



U.S. DEPARTMENT OF ENERGY

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K East Reactor Stack Taken Down

ARRA Funding Removes Large Hanford Landmark from Along Columbia River

RICHLAND, WASH. – The [U.S. Department of Energy](http://www.doe.gov) (DOE) used \$420,000 in American Recovery and Reinvestment Act (Recovery Act) funds to safely bring down the K East Reactor's 175-foot-high exhaust stack on Friday, July 23, 2010, at the Hanford Site in southeastern Washington State.

“This was a safe demolition—a credit to how well the team planned and prepared this project,” said Tom Teynor, DOE's Federal Project Director for the K Basin Closure Project. “Taking down the stack clears the way for additional demolition work in the 100-K Area and forever changes the Hanford skyline.”

In addition to the exhaust stack, the explosive demolition brought down heavy equipment inside the K East Reactor, including counterweights and overhead cranes that had been used during reactor operations.

DOE's Central Plateau contractor, [CH2M HILL Plateau Remediation Company \(CH2M HILL\)](http://www.ch2mhill.com), safely removed the stack using explosive demolition on both the structures and components. A small amount of explosives acted as a catalyst and allowed gravity to do the work in collapsing the stack and other equipment.

CH2M HILL is performing decommissioning and demolition activities on the buildings near the K East Reactor in preparation for an anticipated decision on final disposition of the reactor.

The safety benefits of using explosive demolition include:

- eliminating the need to perform work at extreme heights to dismantle equipment,
- eliminating the need to access hard-to-reach locations,

- eliminating the need for heavy equipment use in a congested area,
- reducing the need for critical lifts of heavy components with cranes during demolition,
- reducing the total number of hours needed to perform the work.

CH2M HILL and its small business subcontractors, Clauss Construction and Controlled Demolition, Inc., worked together to prepare for the demolition project. Controlled Demolition, Inc. demolished the structures under CH2M HILL oversight. Workers spent more than four months preparing for the work.

Crews participated in work planning including numerous walk downs, safety briefings, Hazard Review Board meetings, and structural inspections. Engineering teams also provided additional engineering controls to ensure structural integrity was maintained during the demolition.

The blast removed some exterior siding on the reactor building. Some damage to panels was expected, because the siding on the 1950s-era reactor is old and fragile. Panels near the ground had been removed prior to demolition but DOE and CH2M HILL chose to not increase risks to workers by having them remove panels higher up on the building. More panels came off than expected, but surveys of the building haven't indicated any structural damage. The area has been surveyed and no contamination was found to be spread as a result of the demolition.

“Safety is always the priority when planning any demolition but this project required extra controls,” said Kurt Kehler, CH2M HILL decommissioning and demolition vice president. “The demolition was a success. The stack fell exactly where we anticipated it would fall.”

Crews will conduct cleanup of the explosion debris and continue deactivation activities in the reactor building after an engineering walk down confirms it is safe for workers to enter the facility.

The K East and K West Reactors are located about 400 yards from the Columbia River, which runs through the Hanford Site. The reactors were built in the 1950s during a Cold War buildup of plutonium production to support U.S. defense. The K East Reactor operated until 1971. A spent fuel basin attached to the reactor was reactivated and stored irradiated fuel from Cold War operations at another Hanford reactor through 2004. Removal of the irradiated fuel, associated radioactive sludge and debris, and the basin itself in 2009 was critical to cleanup along the river, because it provided crews access to contaminated soil underneath the basin.

Friday's demolition of the reactor stack and equipment inside the reactor building is a step toward dismantling the external footprint of the reactor. DOE is evaluating whether it will dismantle the reactor or place the facility in interim safe storage, a process called “cocooning” that has been completed on five other reactors at Hanford.

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