



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

Ray Hannah

Project Manager

Department of Energy

Savannah River Operations Office

April 20, 2010





Agenda

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



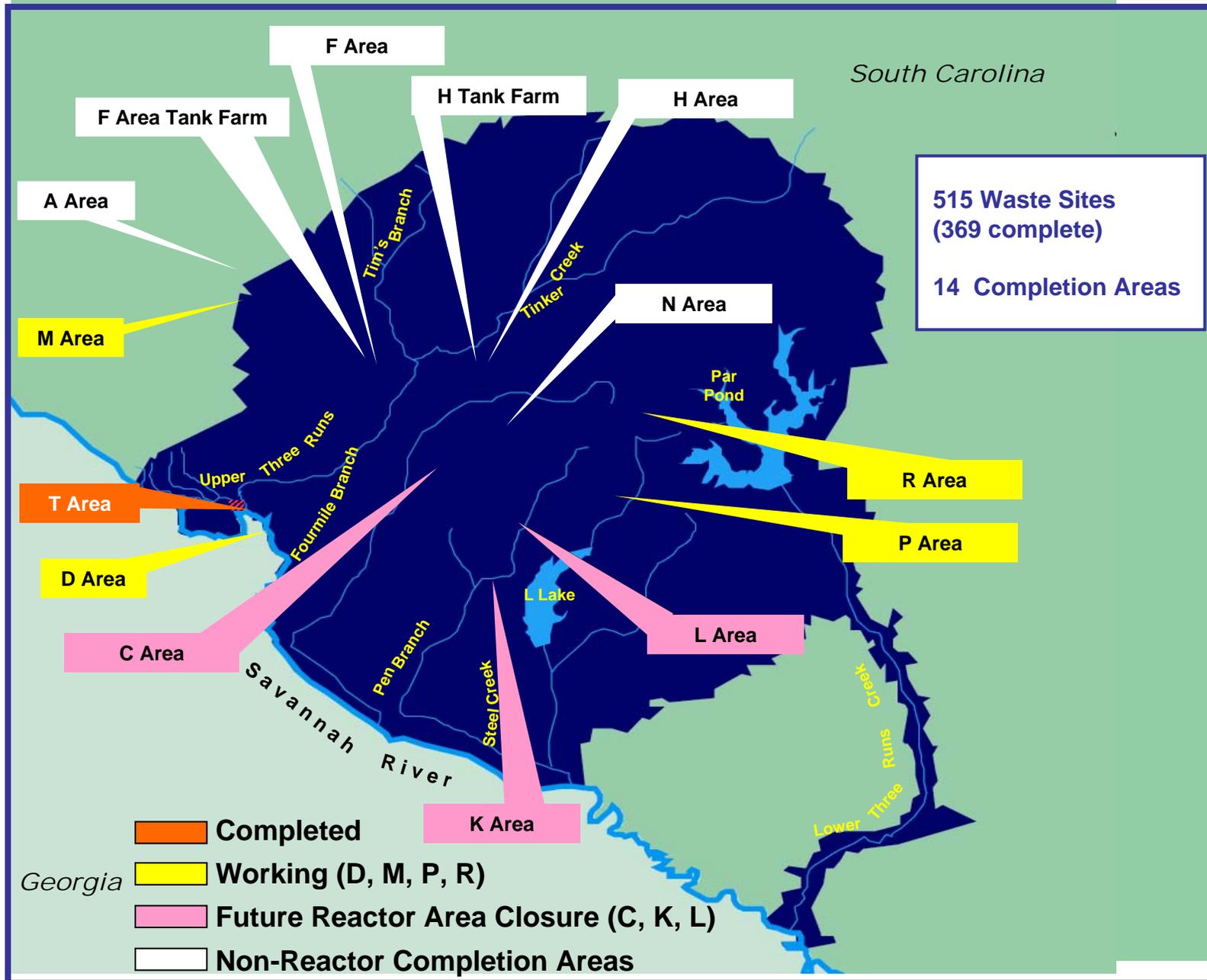


List of Acronyms

- **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

4/08/09

3Q

4Q

1Q

2Q

3Q

4Q

1Q

2Q

3Q

4Q

Completed
Deactivation

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

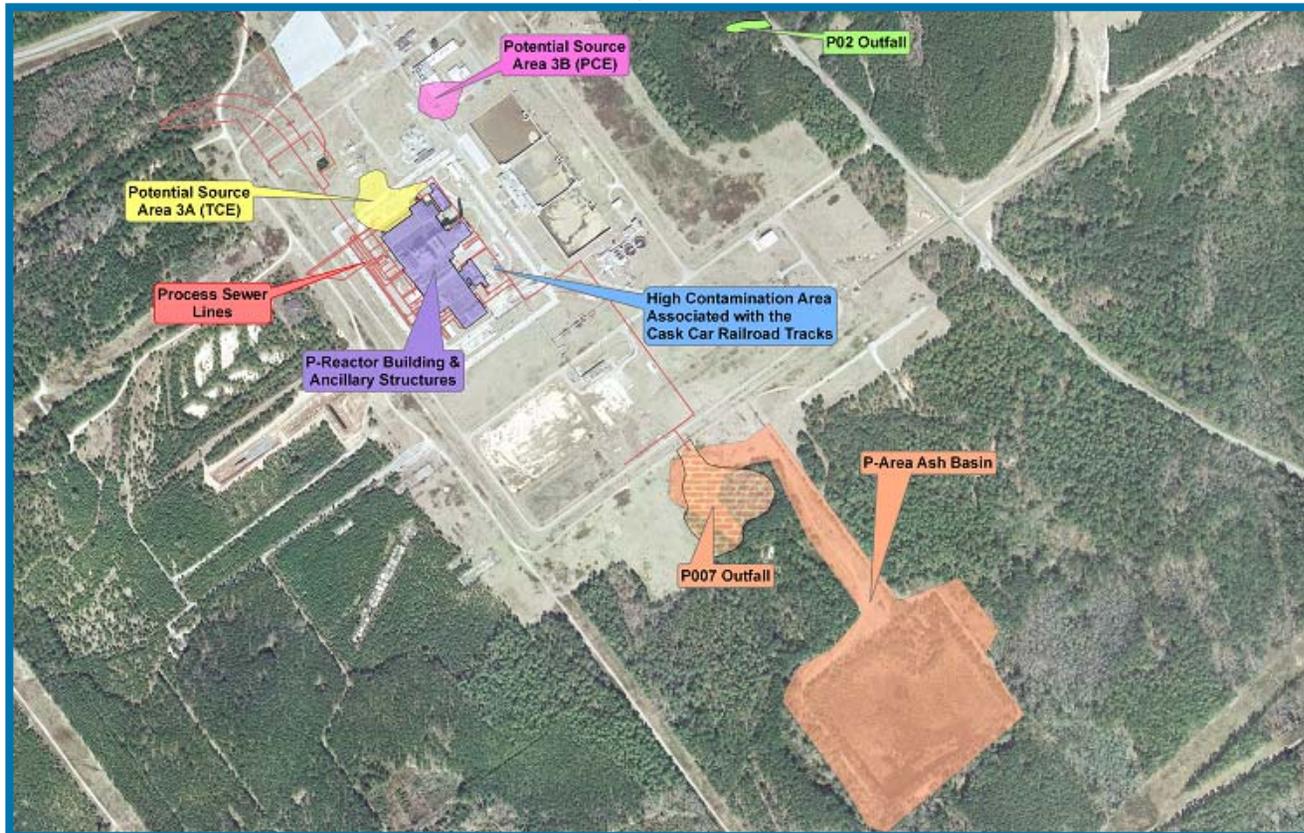
Complete closure of
all waste units

FY09

FY10

FY11

◆ Project Milestone





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-Reactoer Facility – Remediation Strategy



P-Reactoer Facility Overview

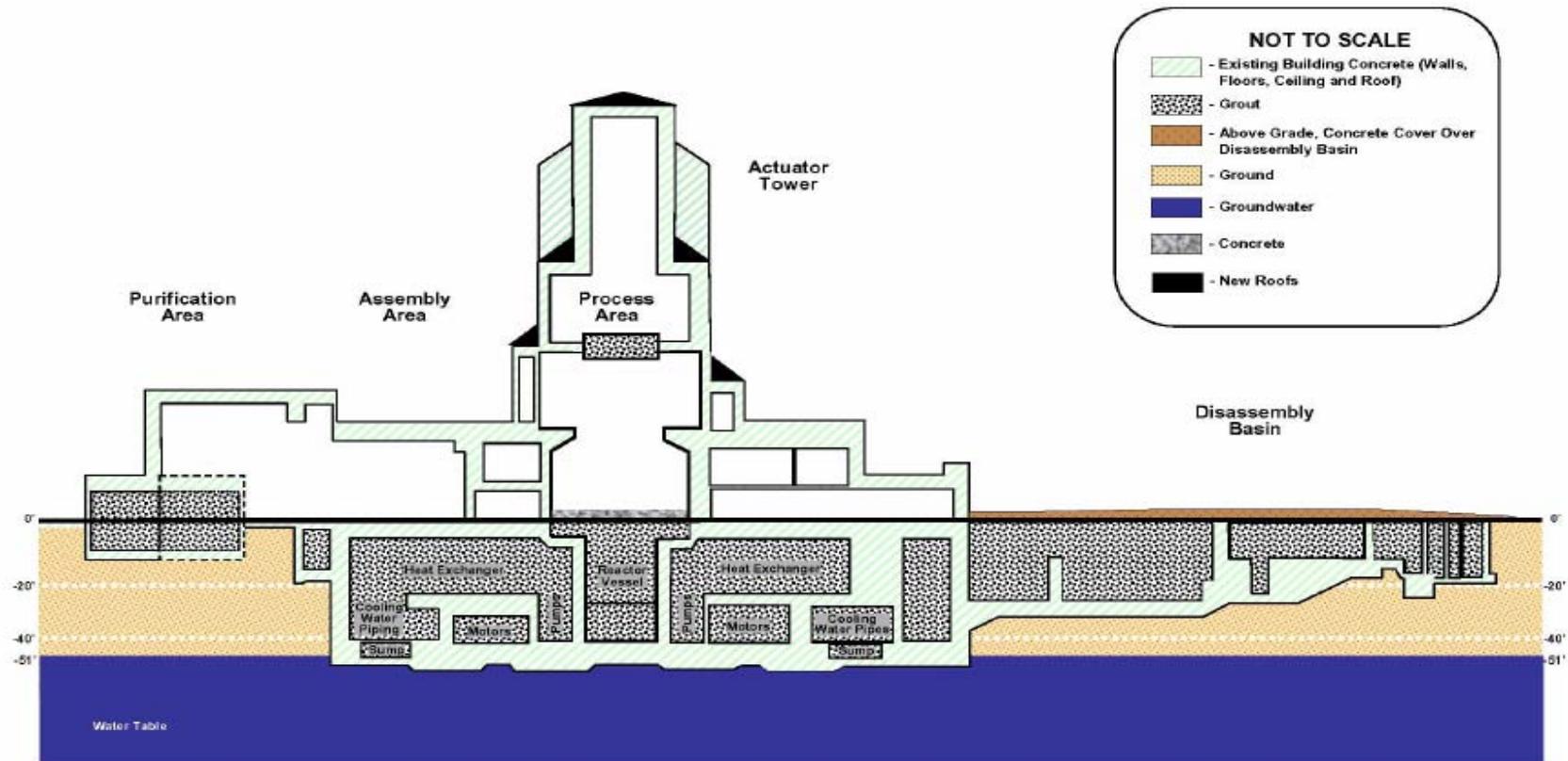
Approach to deactivate and in- situ decommission facility include:

- 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

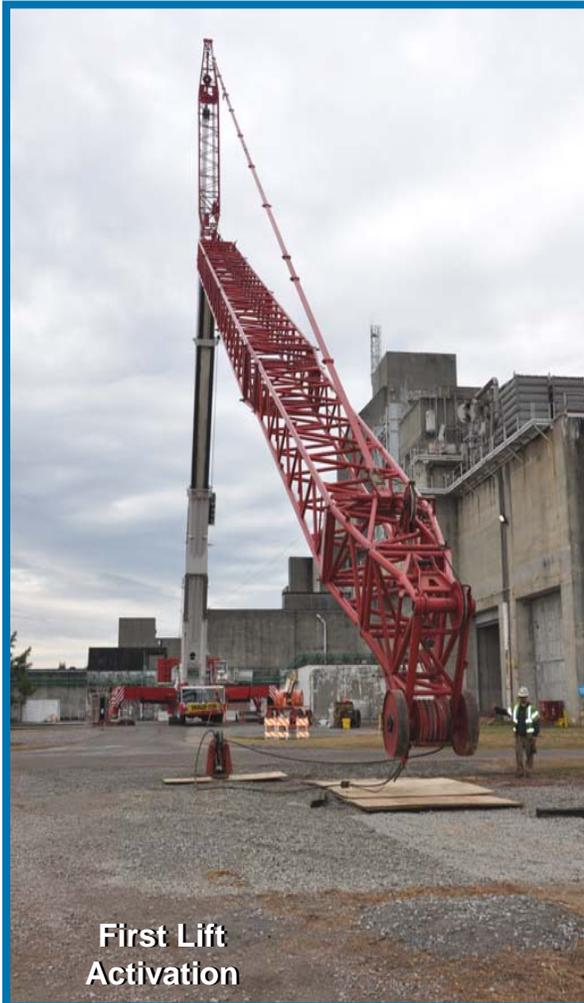




P-Area Gantry Crane Mobilization / Removal Crane Assembly



Successful Crane Activation



First Lift Activation



Gantry Crane



177.5 foot Jib



Crane Debris Removal



Crane Debris Removal





Gantry Crane: Before and After





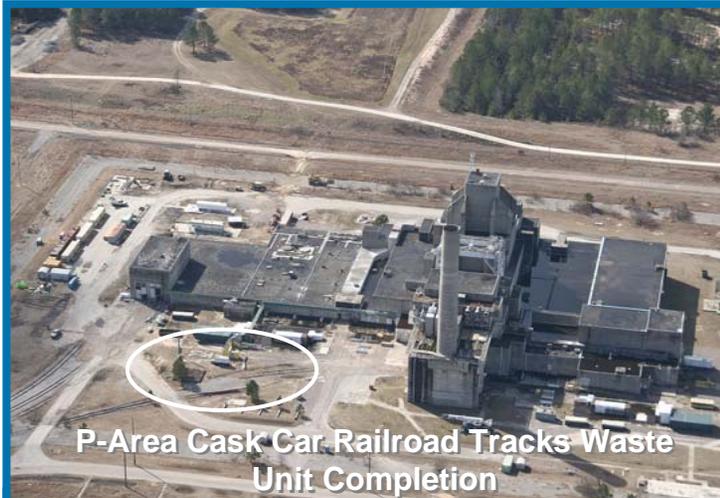
P-Area Operable Unit Accomplishments (continued)

- **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.**

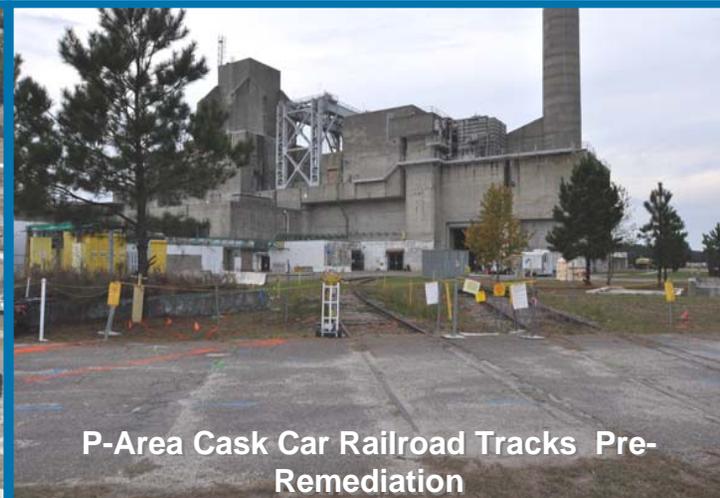




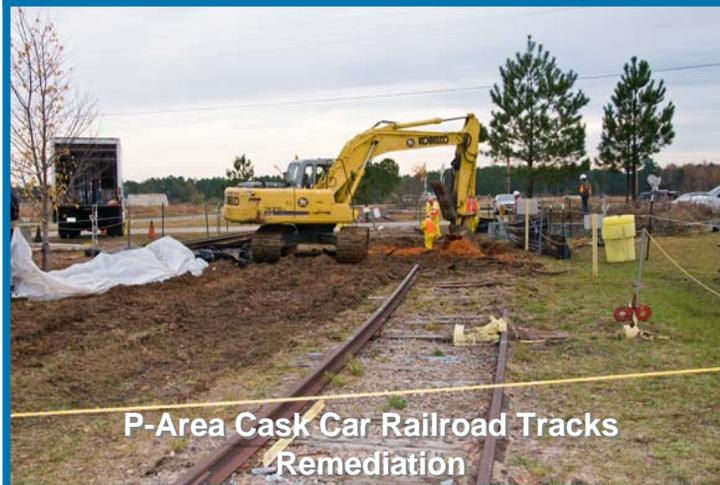
P-Area Cask Car RR Tracks Remedial Action



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





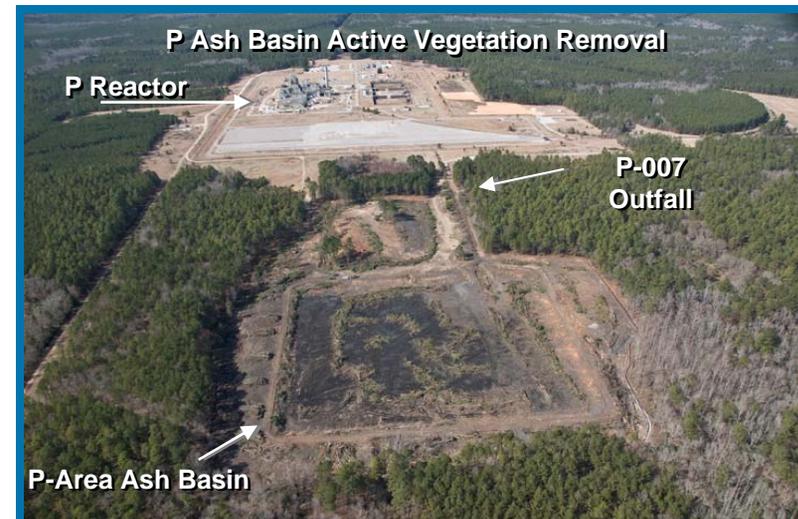
P Area Batch Plant Mobilization





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.**

