Savannah River Site Citizens Advisory Board

Heavy Water Components Test Reactor (HWCTR) Update

Presentation By

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Agenda

- Heavy Water Components Test Reactor (HWCTR) Background
- Completion Objectives
- Scope
- Accomplishments
- Photo Gallery
- Conclusion

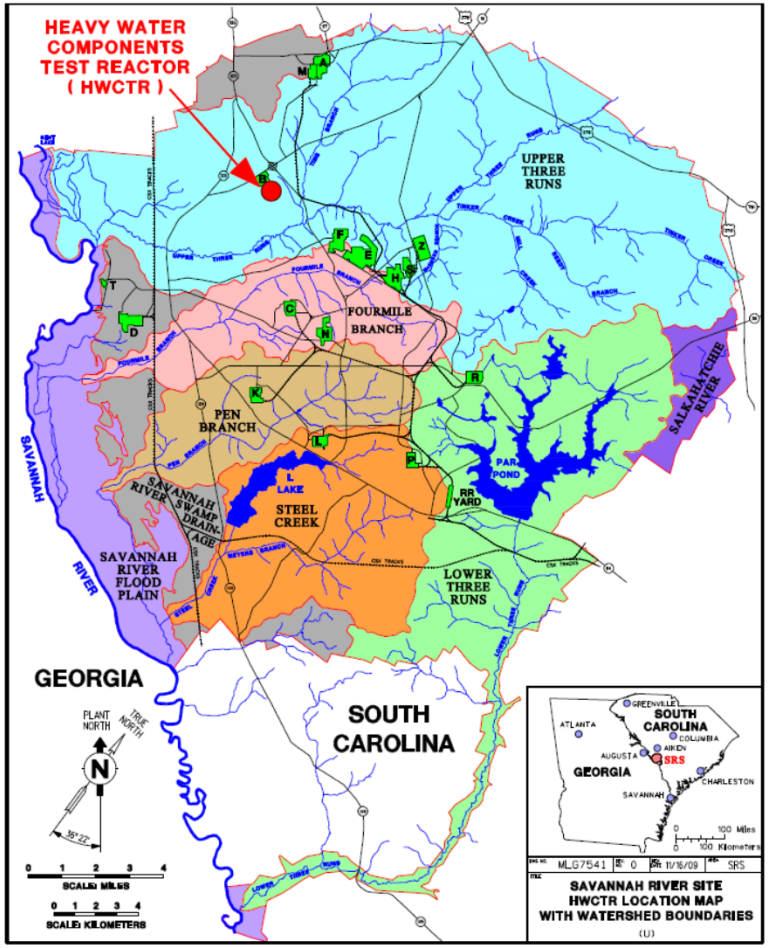
List of Acronyms

- **ARRA** American Recovery and Reinvestment Act
- **D&D** Deactivation and Decommissioning
- **EE/CA** Engineering Evaluation/Cost Analysis
- **HWCTR** Heavy Water Components Test Reactor
- **KPP** Key Performance Parameters
- **M** Million
- **RSER** Removal Site Evaluation Report

Purpose

To provide a status update on the Heavy Water Components Test Reactor (HWCTR) to the Facilities Disposition and Site Remediation Committee

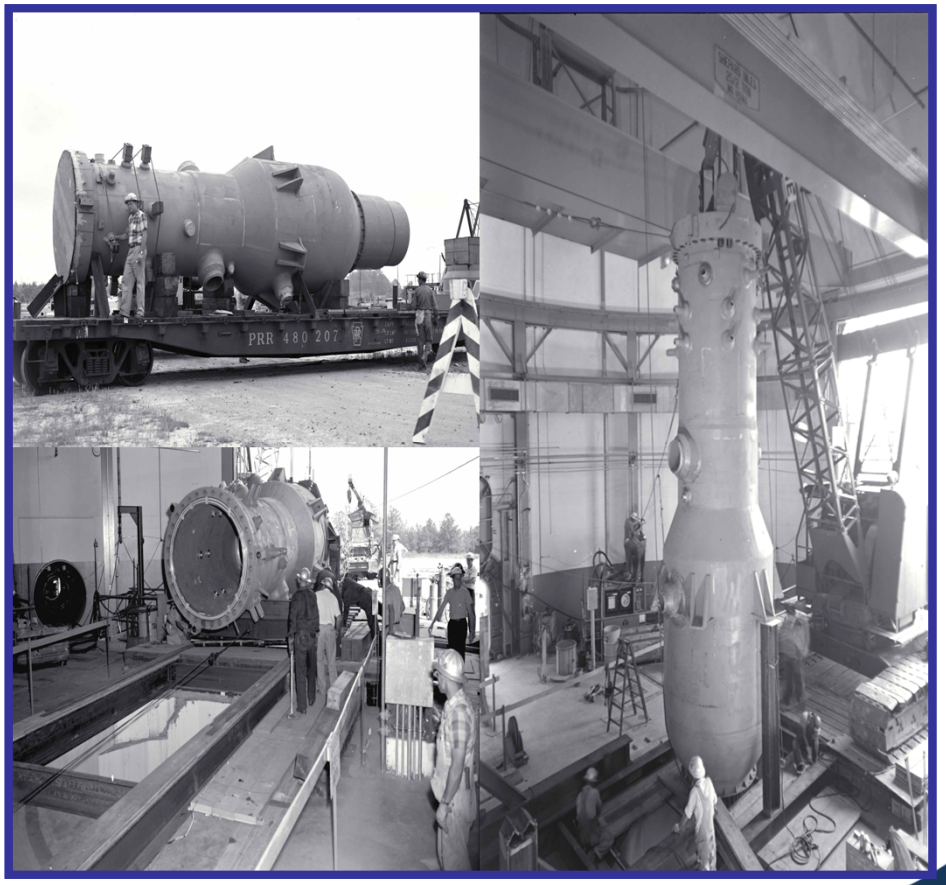
HWCTR Location on the Savannah River Site



Background

HWCTR was built to test the concept of heavy water moderated reactors for the civilian power industry (circ 1960)





Background *continued*

- **1965**
  - **Retired in place with controlled access**
- **1975-1976**
  - **Decommissioning plans considered**
  - **Postponed due to budget constraints**
- **1994-1997**
  - **Second attempt to D&D**
  - **Budget constraints again**
  - **Auxiliary buildings removed**
  - **Placed in extended surveillance mode**



Background - Panorama view showing inside of HWCTR at Ground Level



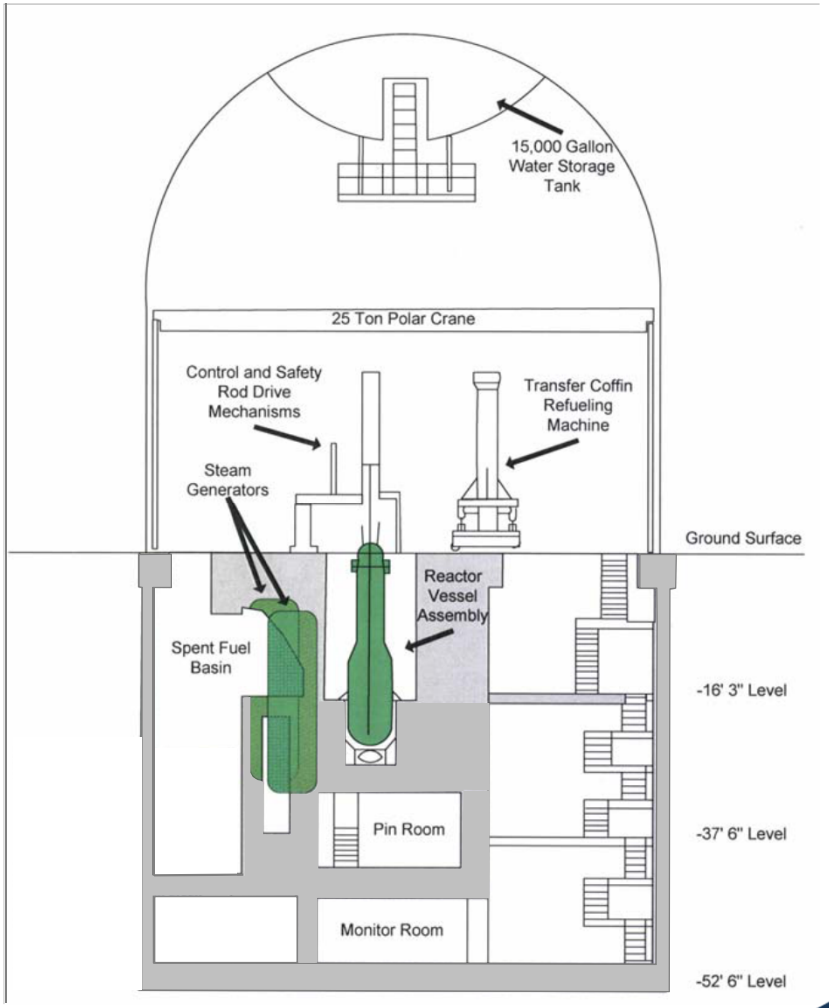
Completion Objectives

- **Achieve Human Health and Environmental Protectiveness by removing approximately 99% contamination**
  - **Meets standards for industrial worker**

- **Final Decommissioned End State**
  - **In-Situ Decommissioning with Reactor Vessel and 2 Steam Generators removed and disposed E-Area trenches on site**

Scope

- **Major Work Activities**
  - **Drain all liquids and isolate all hazardous energy**
  - **Remove and dispose the metal dome**
  - **Remove and dispose the reactor vessel**
  - **Remove and dispose the two steam generators**
  - **Grout the spent fuel pool**
  - **Grout the below-grade areas of the building, including remaining piping and equipment**
  - **Install a concrete cover over the remaining grouted structure**



Scope - Conceptual Site Model of In-Situ Decommissioning with Reactor Vessel and Steam Generators Removal

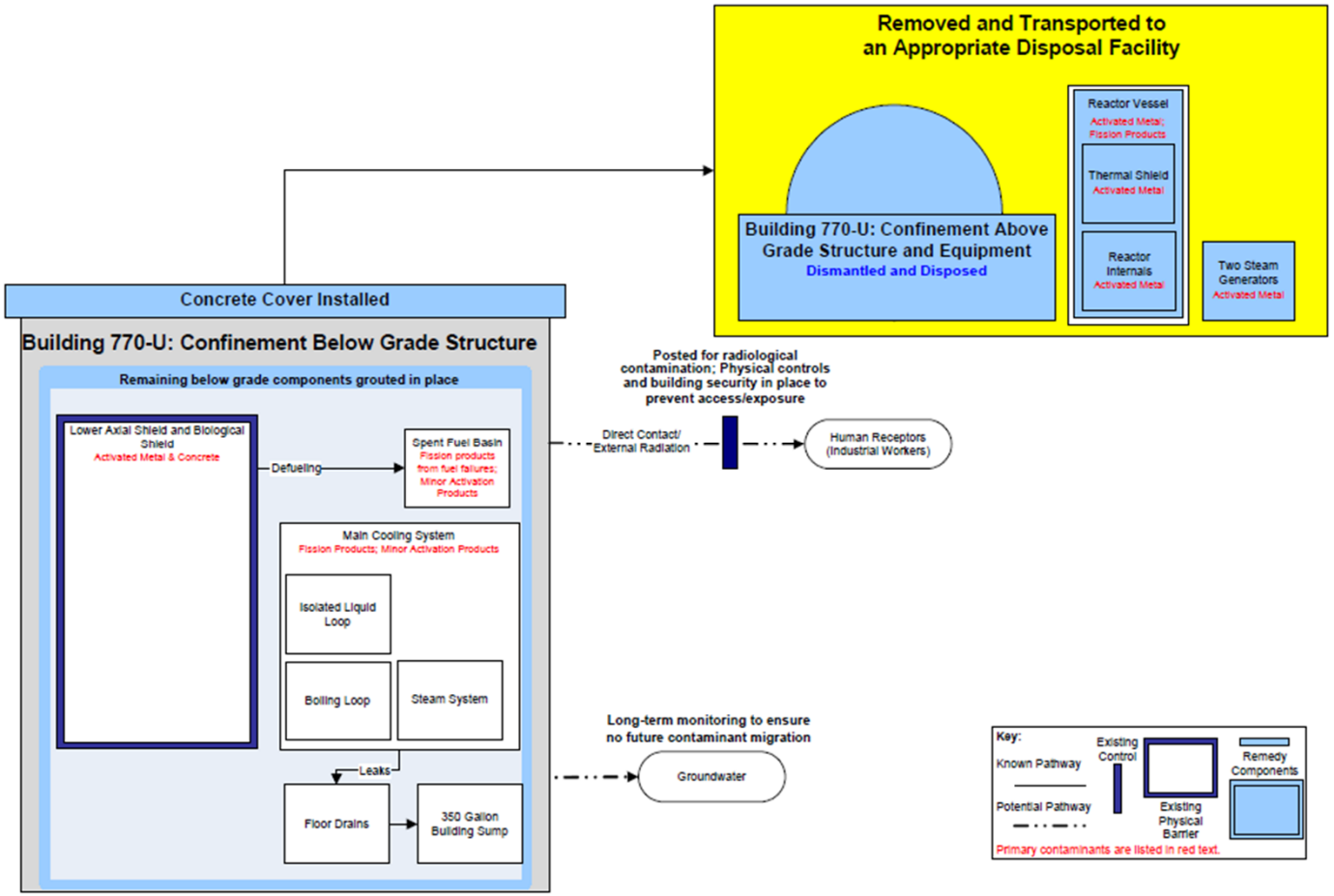
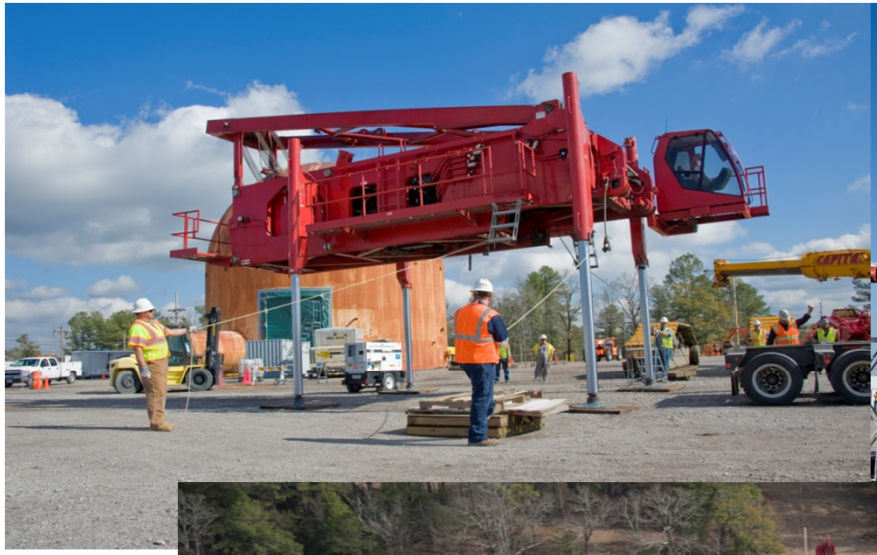


Photo Gallery

Block Removal



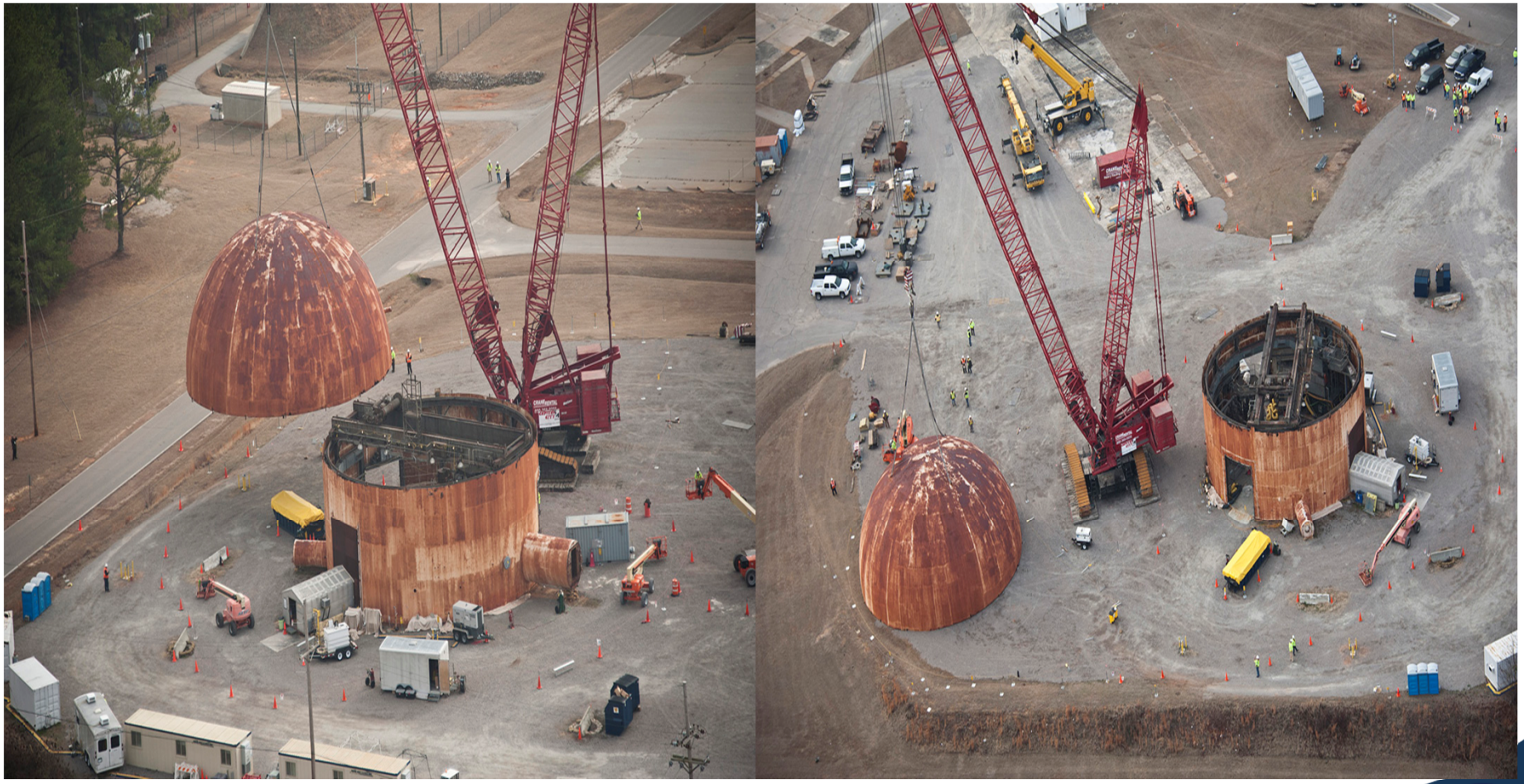
Crane Assembly







Dome Removal



Steam Generator Removal





Reactor Vessel Removal





Relocation of Transfer Coffin



Dome and Wall Shearing



Completed HWCTR Concrete Cap



Conclusion

- Work has been performed safely
- Projects are mechanically completed and completed ahead of schedule in July 2011 and below cost

Cost Backup (Total Project Cost)

	Original TPC ($ Million)	Actual TPC ($ Million)
HWCTR Decommissioning	10.7	8.77