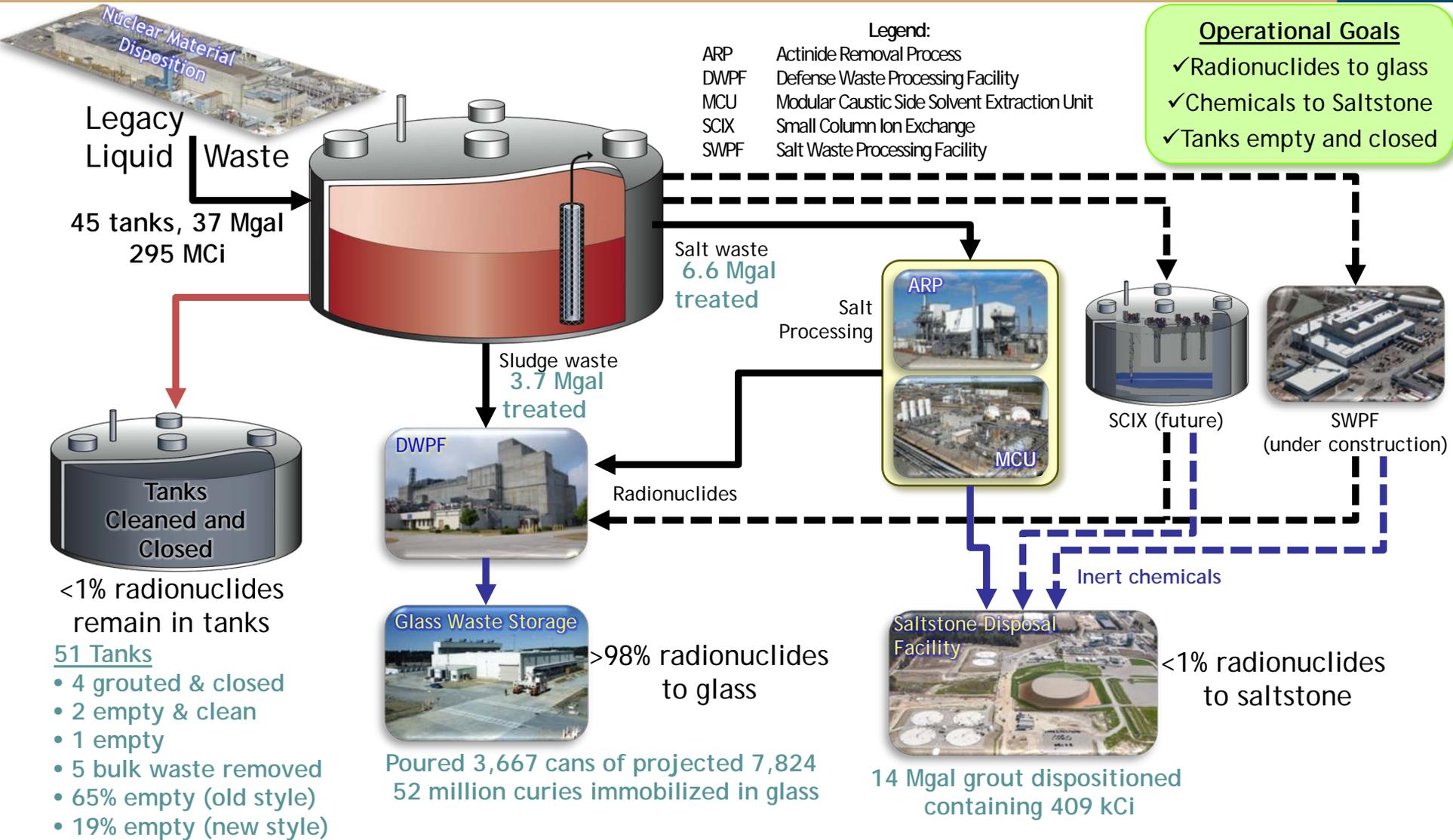
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July 22, 2013

- Fulfill Savannah River Site Citizens Advisory Board request for briefing on Revision 18 of the Liquid Waste System Plan

- Liquid Waste System Overview/Status
- Rev 17 Review
- Rev 18 Inputs & Assumptions
- Rev 18 Results
- Summary

We do the right thing.



We do the right thing.

- Continued record setting Performance at ARP/MCU
 - 1/11/13 Achieved Treatment of 3 Million gallons of salt waste through the Salt Disposition Process (SDP) since 2008
 - 3/5/13 Achieved new daily processing record of over 15,900 gallons
 - 3/12/13 Achieved a new seven-day weekly processing record of over 83,500 gallons
- Completed major facility outage ahead of schedule and resumed operations
 - Extends life of ARP/MCU
 - Increases reliability and attainment of ARP/MCU and Saltstone
- Positions facilities for increased salt processing rate



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- Record setting fiscal year - 275 canisters (338 canisters 12 month rolling)
- Highest historical production month - 37 in December 2011
- Nine consecutive months with >20 canisters
- Sludge chemistry challenges impacted year-end performance
- Transitioned processing to Sludge Batch 8
- Melter 4 refractory installation complete



System Plan Rev. 17 assumptions were aligned to meet the Federal Facility Agreements for waste removal and tank closure commitments and the Site Treatment Plan commitment for completion of waste processing

- Funding Target \$665M (excluding SWPF)
- ARP/MCU
 - Shutdown prior to the startup of SWPF allowing for SWPF tie-ins
 - Process~1.1 Mgal/yr in FY13 and FY14
- Salt Waste Processing Facility (SWPF) startup October 2014
 - Analyzed sensitivity case w/ SWPF start-up October 2015
- Small Column Ion Exchange (SCIX) startup September 2018

| Key Milestone | Rev. 17 | FFA/STP Commitment |
|---|---------|--------------------|
| Date when all Type I, II, and IV tanks are closed | 2022 | 2022 |
| Bulk Sludge processing complete | 2025 | 2028 |
| Bulk Salt Processing Complete | 2025 | 2028 |
| Heel Processing Complete | 2026 | 2028 |

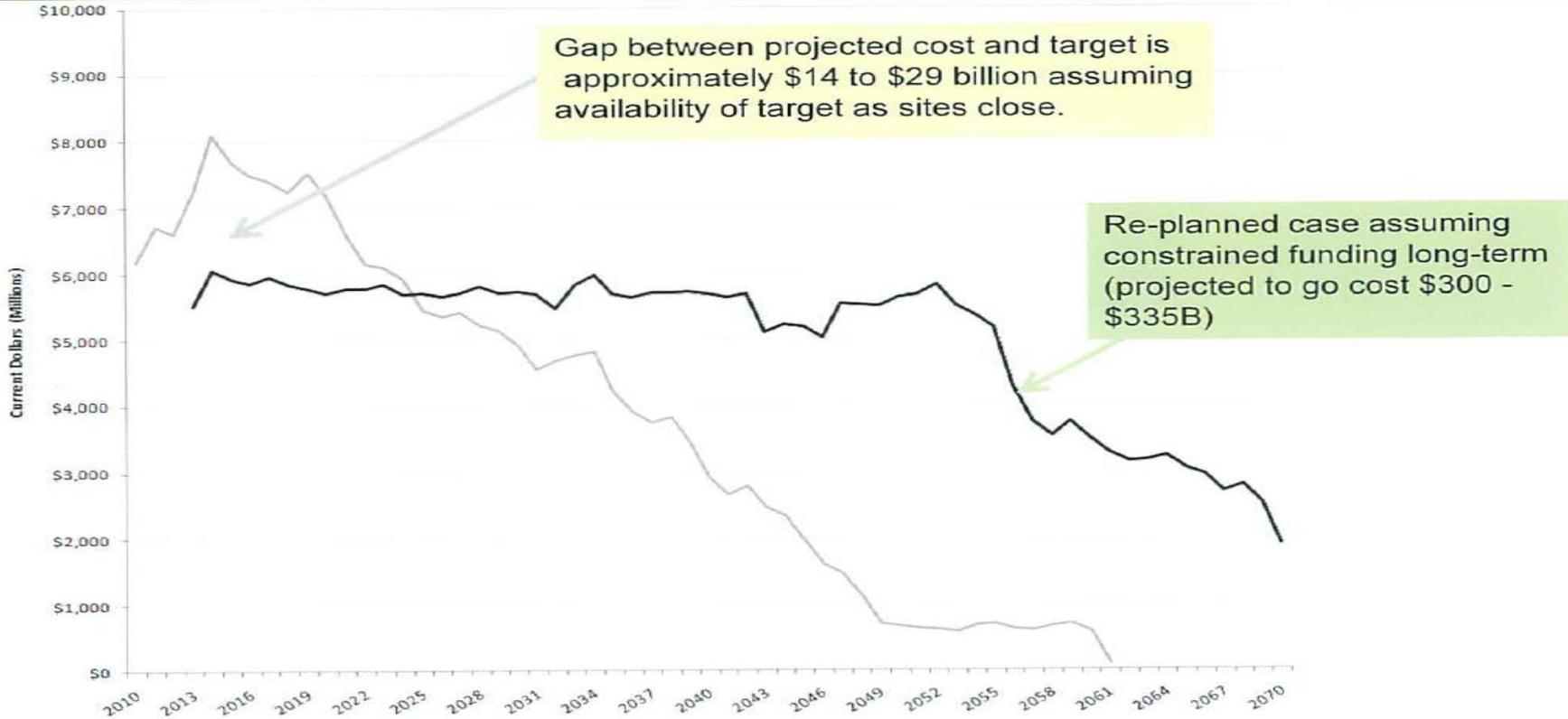
Regulatory
Commitments
Met
Just-in-Time



- Changes are driven by:
 - Advances in Technology
 - Change in Sequencing
 - Acceleration Opportunities
 - Cost Savings Opportunities
 - Funding Adjustments

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Aligning Program Performance with Anticipated Funding Targets Will Significantly Impact Existing Priorities and Compliance Agreements



EM Environmental Management

safety ♦ performance ♦ cleanup ♦ closure

www.em.doe.gov

Liquid Waste Priorities

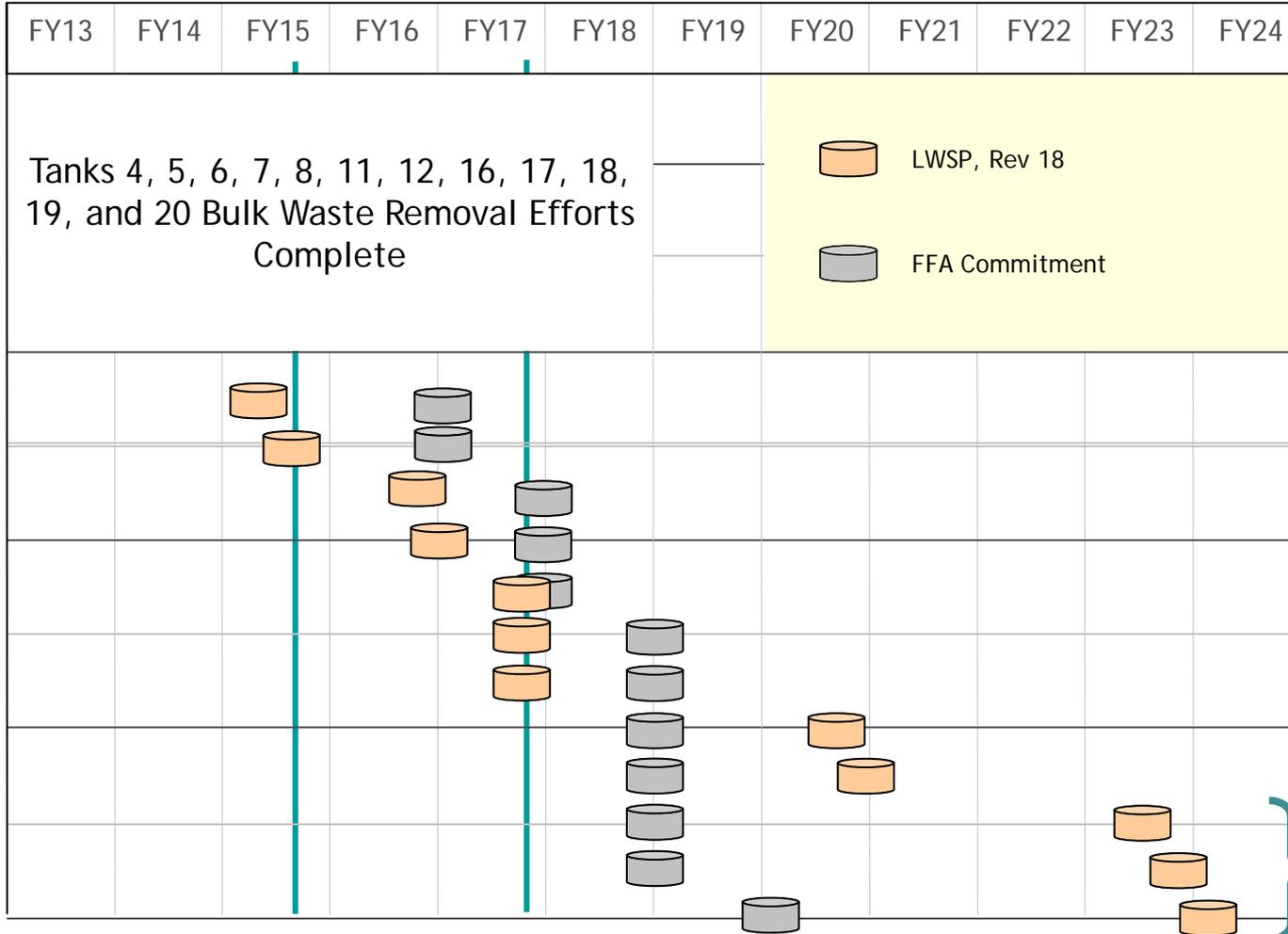
1. Safe Storage
2. Hazard Elimination & Risk Reduction (including H-Canyon Support)
3. Tank Grouting & Facility Flushes

Resulting Behaviors

1. Maximize Salt Processing
2. Continue Sludge Processing
3. Tank Cleaning & Grouting as resources allow
(acknowledge and agree that bulk waste removal eliminates >95% of the hazard)

- Funding Target = \$687M (excluding SWPF)
- SWPF startup October 2018 (base case)
 - Analyzed a sensitivity case w/ SWPF startup in October 2023
- ARP/MCU per accelerated plan
- DWPF produces 275 canisters per year
- SCIX deployed as funding and feed capability can support - as early FY16
- Additional Canister Storage Available December 2016
- SDUs 3 & 5 will be available in Oct 2013
- SDU 6 will be available July 2015

We do the right thing.

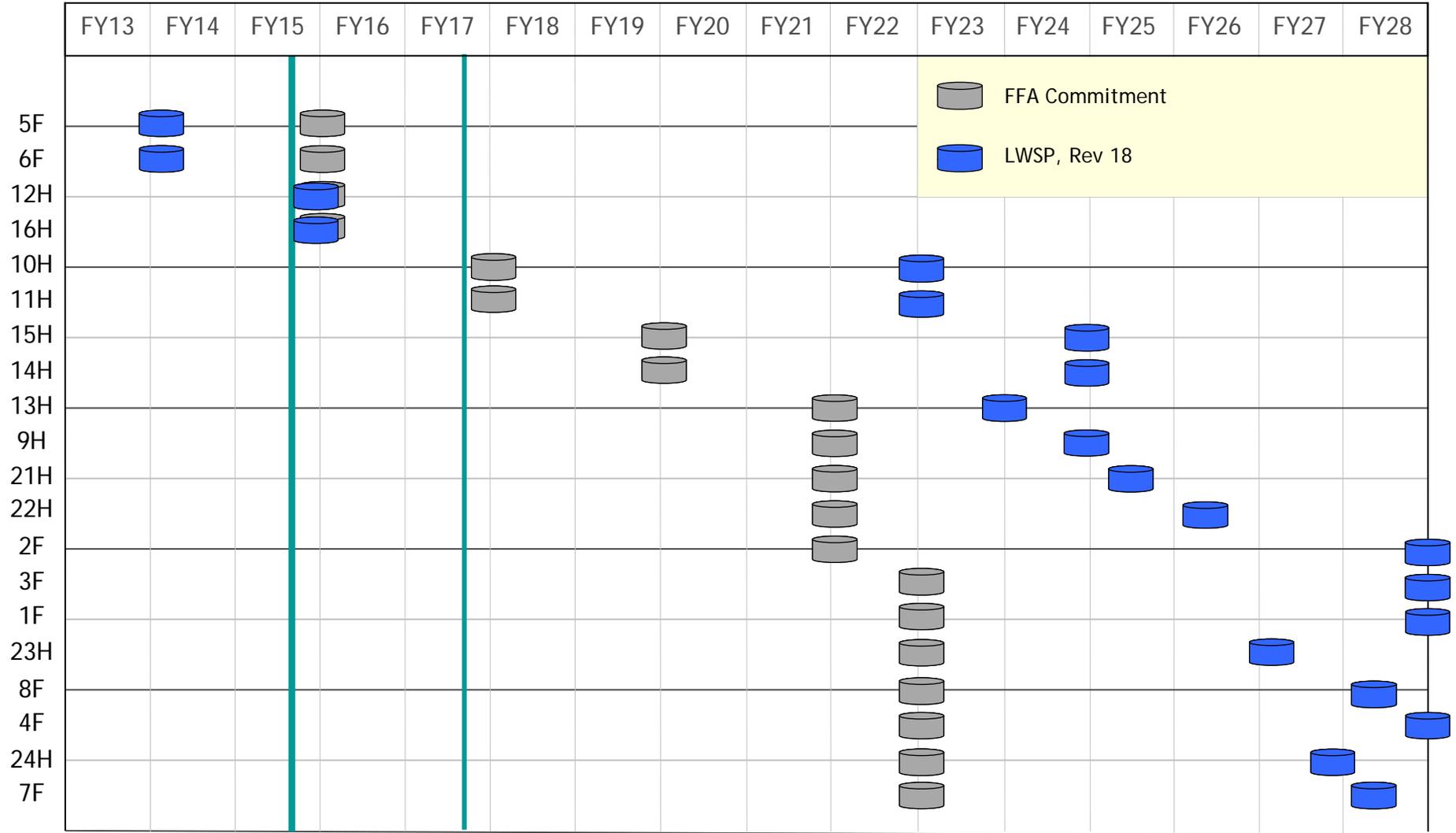


} dry salt with
essentially no leak
potential

Tank Closure Projections

Assuming SWPF startup in October 2018

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|---|---------|---------|--------------------|
| Date when all Type I, II, and IV tanks are closed | 2022 | 2028 | 2022 |
| Bulk Sludge processing complete | 2025 | 2026 | 2028 |
| Bulk Salt Processing Complete | 2025 | 2028 | 2028 |
| Heel Processing Complete | 2026 | 2032 | 2028 |

- SWPF startup delayed by 4 years to October 2018 from October 2014
- Funding target essentially the same as Rev 17 (with adjustments for inflation)
- Results in significant impacts to meeting regulatory commitments
- Strategy adjusted to maximize risk reduction with best utilization of funding provided

| | |
|--------|---|
| ARP | Actinide Removal Process |
| DOE | Department of Energy |
| DOE-EM | Department of Energy - Environmental Management |
| DWPF | Defense Waste Processing Facility |
| FFA | Federal Facilities Agreement |
| FY | Fiscal Year (October 1st - September 30th) |
| LWSP | Liquid Waste System Plan |
| MCi | Million Curies |
| MCU | Modular Caustic-side Solvent Extraction Unit |
| Mgal | Million Gallons |
| SCIX | Small Column Ion Exchange |
| SDU | Saltstone Disposal Unit |
| SRR | Savannah River Remediation, LLC |
| STP | Site Treatment Plan |
| SWPF | Salt Waste Processing Facility |