



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

Salt Disposition Integration

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DOE-Savannah River

Presented to the Citizens Advisory Board

January 26, 2016

To satisfy 2016 Citizens Advisory Board Work Plan by:

- Providing a description of the Salt Disposition Integration (SDI) scope of work
- Providing an update on SDI status

Acronyms

- DWPF Defense Waste Processing Facility
- DOE [U.S.] Department of Energy
- FPD Federal Project Director
- LLW Low-level Waste
- LW Liquid Waste
- MCU Modular Caustic Unit
- RSS Raw Salt Solution
- SCDHEC South Carolina Department of Health and Environmental Control
- SDI Salt Disposition Integration
- SRR Savannah River Remediation
- SRS Savannah River Site
- SWPF Salt Waste Processing Facility

Background

- Before the Salt Waste Processing Facility (SWPF) starts operations, it needs to be connected to the Savannah River Site (SRS) liquid waste (LW) system
- The SDI project provides upgrades to and connections with the LW system in anticipation of the future SWPF operation

Mission

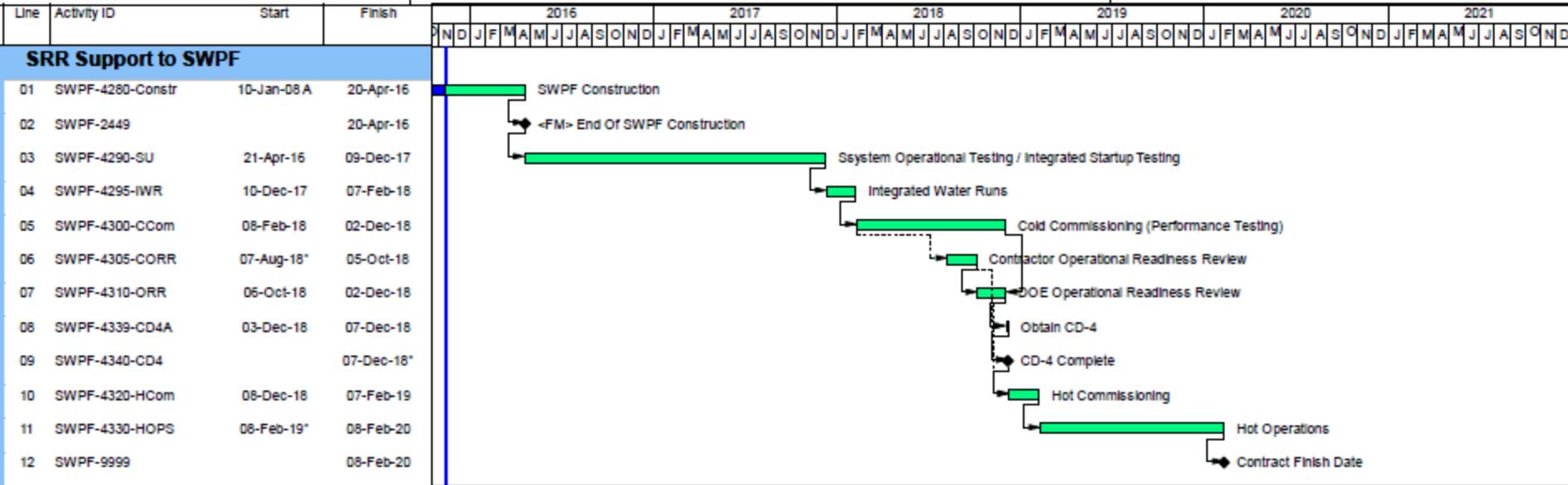
- Install LW transfer lines to connect SWPF with the SRS Tank Farm
- Upgrade specific LW facilities to handle SWPF waste processing and volume

LW/SWPF Integration Schedule Forecast

Project : DWPF...
 Layout : L_SDI_K_SWPF SDI_Parsons Key
 Milestones
 TASK filter: L_SDI_SWPF SDI_Parsons_L2 Sum.

Parsons Summary OTB Rev.2

Print Date : 01-Dec-15 15:55
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Blend and Feed Modifications

- Provide raw salt solution (RSS) feed for SWPF
 - Equip one existing tank (Tank 21) with blending capability
 - Equip one existing tank (Tank 49) as the SWPF Feed Tank
 - Provides transfer piping for RSS transfers to SWPF



Laboratory Waste Handling

- Improve method to remove higher curie waste and material from DWPF shielded cells

East and West Transfer Lines

- Tie-ins of new underground SWPF piping to existing Liquid Waste piping
 - East Transfer Line Tie-in to provide path from SWPF to Tank 50
 - West Transfer Line tie-ins provide path between SWPF, H-Tank Farm (HTF), and the Defense Waste Processing Facility (DWPF)

DWPF Modifications

- Allow receipt of high activity effluent streams from SWPF

Aerial View of LW/SWPF Integration Scope



DWPF Modifications
Lab Waste Handling



SSRTs
(Complete)



Blend & Feed
Modifications



ETF Modifications
(Complete)



West Transfer Line
Modifications



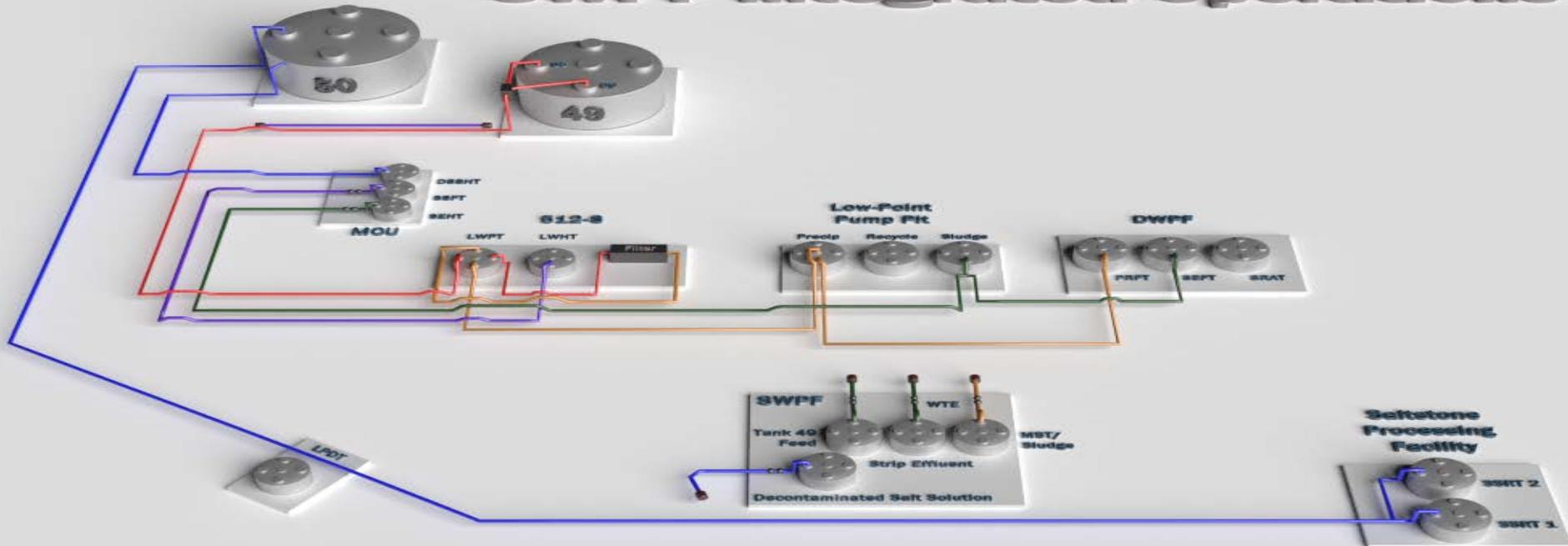
East Transfer Line
Modifications



SWPF

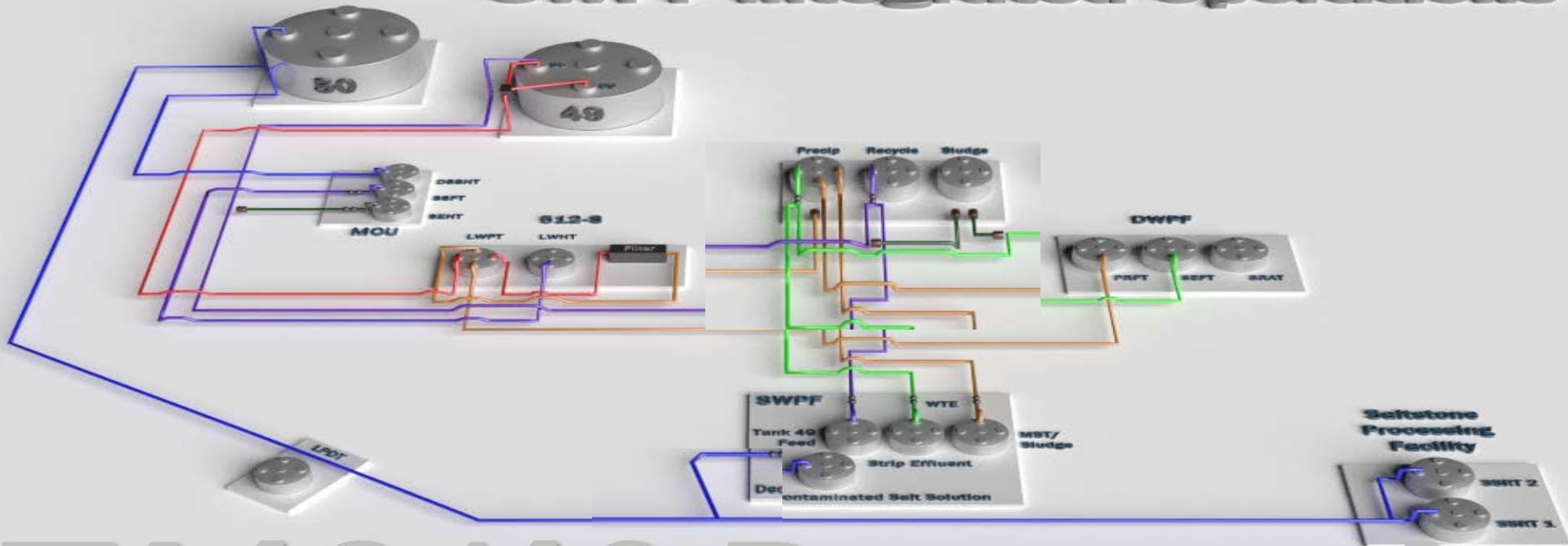


SWPF Integrated Operations



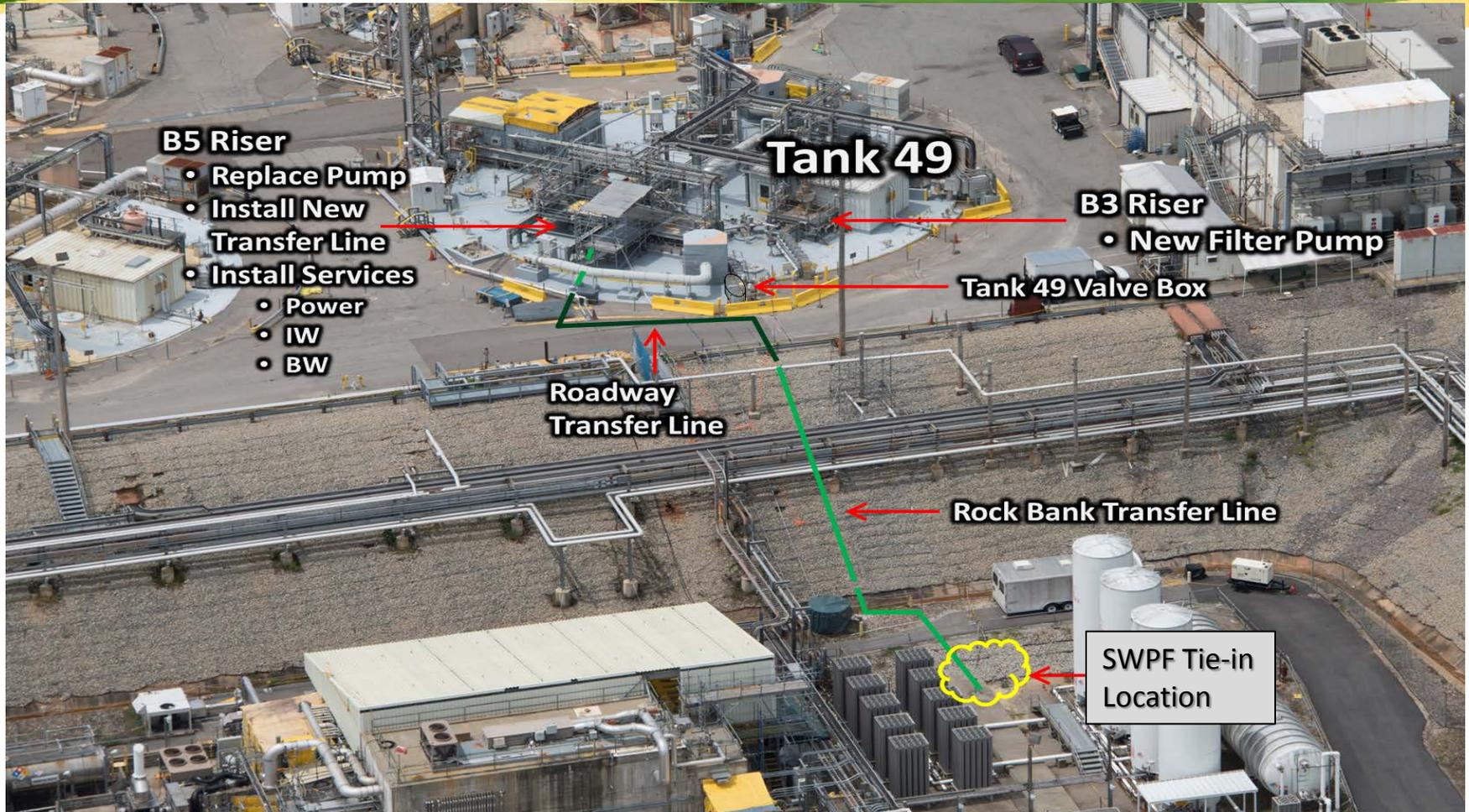
FY 16 Current Status

SWPF Integrated Operations



FY 18/19 Proposed

Tank 49 Transfer Piping Scope



- **Blend and Feed Modifications**

Completed the excavation of the pier supports

Completed the fabrication of new 3" core and 6" jacketed transfer line under roadway



- **Laboratory Waste Handling**

Awarded contract for final design

Issued Preliminary Hazards Analysis



- **DWPF Modifications**

Initiated development work for:

- Steam Mods at 511-S
- Safety Class Electrical Thermowell Jumper for 511-S Precipitate Tank temperature
- Wide Mouth Bubbler for the 511-S Precipitate Tank
- software design for integration of SWPF and Liquid Waste Facilities



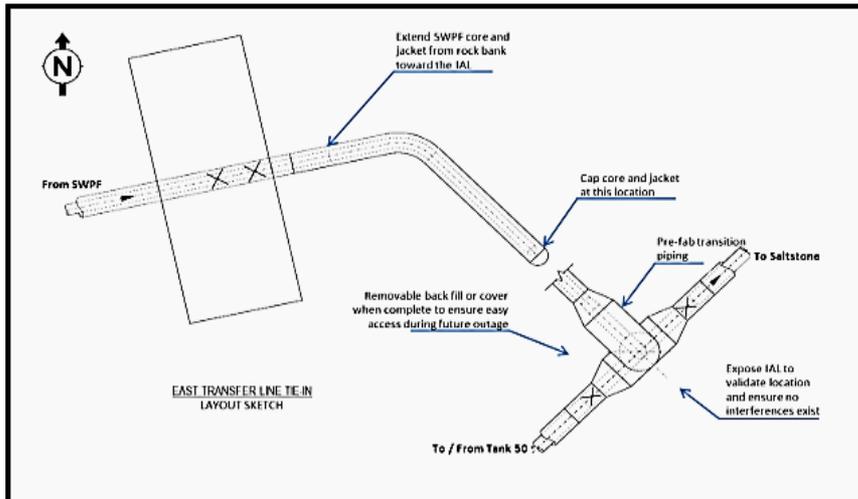
• East Transfer Line

Performed survey of area to identify layout and interface points

Initiated site use permit for the excavation area.

Developing construction plan

Initiated development of flush and drain concepts

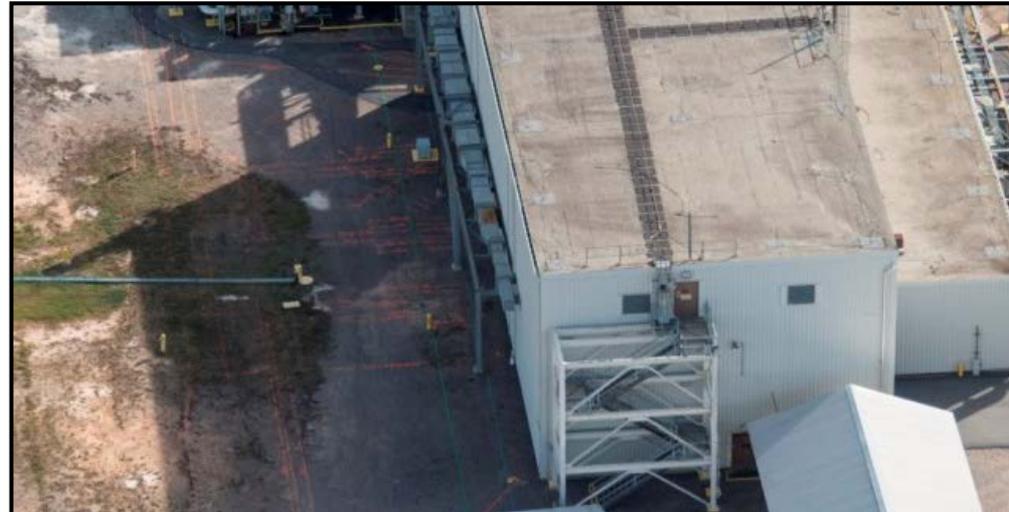


• West Transfer Line

Developing Modular Caustic Unit (MCU) piping configuration changes to reduce impacts on SWPF start up and outages

Developing shoring specification

Developing communication hardware and fiber cable installations



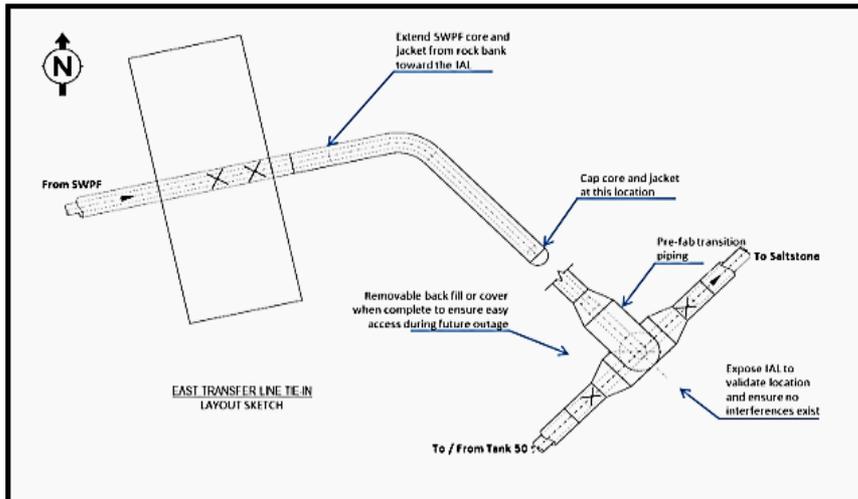
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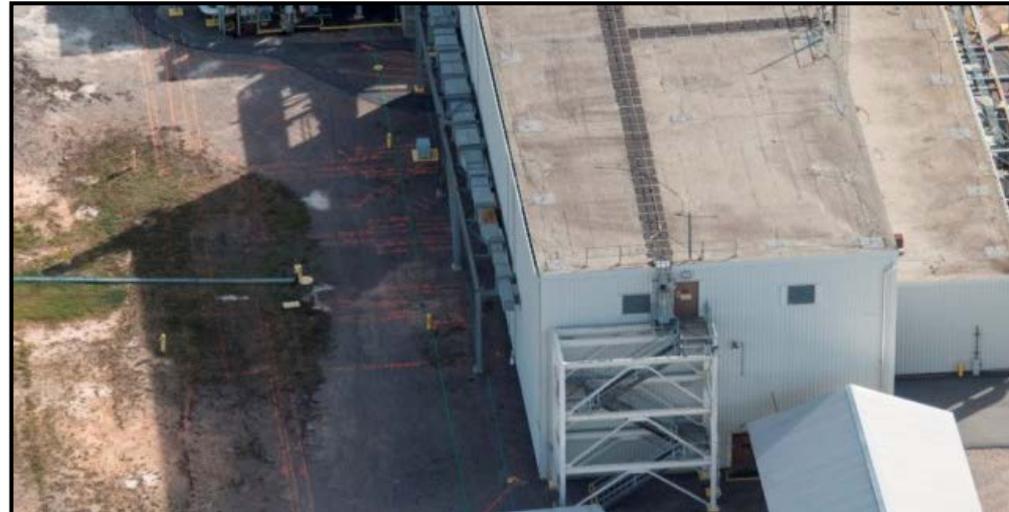


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Developing communication hardware and fiber cable installations



- The SDI project provides upgrades to and connections with the LW system in anticipation of the future SWPF operation
- LW facility upgrades are needed to handle the increased volume of salt waste processing once SWPF start operations
- Work is progressing to assure that the LW system will be ready to function with SWPF once it comes on line.

