



SALT WASTE PROCESSING FACILITY

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INTRODUCTION

Removing salt waste, which comprises approximately 90 percent of the tank space in the SRS tank farms, is a major part of emptying the Site's waste tanks, currently at a volume of approximately 36 million gallons (treatment volume will be approximately 100 million gallons)

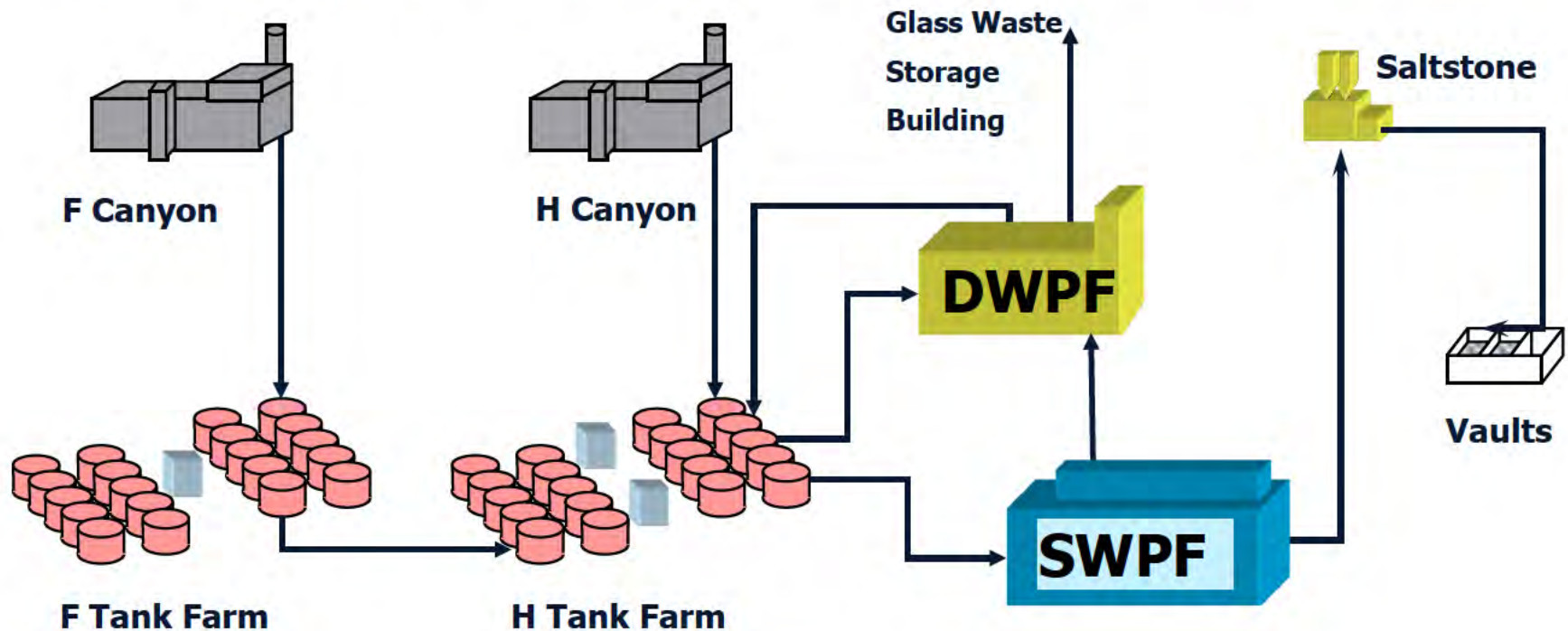
Salt Waste Processing Facility is the key facility designed to process the vast inventory of salt waste stored in SRS tanks. Ultimate operations of the facility is among DOE's highest environmental cleanup priorities and a main component of its commitment to reducing risk at SRS.

What will it do? SWPF's key mission is to separate and concentrate the highly radioactive waste—mostly cesium, strontium, and actinides—from the less radioactive salt solution. After initial separation, the concentrated high-activity waste will be sent to the nearby Defense Waste Processing Facility where it will be immobilized in a glass matrix and stored in canisters onsite. The decontaminated salt solution will be mixed with cement-like grout at the nearby Saltstone Facility for disposal onsite.

Why is it needed? SWPF has already significantly increased processing rates for the SRS radioactive liquid waste system and support emptying and closing the Site's remaining 43 high-level waste tanks



ROLE IN SRS LIQUID WASTE SYSTEM



Sludge



Salt



Supernate



SWPF

- ✓ Cs decontamination factor > 40,000
- ✓ Approximately 100 MCi to be processed

MILESTONES



- **SWPF Project awarded to Parsons 2003**
 - CD-1 Initiated 2004
 - Conceptual/Preliminary Design
 - CD-2/3A Initiated 2007
 - Final Design
 - CD-3B Initiated 2009
 - Construction support
- **Construction Complete 2016**



SWPF 3-D Model



Pump and Valve Gallery Corridor

MILESTONES



- **Cold Chemical and Integrated System Testing Complete 2019**
- **Readiness Activities Complete 2020**
 - Management Self-Assessment
 - Contractor Operational Readiness Review (CORR)
 - DOE Operational Readiness Review (DORR)
- **Hot Commissioning Complete January 17, 2021**
 - Initial Radiological Introduction, October 5th
 - >300k safely and successfully processed
- **First Year Operations Complete January 17, 2022**
 - >2M gallons safely and successfully processed to date



Process Vessel Ventilation



Cross Flow Filter Bundle

SWPF PEOPLE ARE KEY

- **SWPF record of success due to its people!**
- **Safety Record**
 - 964 Days without a recordable injury (as of 1/18/2022)
 - No significant Chemical or Radiological exposures throughout Commissioning and Radiological Operations



DOE Voluntary Protection Program Superior STAR

PRODUCTION

- Processed 2.06Mgal during OYO and 2.37Mgal to date
- More than 1MCi Cs-137 removed from HLW Tanks
- Decontaminated Salt Solution ~1% of limit (DF>40,000)



SWPF Control Room

PATH FORWARD

- **Continue to Operate with a conservative bias towards safety and a sense of urgency for mission accomplishment**
- **Work collaboratively with SRR/SRMC/DOE**



CSSX Contactors



Laboratory Samplers

TRANSITION

- Excellent communication and partnering during Transition planning with SRR (SRMC) and DOE
 - Personnel retention remains a concern, but less so with SRMC



Field Operations



SWPF Laboratory

CONCLUSION



- **Parsons has successfully Designed, Constructed, Commissioned, Started-up and is Operating a HC-2 Nuclear Facility**
 - Numerous obstacles have already been overcome
 - Improved integration with Liquid Waste Contractor
 - Daily Operational interface and transfer discussions
 - Global participation in planning, departmental, and outage calls
- **Working to minimize Distraction and Attrition during Transition**
- **Additional improvements are continuously being identified and pursued to further increase SWPF and overall Liquid Waste Operations performance**
 - We are excited about being unified under one contract and how that will allow for improved coordination and prioritization