



U.S. DEPARTMENT OF
ENERGY

Savannah River Site

Savannah River Site Citizens Advisory Board Facility Disposition and Site Remediation Committee

P-Area Operable Unit (PAOU) Update

Presentation By

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Agenda

- **P-Area Operable Unit (PAOU) Background**
- **Current Status**
- **Scope**
- **Strategy**
- **Accomplishments**
- **Conclusion**



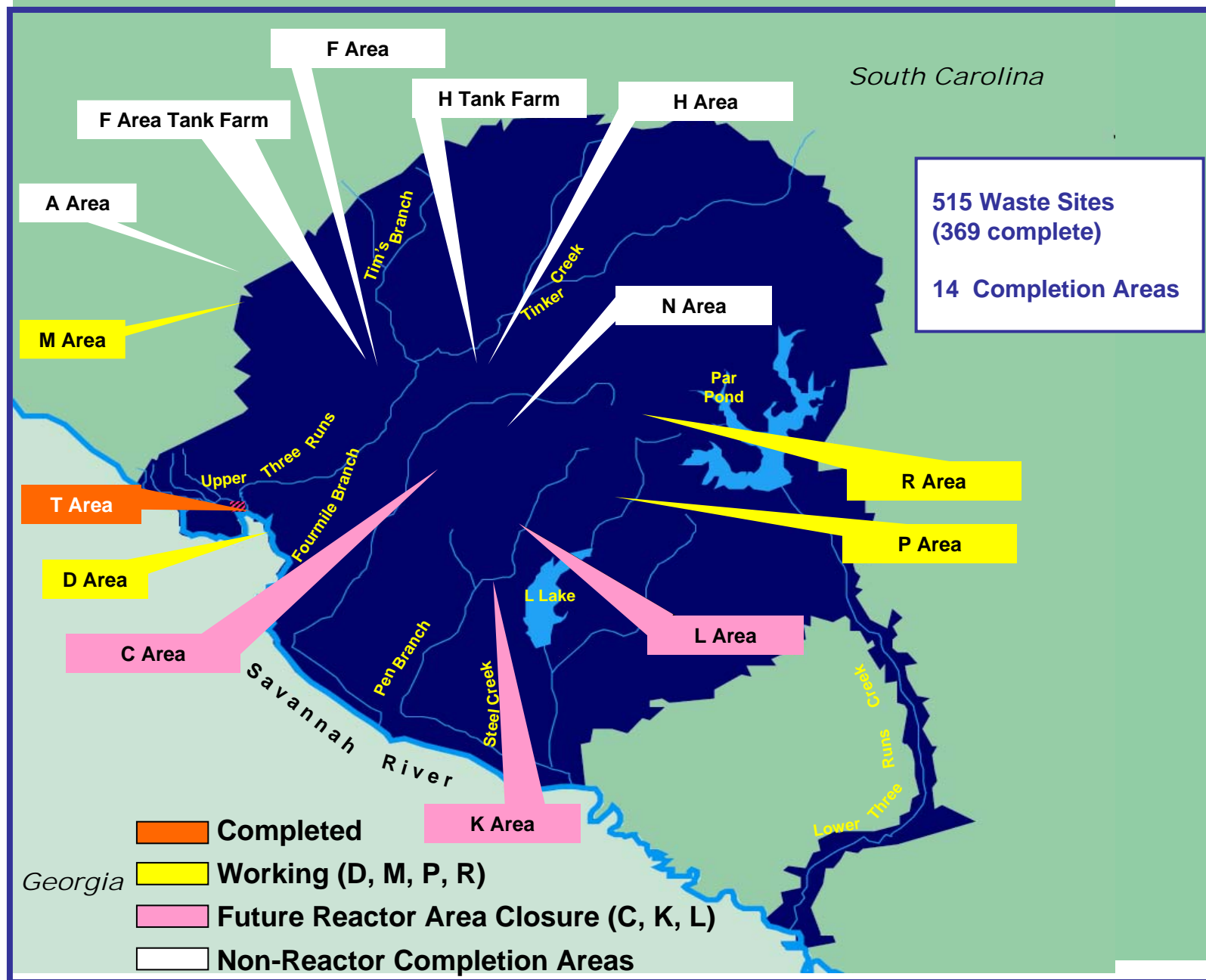


List of Acronyms

- **D&D** **Deactivation and Decommissioning**
- **PAOU** **P-Area Operable Unit**
- **RFP** **Request for Proposal**
- **PSA** **Potential Source Area**
- **TPC** **Total Project Cost**



Area Completion Approach





PAOU Background

- Operated from 1954 and to 1991
- Comprises approximately 100 acres, includes 17 waste units and, at one time, 42 buildings and ancillary structures.
- Facilities included reactor building, maintenance buildings, administrative building, cooling water basin, pump house, and coal fired power house.
- Reactor was operational centerpiece of area; purpose was to produce special nuclear materials for national defense.
- PAOU first reactor area to be addressed under area completion process.





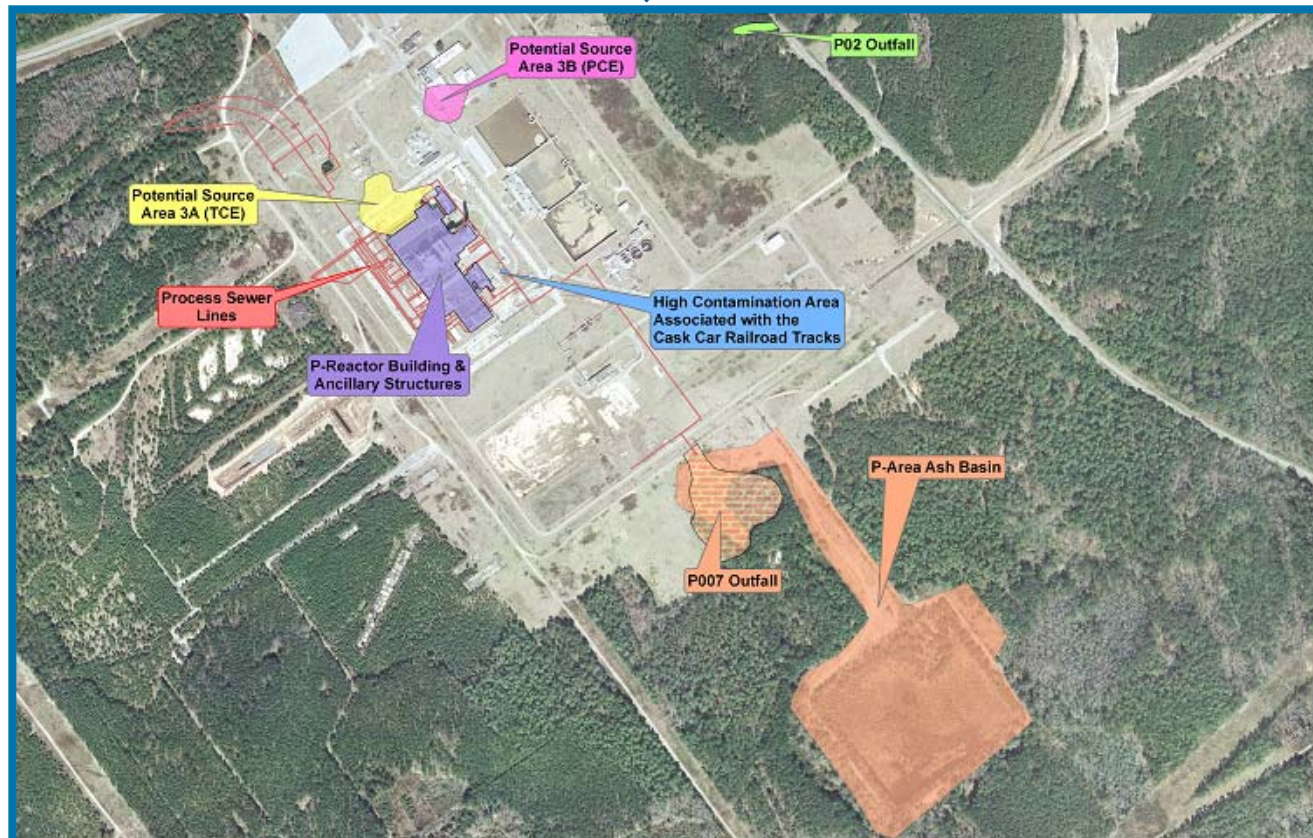
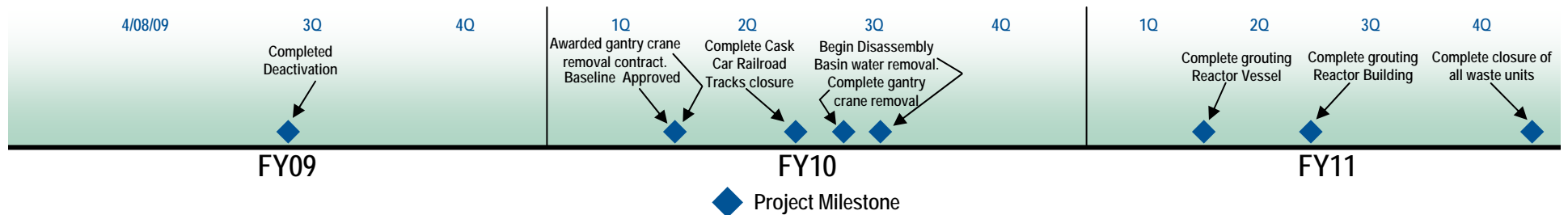
PAOU Area Completion Objectives

- Remediate waste units
- In-Situ Decommission Reactor Building
- At completion, P-Area Operable Unit will be safe for industrial reuse





P-Area Operable Unit





P-Area Operable Unit Scope

- **Project being safely performed as part of Recovery Act funding at a TPC of \$270M. Scope includes:**
 - **D&D of P-Reactor Building**
 - **Evaporation of four million gallons of water from Disassembly Basin**
 - **The placement of approximately 130,000 cubic yards of grout including:**
 - **Below grade spaces**
 - **Reactor Vessel**
 - **Disassembly Basin**
 - **The removal and disposal of above-grade Disassembly Basin structure and concrete cap installation**
 - **Ventilation Stack and Gantry Crane removal**
 - **Roof modifications and sealing of building**
 - **Batch Plant operations and maintenance**
 - **Upgrades to railroads and roads used for transporting grout materials**





P-Area Operable Unit Scope (continued)

- Remediate waste units:
 - P-Area Cask Car Railroad Tracks
 - PSA-3A and 3B waste units
 - P007 Outfall
 - P-Process Sewer Lines
 - P-Ash Basin





P-Reactor Facility – Remediation Strategy



P-Reactor Facility Overview

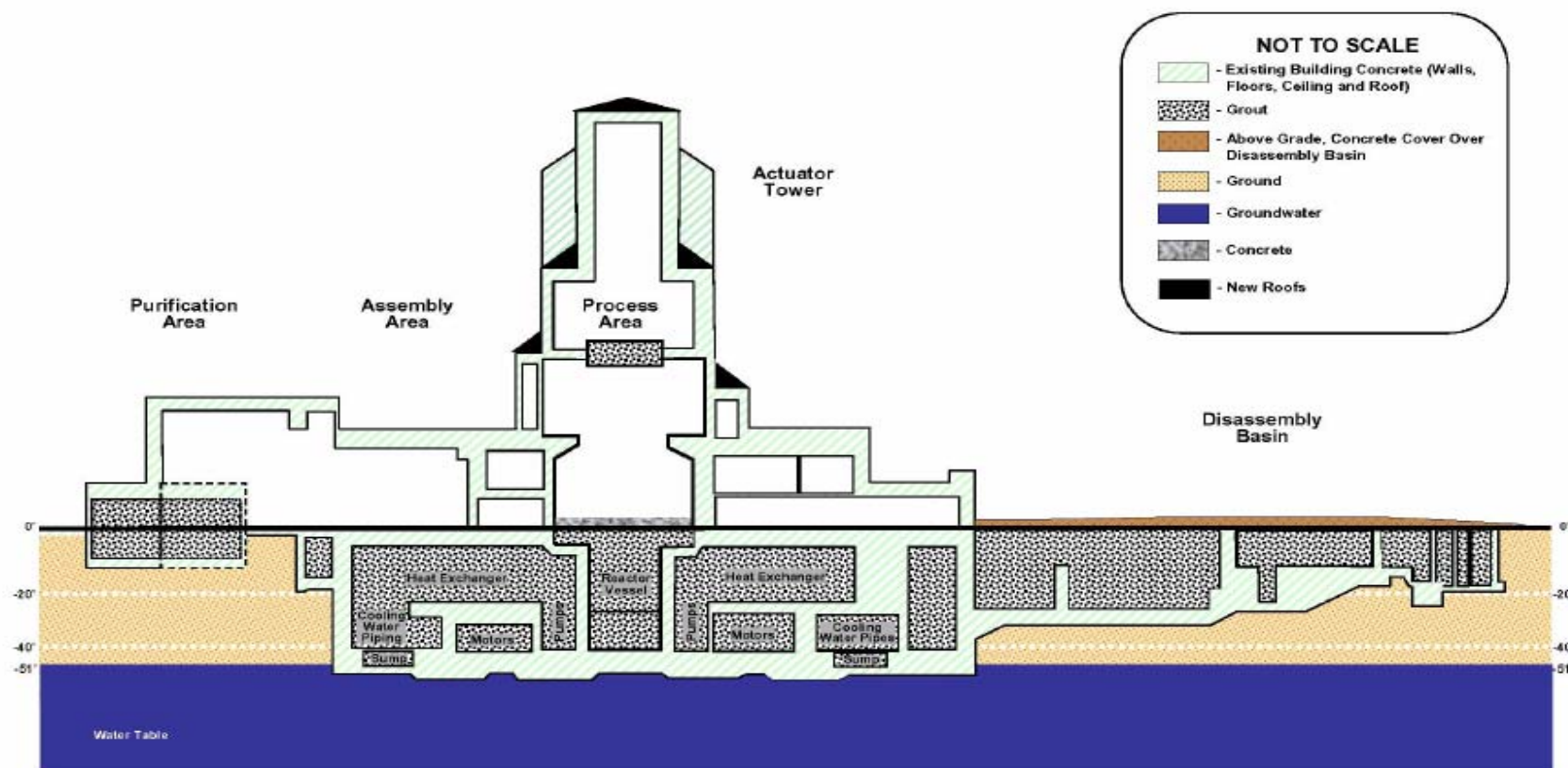
Approach to deactivate and in- situ decommission facility include:

- evaporate disassembly basin water
- grout basin
- remove above grade portion of disassembly basin wing and cap basin
- grout the below-ground portions of the reactor buildings
- remove ventilation stack and gantry crane
- modify roofs and seal building





Reactor In-Situ End-State Cross Section





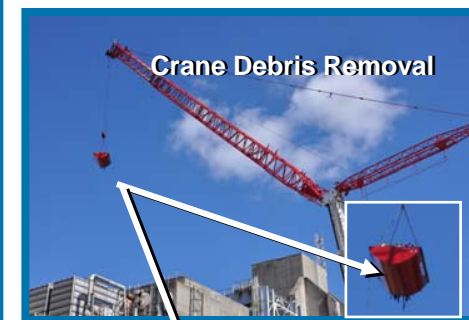
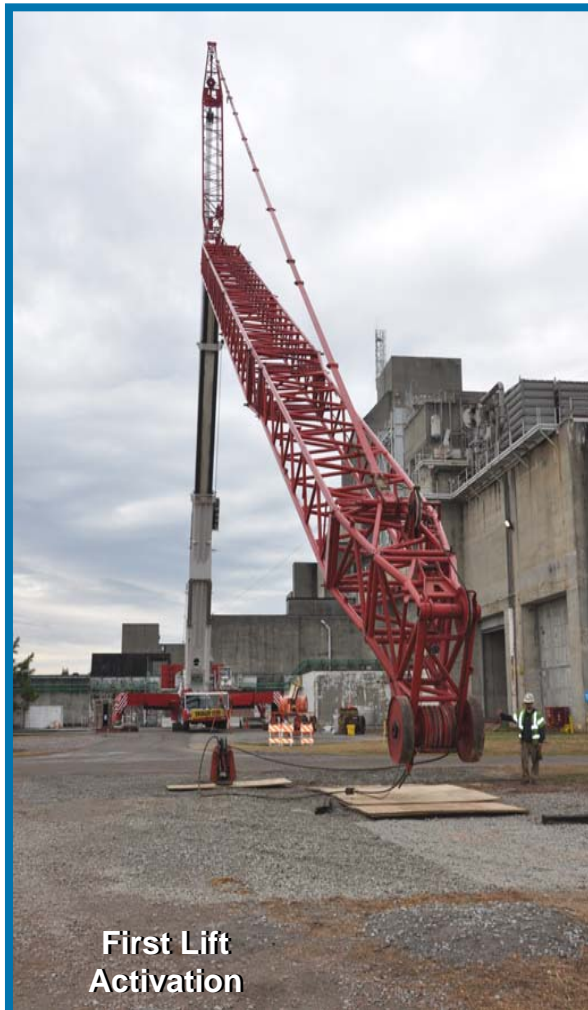
P-Area Operable Unit Accomplishments

- **P-Reactor Facility:**
 - Safely performing work
 - Completed deactivation
 - Removed exterior metal and piping from reactor building
 - Installed temporary power and lighting
 - Prepared facility for decommissioning
 - Installed and operating 6 Disassembly Basin Water evaporators with 4 additional undergoing testing
 - Completed Gantry Crane removal
 - Awarded contract for stack removal/below-grade grouting and are evaluating bids for modify roofs/seal building contract





P-Area Gantry Crane Mobilization / Removal Crane Assembly





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Gantry Crane: Before and After





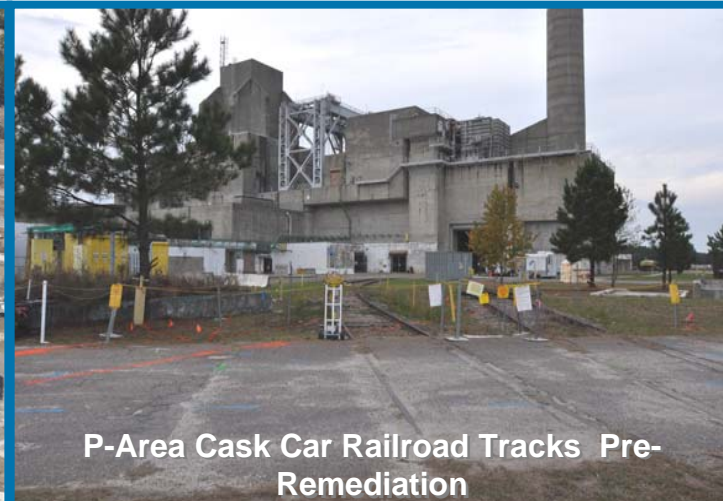
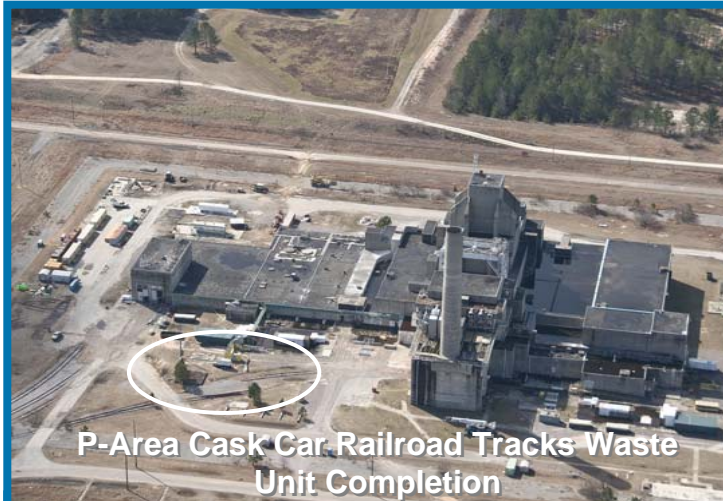
P-Area Operable Unit Accomplishments (continued)

- **Achieved mechanical completion of the P-Cask Car Railroad Tracks Soil Contamination Removal.**
 - **Excavated and disposed on site 70 cubic yards of radiologically contaminated soil and debris**
- **Began remediation well installation at PSA 3A and 3B.**
- **Completed vegetation removal for Ash Basin remediation and soil stockpiling.**
- **Installing Batch Plant provide grout to both P and R Reactor decommissioning.**





P-Area Cask Car RR Tracks Remedial Action





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P Area Batch Plant Mobilization





P-Ash Basin

- Installed 1500 linear feet of erosion control fencing
- Completed removal of 35-acres of vegetation to prepare site for clean soil cover
- Completed sampling around the P Area Ash Basin to determine ash thickness





Conclusion

- **Work is performed safely.**
- **Significant field activities underway leading to decommissioning first SRS Weapons Production Reactor.**
- **Stakeholder involvement contributing to cost effective cleanup.**

