Start-up of Salt Waste Processing Facility – System Plan Impacts

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SRR Liquid Waste Program Operational Highlights

- **51 Tanks**
- **7.3 Mgal salt waste treated**
- **16.3 Mgal grout disposed containing 417 kCi**
- **3,871 of 8,582 canisters poured**
- **6 grouted & closed**
- **10 in closure sequence**
- **69% old style empty**
- **16% new style empty**

Legend:
- ARP: Actinide Removal Process
- DWPF: Defense Waste Processing Facility
- MOU: Modular Caustic Side Solvent Extraction Unit
- SWPF: Salt Waste Processing Facility

- 45 tanks remaining
- 37 Mgal remaining
- 260 Mcl remaining

- Tanks cleaned & closed <1% radionuclides remain in tanks

- Salt waste

- GDWPF: Glass Waste Storage
- Most radionuclides to glass

- Saltstone Disposal Facility
- <<1% radionuclides to saltstone

- SWPF (under construction)
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Revision 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Type I, II, and IV tanks BWRE complete</td>
<td>2028</td>
</tr>
<tr>
<td>Final Type I, II, and IV tanks complete operational closure</td>
<td>2032</td>
</tr>
<tr>
<td>Complete bulk sludge treatment</td>
<td>2030</td>
</tr>
<tr>
<td>Complete bulk salt treatment</td>
<td>2033</td>
</tr>
<tr>
<td>Complete heel treatment</td>
<td>2039</td>
</tr>
<tr>
<td>Maximum canister waste loading</td>
<td>40 wt%</td>
</tr>
<tr>
<td>Nominal maximum annual canister throughput rate</td>
<td>276</td>
</tr>
<tr>
<td>Total number of cesium-only canisters produced</td>
<td>0</td>
</tr>
</tbody>
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Annual SWPF Throughput
System Plan Projections

- Current revision of the Liquid Waste System Plan (Rev 19) projects that bulk sludge processing will complete 3 years before the completion of salt processing at SWPF in 2033.
- In order to accommodate the cesium laden strip-effluent stream from SWPF, DWPF will need to produce ~280 canisters per year.
- Solids generated from waste tank cleaning (heel removal/chemical cleaning) are insufficient to support a 280 canister per year production rate.
- For system planning purposes, it is assumed that simulated sludge is added in the tank farm to meet current Glassmaker/P CCS constraints.
- New frit formulations may reduce or eliminate the need for sludge simulants but would not decrease the number of canisters required to disposition the SWPF effluents.