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

P-Area Operable Unit (PAOU) Update

Presentation By
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Savannah River Operations Office
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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

- Completed
- Working (D, M, P, R)
- Future Reactor Area Closure (C, K, L)
- Non-Reactor Completion Areas

515 Waste Sites (369 complete)
14 Completion Areas
PAOU Background

- P Area operated from 1954 and shutdown in 1991.
- Operable unit comprises approximately 100 acres, includes 17 waste units and, at one time, 42 buildings and ancillary structures.
- Facilities in the area included the reactor building, maintenance buildings, administrative building, cooling water basin, pump house, and a coal fired power house.
- Reactor was the operational centerpiece of the area and its purpose was to produce special nuclear materials for national defense.
- The PAOU is the first reactor area to be addressed under the area completion process.
PAOU Area Completion Objectives

• Remediate waste units.

• In-Situ Decommission Reactor Building.

• At completion, the P-Area Operable Unit will be safe for industrial reuse.
P-Area Operable Unit

<table>
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<tr>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
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<tbody>
<tr>
<td>4/08/09</td>
<td>Completed Deactivation</td>
<td>3Q</td>
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<tr>
<td>1Q</td>
<td>Awarded gantry crane removal contract, Baseline Approved</td>
<td>1Q</td>
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<td>2Q</td>
<td>Complete Cask Car Railroad Tracks closure</td>
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<tr>
<td>3Q</td>
<td>Begin Disassembly, Basin water removal, Complete gantry crane removal</td>
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<td>4Q</td>
<td>Complete grouting Reactor Vessel</td>
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<td></td>
<td>Complete grouting Reactor Building</td>
<td>Complete closure of all waste units</td>
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**Project Milestone**
- Awarded gantry crane removal contract. Baseline Approved
- Complete Cask Car Railroad Tracks closure
- Begin Disassembly, Basin water removal, Complete gantry crane removal
- Complete grouting Reactor Vessel
- Complete grouting Reactor Building
- Complete closure of all waste units
P-Area Operable Unit Scope

- This project is being safely performed as part of the Recovery Act funding at a TPC of $270M. Scope includes:
  
  - D&D of P-Reactor Building
    - Evaporation of four million gallons of water from the Disassembly Basin
    - The placement of approximately 130,000 cubic yards 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 is to deactivate and in-situ decommission facility to 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 contracts for stack removal/below-grade grouting and modify roofs / seal building
P-Area Gantry Crane Mobilization / Removal Crane Assembly

Successful Crane Activation

177.5 foot Jib

First Lift Activation

Crane Debris Removal

Gantry Crane
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 to provide grout to both P and R Reactor decommissioning.
P-Area Cask Car RR Tracks Remedial Action

P-Area Cask Car Railroad Tracks Waste Unit Completion

P-Area Cask Car Railroad Tracks Pre-Remediation

P-Area Cask Car Railroad Tracks Remediation

P-Area Cask Car Railroad Tracks Waste Unit Completion
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.