



U.S. DEPARTMENT OF

ENERGY

Savannah River Site

Savannah River Site Citizens Advisory Board

P-Area Operable Unit (PAOU) & R-Area Operable Unit (RAOU) Update

Presentation By

Ray Hannah

Deputy Federal Project Director

Office of the Assistant Manager for Closure Project

Department of Energy

Savannah River Operations Office

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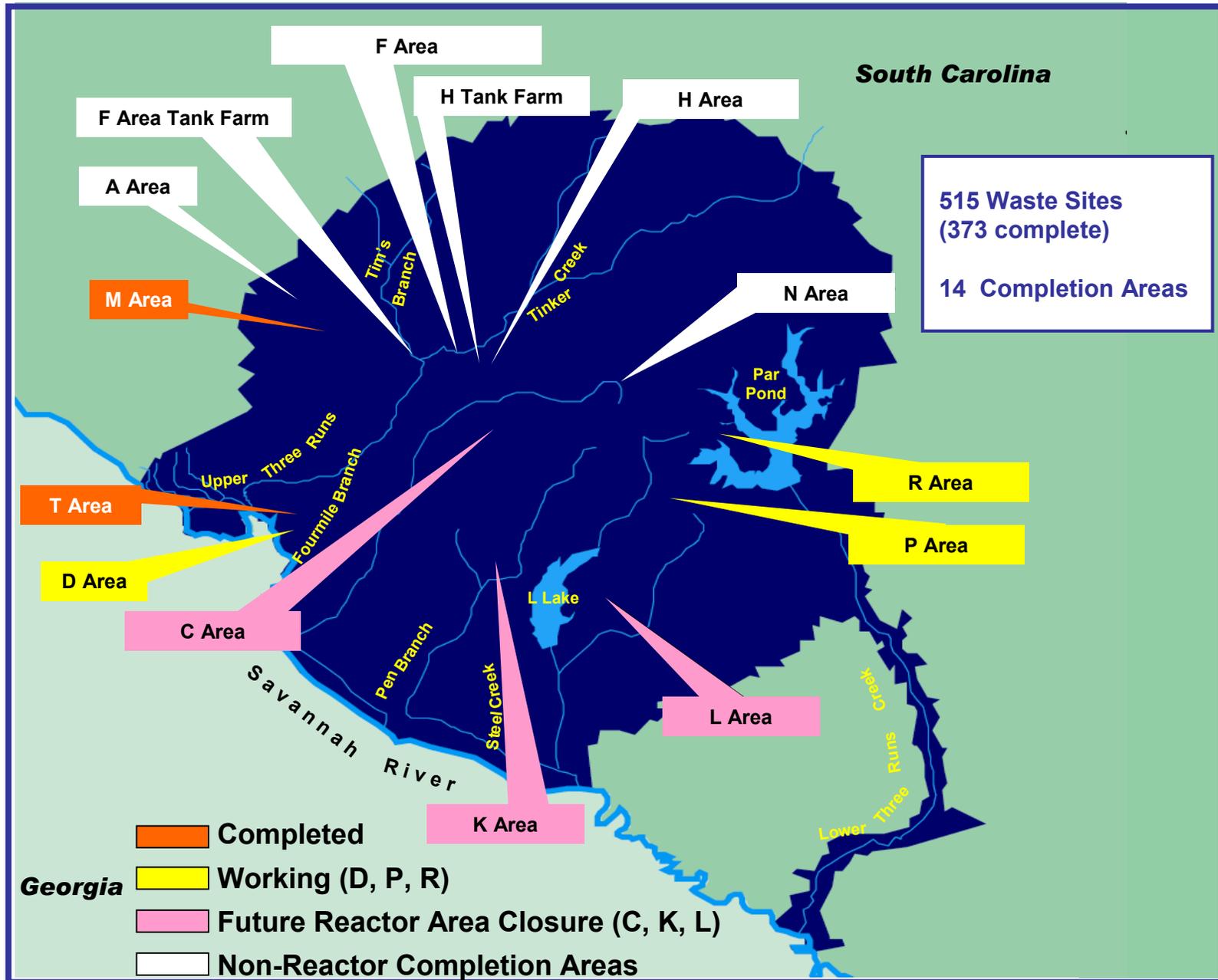
Agenda

- **P and R Area Operable Units Background**
- **Area Completion Objectives**
- **Scope**
- **Accomplishments**
- **Photo Gallery**
- **Conclusion**

List of Acronyms

- **D&D** **Deactivation and Decommissioning**
- **GPP/OPS** **General Plant Projects / Operations**
- **PAOU** **P-Area Operable Unit**
- **RAOU** **R-Area Operable Unit**
- **PSA** **Potential Source Area**
- **TPC** **Total Project Cost**

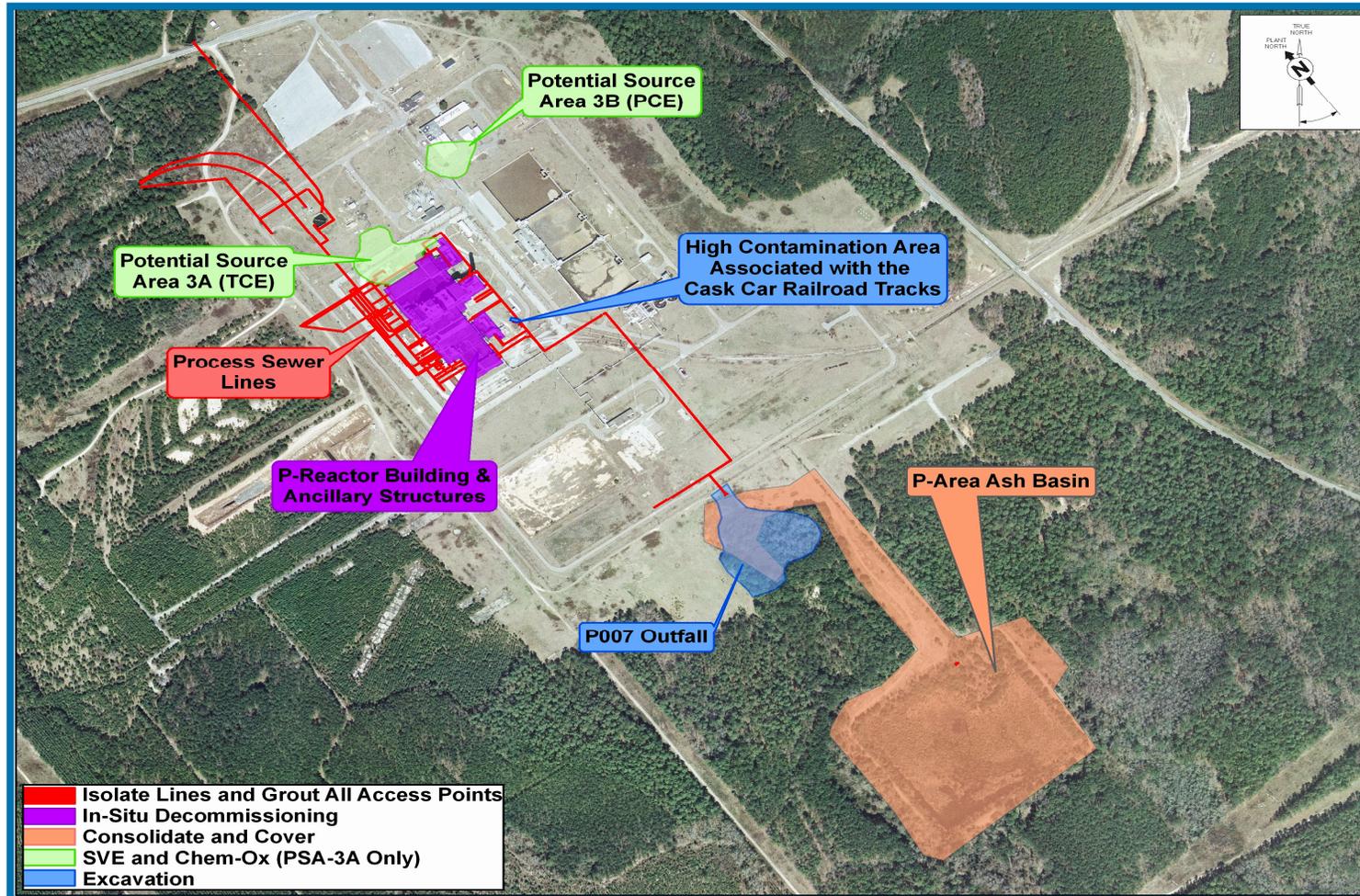
Area Completion Approach



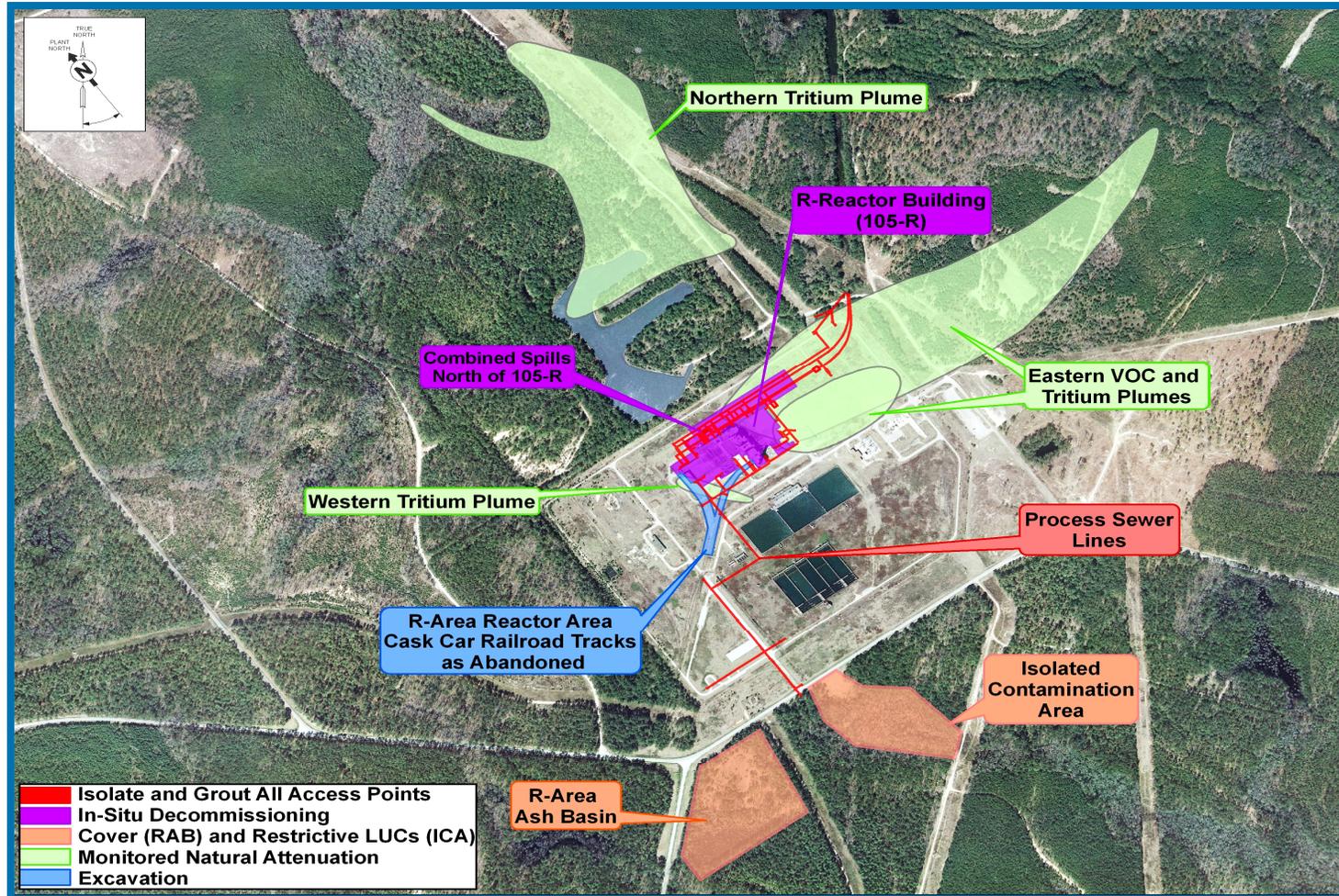
P and R Area Operable Unit Background

- **P Reactor operated from 1954-1988; R Reactor operated from 1953-1964**
- **Each operable unit comprises over 100 acres and includes waste units, and at one time, multiple buildings and ancillary structures that have been decommissioned**
- **Facilities in the areas included the reactor building, maintenance buildings, administrative building, cooling water basin, pump house, and a coal fired power house**
- **Reactors were the operational centerpiece of the area and its purpose was to produce special nuclear materials for national defense**
- **Operable units are the first reactor areas to be addressed under the area completion process**

PAOU



RAOU





Operable Unit Completion Objectives

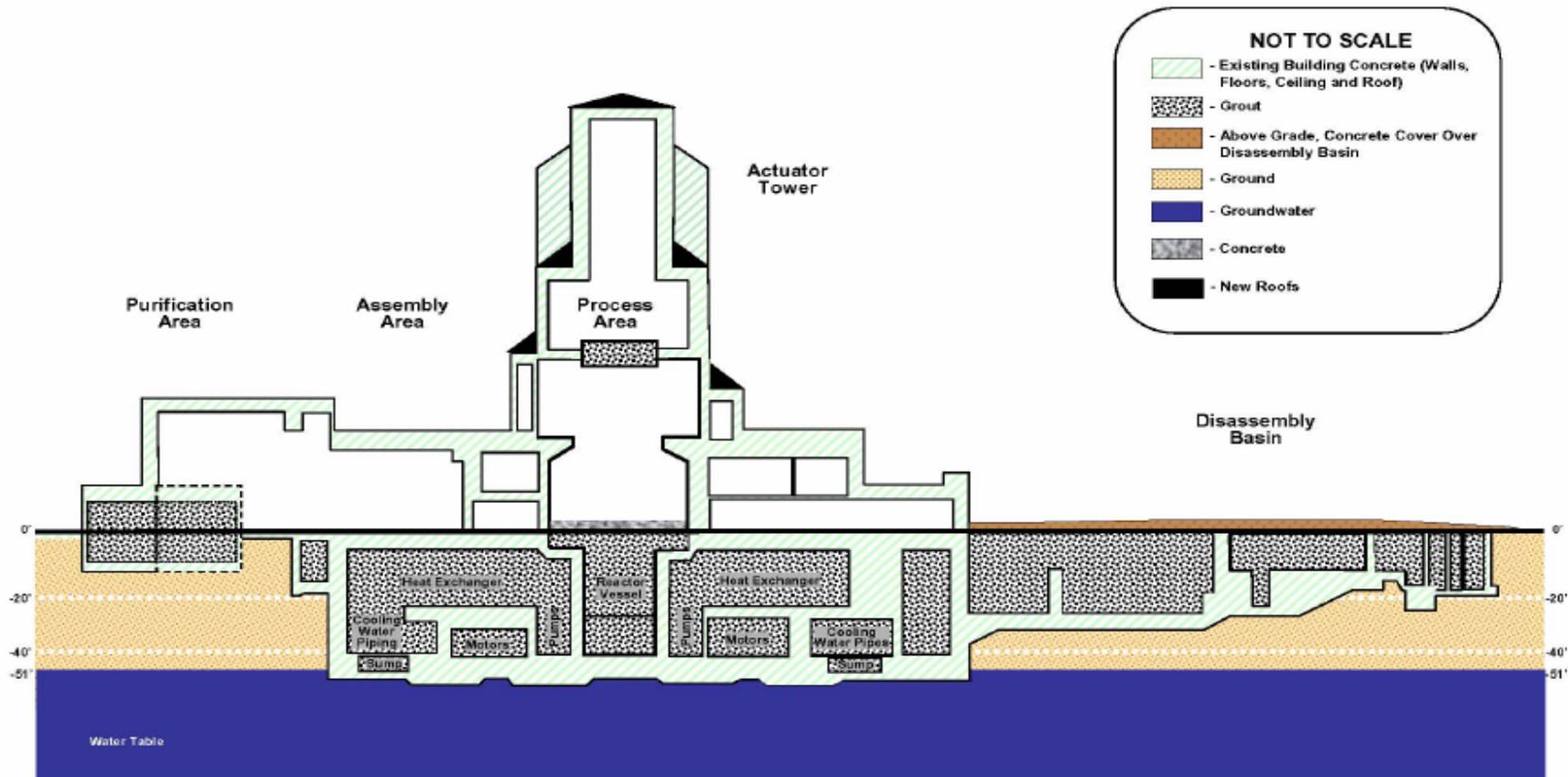
- **Remediate waste units requiring action**
- **In-Situ Decommission Reactor Building**
- **At completion, Operable Unit will be safe for industrial reuse**

Operable Unit Scope

- **The projects are being safely performed as part of the Recovery Act funding. Scope includes:**
 - **D&D of each Reactor Building**
 - **The placement of approximately 120,000 cubic yards of grout within the reactor building and Disassembly Basin**
 - **The removal of the Disassembly Basin wing and concrete cap installation over that footprint**
 - **Ventilation Stack and Gantry Crane removal**
 - **Roof modifications and sealing of building**
 - **Evaporation of four million gallons of water from the P-Reactor Disassembly Basin (R Reactor complete)**

Operable Unit Scope (continued)

Reactor In-Situ End-State Cross Section



Operable Unit Scope (continued)

- **PAOU**

- **Remediate waste units requiring action:**
 - **Cask Car Railroad Tracks (radiological contamination)**
 - **PSA-3A and 3B waste units (solvent contamination)**
 - **P007 Outfall (radiological contamination)**
 - **Process Sewer Lines (radiological contamination)**
 - **Ash Basin (spent coal ash including arsenic)**
- **Characterize groundwater**

- **RAOU**

- **Remediate waste units requiring action:**
 - **Cask Car Railroad Tracks (radiological contamination)**
 - **Process Sewer Lines (radiological contamination)**
 - **Area North of Reactor Building**
 - **Ash Basin (spent coal ash including arsenic)**
 - **Groundwater contamination (tritium & VOC plume)**
- **Construct drainage improvements**

Operable Unit Current Status

- **P Reactor**
 - **Removed Gantry Crane**
 - **Completed Disassembly Basin water evaporation**
 - **Deactivation complete**
 - **Placed over 80,000 cubic yards of grout in building**
 - **Initiated roof modifications**
 - **Prepping for stack removal**
- **R Reactor**
 - **Removed Gantry Crane**
 - **Placed over 28,000 cubic yards of grout in Disassembly Basin and prepping Basin wing for dismantlement and removal**
 - **Completed moderator draining**
 - **Deactivation ongoing**
 - **Initiated grout placement within building**
 - **Prepping for stack removal**

Operable Unit Current Status (continued)

- **PAOU**

- Completed Cask Car Railroad Track remediation
- Completed well installation at PSA-3A/3B
- Awarded Process Sewer Line contract
- Completed P Ash Basin 30-acre vegetation removal and soil stockpiling

- **RAOU**

- Completed Cask Car Railroad Track remediation
- Completed monitor well installation for Groundwater
- Initiated Process Sewer Line remediation
- Completed drainage improvements on southern portion and initiated at northern portion
- Awarded contract for R Ash Basin and initiated 17-acre soil cover placement

Photo Gallery

R-Area Cask Car Railroad Track Completion



R-Area Ash Basin Soil Cover Placement



P-Area PSA-3B Solar Panels



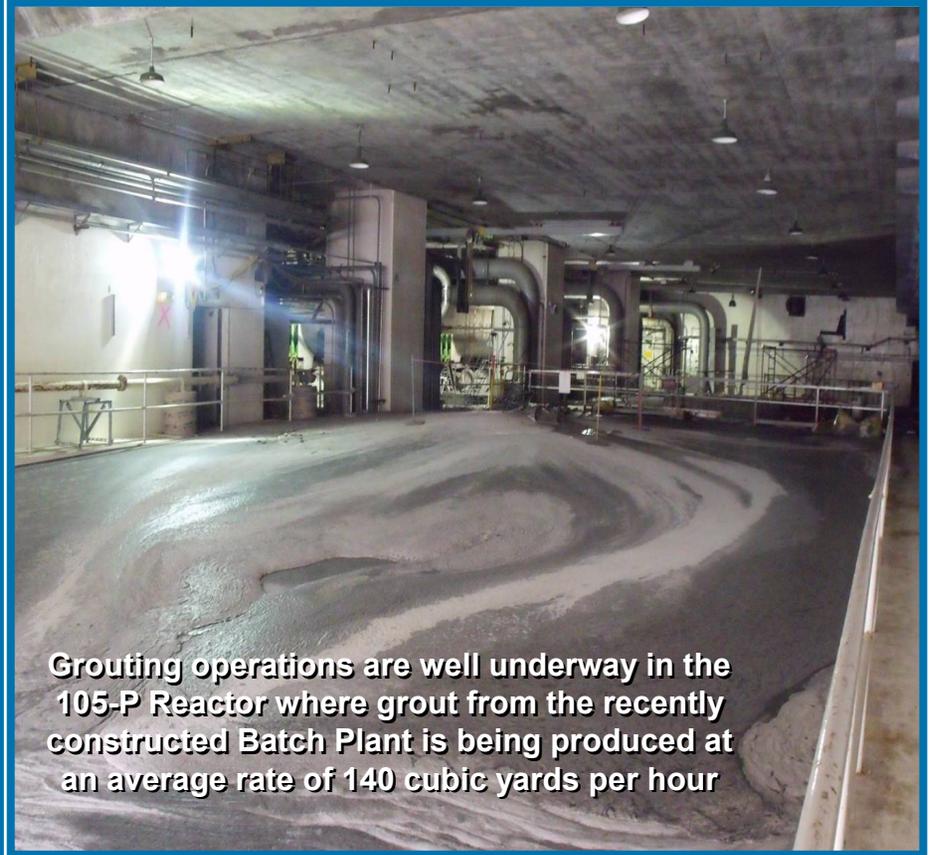
R-Reactor HEPA Filter Removal



P Area with Grout Plant Operational



P Reactor Grouting Operations



Grouting operations are well underway in the 105-P Reactor where grout from the recently constructed Batch Plant is being produced at an average rate of 140 cubic yards per hour

R-Reactor Disassembly Basin Grouting



Reactor Initial State



Reactor End State





Conclusion

- **Work is being performed safely**
- **Executing Reactor decommissioning scope and waste unit remediations**
- **Projects are performing well and are on schedule for field completion in December 2011**