



U.S. DEPARTMENT OF

ENERGY

Savannah River Site

**A Presentation to the
Savannah River Site
Citizens Advisory Board**

Heavy Water Components Test Reactor (HWCTR) Update

Presentation By

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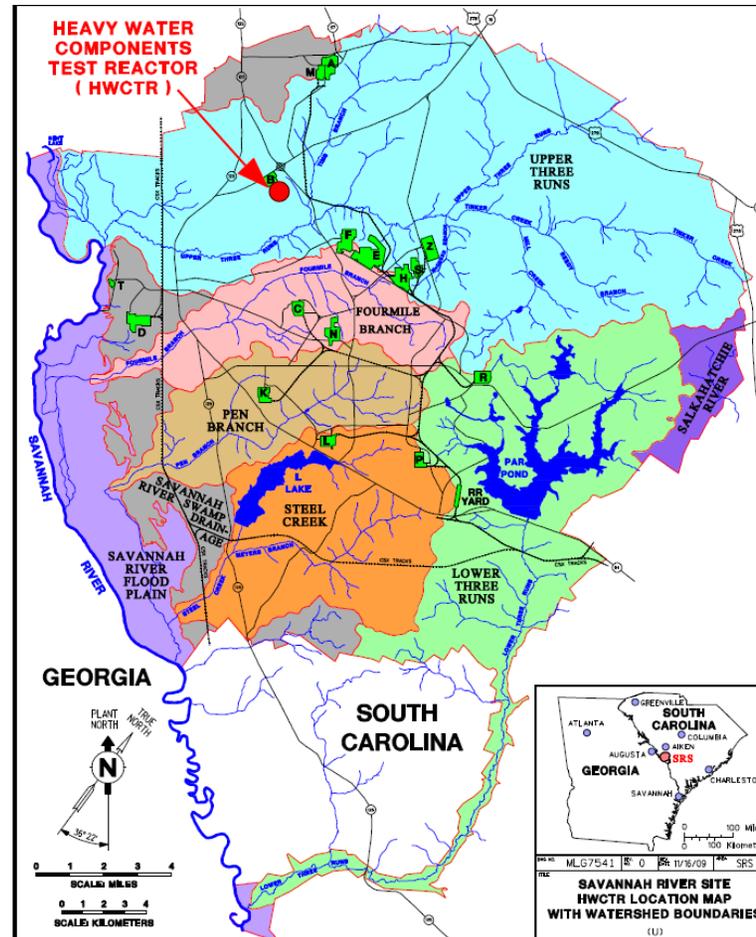
Agenda

- **Heavy Water Components Test Reactor (HWCTR)
Background**
- **Completion Objectives / Key Performance Parameters**
- **Scope**
- **Current Status**
- **Path Forward**

List of Acronyms

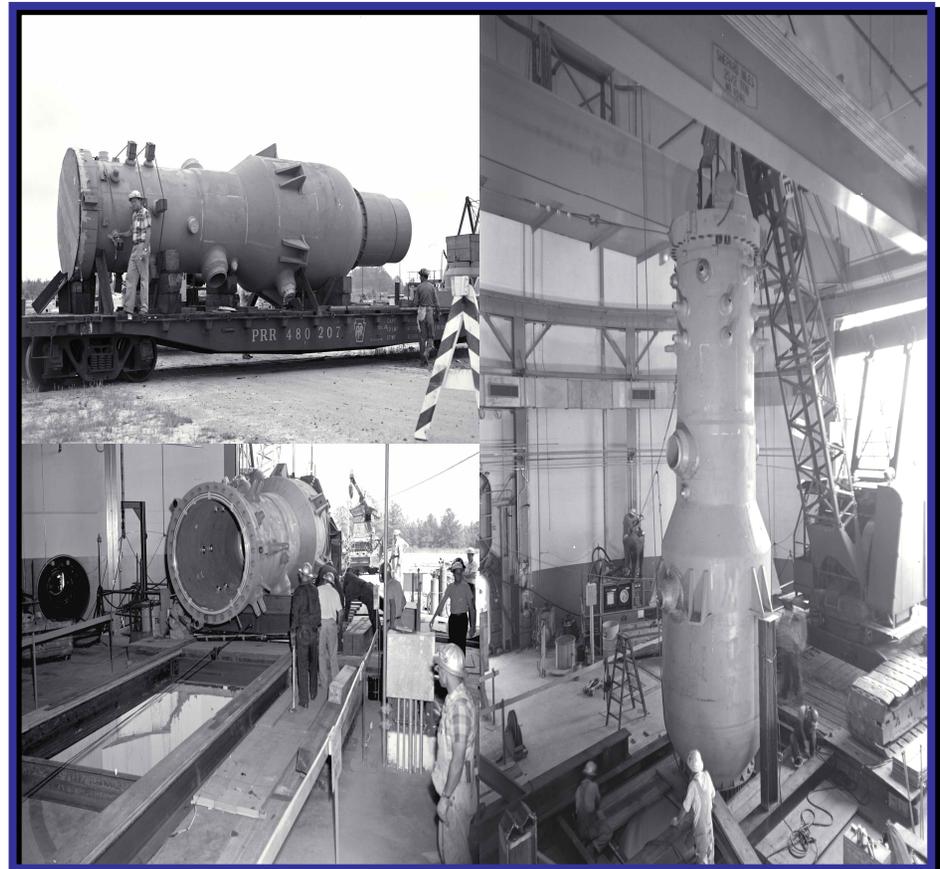
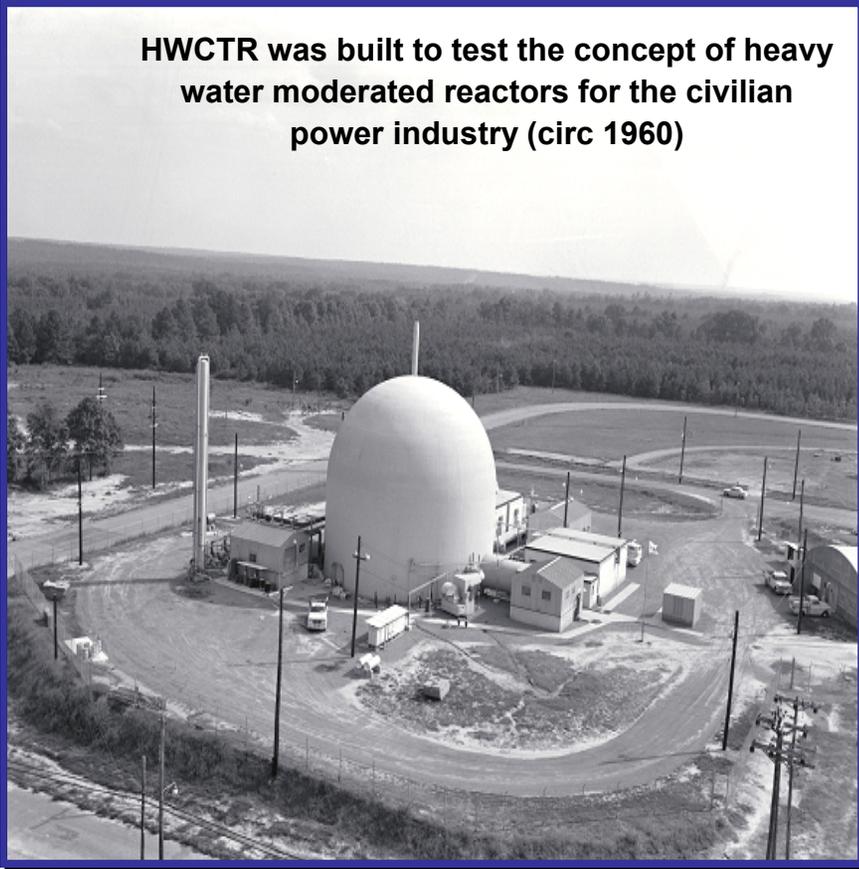
- **ARRA** **American Recovery and Reinvestment Act**
- **D&D** **Deactivation and Decommissioning**
- **EE/CA** **Engineering Evaluation/Cost Analysis**
- **HWCTR** **Heavy Water Components Test Reactor**
- **KPP** **Key Performance Parameters**
- **M** **Million**
- **RSER** **Removal Site Evaluation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

HWCTR Location on the Savannah River Site



Background *continued*

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



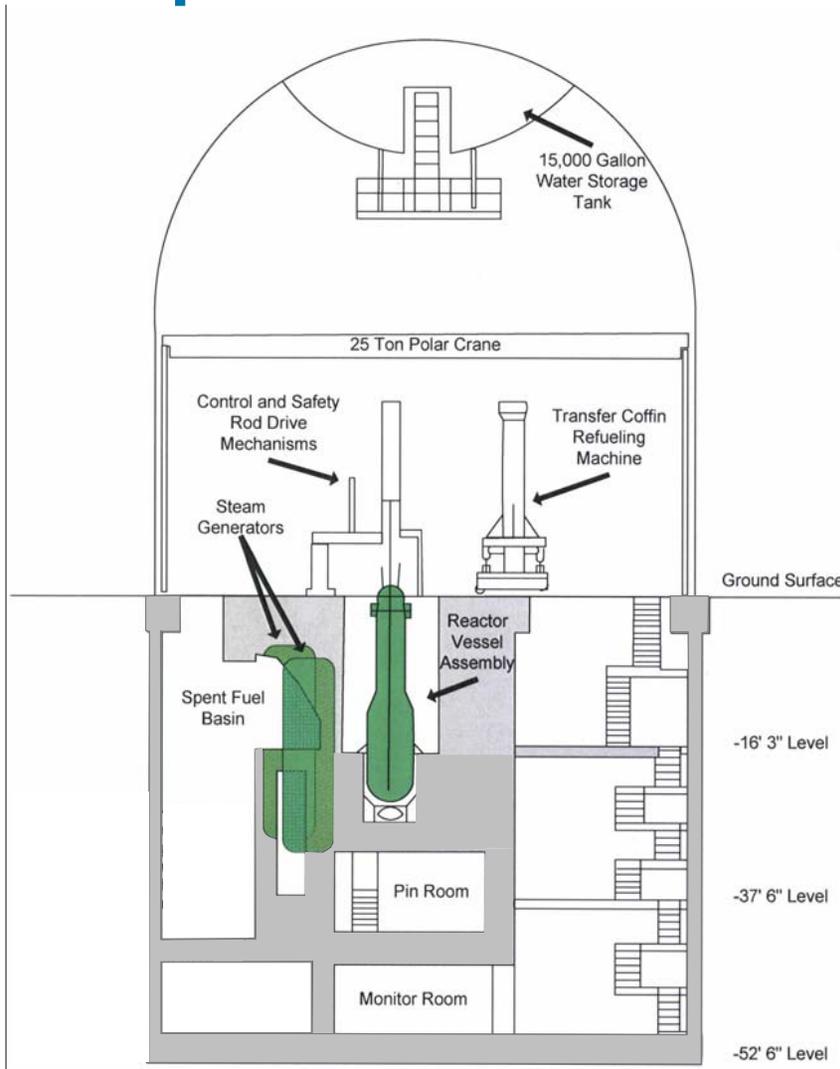
Background - Panorama view showing inside of HWCTR at zero elevation



Completion Objectives / Key Performance Parameters

- ❖ **Achieve Human Health and Environmental Protectiveness by removing approximately 99% contamination**
 - **Meets standards for industrial worker**
- ❖ **Final Decommissioned End State**
 - **Achieve Mechanical Completion**
 - **Final walk-down inspection is completed, including close-out of punch list**
 - **Regulatory acceptance is documented**

Scope

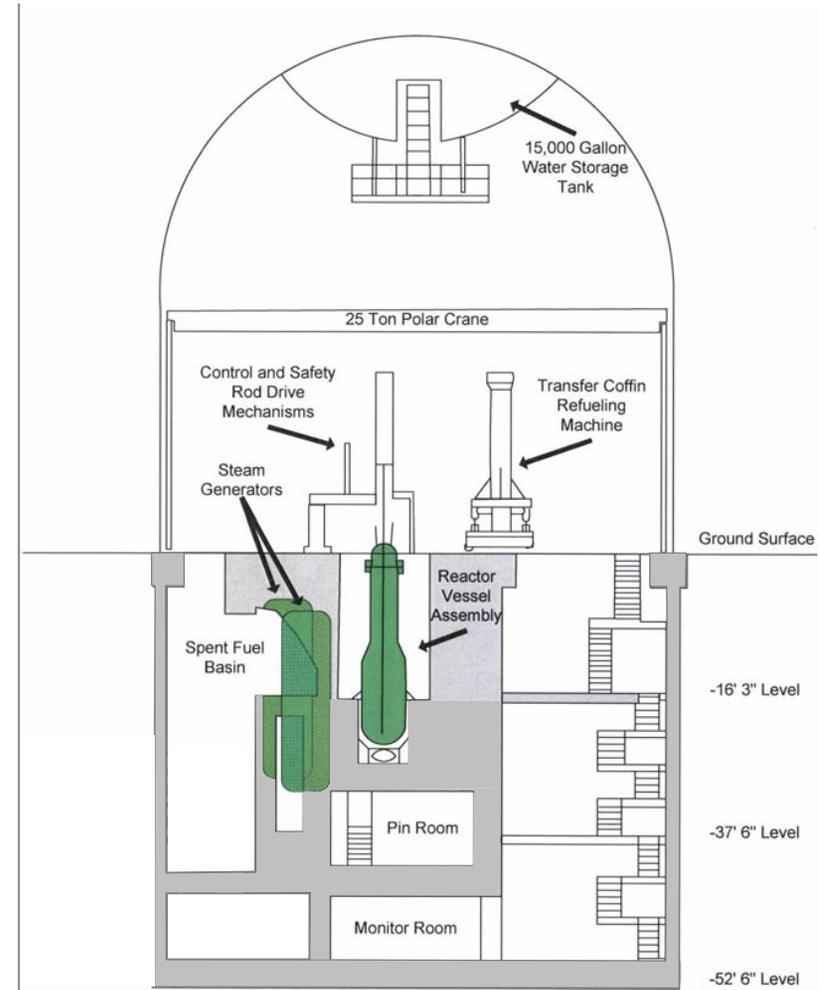


- ❖ **Project being performed as part of Recovery Act funding for \$10.7M**
- ❖ **End State: *In Situ* Decommissioning with Reactor Vessel and 2 Steam Generators removed**

Scope continued

❖ 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



Current Status





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Current Status - Cutting of two access doors





Path forward

- ❖ **Asbestos Abatement at Reactor Vessel head (June 10, 2010 complete)**
- ❖ **Start removal of concrete blocks and cutting piping around Reactor Vessel (August 10, 2010)**
- ❖ **Cut and remove dome for heavy lifts (December, 2010)**
- ❖ **Rig and remove Polar Crane and Trolley (January, 2011)**
- ❖ **Remove Reactor Vessel and load on transport frame (January, 2011)**
- ❖ **Remove and disposition 2 Steam Generators (January, 2011)**
- ❖ **Move Fuel Transfer Vessel Coffin to Reactor Vessel void (February, 2011)**



Path Forward – continued

- ❖ **Grout below grade building areas (March 2011)**
- ❖ **Concrete cover over remaining grouted area (May, 2011)**
- ❖ **Decommissioning complete (July 2011)**

