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 (circa 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

2009
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
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)

<table>
<thead>
<tr>
<th>HWCTR Decommissioning</th>
<th>Original TPC ($ Million)</th>
<th>Actual TPC ($ Million)</th>
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<tr>
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<td>10.7</td>
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