U.S. Department of Energy
Environmental Management Recovery Act
Keeping You in the Know
NEWS FLASH
November 17, 2010

Brookhaven Lab Makes Strides in Reactor Decommissioning

"Thanks to the Recovery Act funding we received, we were able to begin the next important phase of the Brookhaven Graphite Research Reactor decommissioning project – the removal of the bioshield. We are confident we will bring this challenging task to a safe and successful conclusion in 2011."

-- Brookhaven National Laboratory Environmental Restoration Projects Director Chuck Armitage

UPTON, N.Y. – American Recovery and Reinvestment Act workers at Brookhaven National Laboratory are busy dismantling a 4,760-ton bioshield made of concrete and steel that wrapped around the world's first reactor built solely for peaceful research purposes.

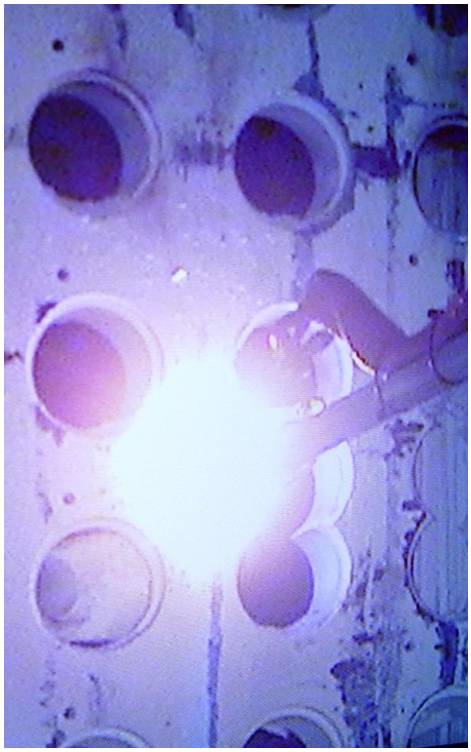
The workers are expected to finish removing the shield in May 2011, bringing the Lab closer to completing the decommissioning of the Brookhaven Graphite Research Reactor, one of two major environmental cleanup projects at the Lab funded by $71 million from the Recovery Act. Completion of the Recovery Act projects will end Office of Environmental Management legacy cleanup activities at the Lab.

The shield was designed to protect personnel from radiation emitted from a highly radioactive, 700-ton graphite pile at the reactor's core. Recovery Act workers safely removed the pile earlier this year. Cranes moved sacks filled with more than 60,000 graphite blocks into steel containers that were shipped to the Nevada National Security Site for disposal.

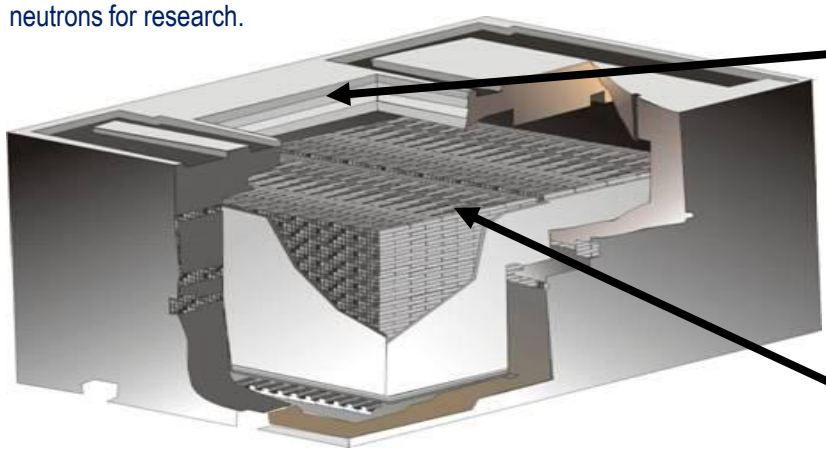
Workers also will build an impermeable cap over the grounds of the reactor building to prevent rain and other moisture from potentially infiltrating contaminated soil.

The reactor operated from 1950 to 1968. The reactor produced large quantities of neutrons, a type of subatomic particle. Scientists used the neutrons to study the atomic structure of a wide range of materials, leading to advances in physics, materials science, and medicine.

In another Recovery Act milestone this year, the Lab completed work allowing the High Flux Beam Reactor to enter into a hibernation of up to 65 years, the period needed for radiation levels to naturally decay so the reactor can be demolished. Workers removed contaminated underground utilities from the reactor, which operated from 1965 to 1996 and also produced neutrons for research.



A specially designed remote torch cuts through the bioshield.



A cutaway view of the Brookhaven Graphite Research Reactor

For more information on the Brookhaven National Laboratory, visit http://www.bnl.gov.