



U.S. DEPARTMENT OF **ENERGY**

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SRS Demolishes Massive Cooling Tower, Continues Progress on Environmental Footprint Reduction

(Aiken, S.C.) – The Savannah River Site’s (SRS) massive K Cooling Tower was safely demolished today as part of the Site-wide Footprint Reduction Initiative funded by the American Recovery and Reinvestment Act (ARRA).

As the second-largest cooling tower to be demolished worldwide, the 450 foot-tall and 345 foot-wide tower posed a unique challenge to SRS project managers and commanded the attention of even the most seasoned industry veterans.

“The Cooling Tower demolition project is unlike any other closure initiative taking place at the Site,” said Dewitt Beeler, Savannah River Nuclear Solutions (SRNS) director of Area D&D Projects. “It isn’t every day that we deal with the demolition of a structure the size of the K Cooling Tower, and it was clear early in the process that we needed expert help.”

After weighing a variety of demolition possibilities, SRS managers chose to hire American DND to complete the work. For the project American DND hired an experienced team from Controlled Demolition Inc. (CDI), a Maryland-based, family-owned company with more than six decades of experience in controlled demolitions.

CDI employees carefully planned each increment of work to prepare for D-Day, or Demolition Day.

In all, more than 3,860 holes were drilled at strategically selected spots on the tower and loaded with explosives. The charges were detonated in a controlled fashion involving precise sequencing and timing to ensure the tower fell in a selected impact-zone.

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Now that the tower has been brought to the ground, the rubble will be transported to an on-site landfill for permanent disposal.

“The demolition of the K Cooling Tower marks the achievement of a significant milestone in the Recovery Act mission at SRS. It has allowed us to create new jobs while reducing the site’s cleanup footprint,” said Rita Stubblefield, Deputy Federal Project Director for the Department of Energy.

Demolition of the tower – which was situated just east of K-Reactor and built in 1992 to cool the water in a reactor in support of national defense initiatives – moves SRS closer to its goal of achieving a 67% operational footprint reduction with the \$1.6 billion federal investment it received under the Recovery Act.

For additional information on the Department of Energy’s Office of Environmental Management and the Savannah River Site, can be found at <http://www.em.doe.gov> or <http://www.srs.gov>. For more information about the SRS Recovery Act Project, please visit www.srs.gov/recovery.

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Note to Editors and News Directors:

For photos and video of the demolition of K-Cooling Tower, please contact Paivi Nettamo, SRNS Public Affairs.

K Cooling Tower Fact Sheet

K Cooling Tower

- K Reactor was shut down in 1988. Due to defense-related needs, K Reactor was slated to be restarted, and a cooling tower was built just south of the reactor facility to cool the water used in nuclear production. However, although it was operational in 1992, this initiative never reached criticality due to the sudden ending of the Cold War, resulting in reduced defense-related needs.
- When K Reactor was shut down, the cooling tower became excessed. The pumps, motors, switch gears, and control rooms were removed or demolished. All that remains is the cooling tower concrete structure. After demolition, only the basin underneath will remain.
- K Cooling Tower was constructed in 1992 with 8-36-inch thick walls over a concrete basin that is 345 feet in diameter and 8 feet deep.
- The K Cooling Tower is approximately 455 feet tall by 330 feet diameter at the base.
- The tower contains approximately 13,000 cubic yards of concrete, which equates to more than 52 million pounds.
- The tower also contains approximately 19,500 cubic yards (approximately 200 truckloads) of PVC fill and PVC piping that helped to distribute the water within the tower.
- The tower includes approximately 1,600 tons of rebar, steel, stainless steel and other metals.
- All materials will be disposed of onsite at the SRS Construction & Demolition Debris Landfill.

Demolition of K Cooling Tower

- American DND is performing all coordination and on-site activities associated with the demolition. It is working with Controlled Demolition, Inc. (CDI), which is performing the implosion of the cooling tower with use of explosives, and LVI, which is providing equipment and operators for the size reduction, load-out and transportation of the debris to the SRS landfill.
- CDI is contracted to explosively implode the 450-foot tall hyperbolic cooling tower located in the K Area at the Savannah River Site.
- The 185-3K Cooling Tower will be the second largest hyperbolic cooling tower structure ever demolished worldwide. CDI also demolished the Trojan Cooling Tower, which stood 495 feet tall at the PGE Trojan Power Facility in Rainier, Oregon.
- Explosives will be placed in 3,860 locations in the bottom 250 feet of the structure.
- A total of approximately 1,300 pounds of nitroglycerin-based explosives along with approximately 20,000 linear feet of detonating cord will be used to fell the tower in a controlled fashion into a predetermined fall area.
- Preparation of the tower for implosion commenced in the first week of April 2010. Explosives were delivered to the site on May 14, and assembly loading occurred on May 16.
- The implosion schedule is dependent upon weather conditions. It is scheduled to occur on the morning of Tuesday, May 25.