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Subject: DOE-SR UPDATE ... Savannah River Site's H Canyon Turns 60 Years Old

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The H Canyon Facility at the Department of Energy's (DOE) Savannah River Site (SRS) recently celebrated 60 years of service to the United States; first in producing nuclear materials in support of our nation's defense weapons programs and later, after the Cold War, helping to disposition and stabilize nuclear materials and spent nuclear fuel from legacy cleanup, and both foreign and domestic research reactors.

U.S. Congressman Joe Wilson, Department of Energy Deputy Assistant Secretary for Tank Waste and Nuclear Materials Management Ken Picha, SRNS President and CEO Carol Johnson, and Savannah River Site Manager Jack Craig, all spoke at a recent luncheon celebration for H Canyon employees and supporters. The speakers conveyed their gratitude to H Canyon employees for the Canyon's long history of contributing to the national defense by supplying products for the nation's needs, and urged for excellence in future operations.

"H Canyon has served our nation well for 60 years and today it remains the only operating production-scale shielded chemical separations facility in the country," said Energy Secretary Ernest Moniz. "Thanks to the hard work, creativity, and dedication of the men and women operating at H Canyon, the facility has stood the test of time as a national asset for large scale nuclear materials processing. It is a global asset for nuclear nonproliferation cooperation. The Department commends the H Canyon community for the essential work they are doing to strengthen our national security, nonproliferation efforts, and the safe disposition of nuclear material."

"For 60 years, the Canyon has supported this country's nuclear material needs," said Congressman Wilson. "There is no other place in the United States that has served our nation in this way. During the Cold War, it was involved with nuclear material production, significantly contributing to a victory for democracy. Today, H Canyon proves that it is a great asset to our nation by helping to keep nuclear materials in a safe and secure location, and I am grateful for their dedicated, capable employees."

Two recent key milestones were also celebrated; resumption of the HB Line mission to prepare surplus plutonium for disposition and readiness to begin the Second Uranium Cycle, to start processing spent nuclear fuel.

H Canyon was originally constructed in the 1950s and began operations in 1955. For nearly 40 years, the facility separated and recovered plutonium, as well as uranium-235 and neptunium-237, from irradiated, aluminum-clad, enriched-uranium fuel assemblies from site weapons production reactors. The end of the Cold War in 1991 led to a significant change in the role of H Canyon, as this facility, once used to produce weapons-grade nuclear materials, was no longer needed for that purpose.

In April 1992, DOE issued a decision to stop operations at nuclear weapon production sites, including H Canyon and HB Line (located on top of the Canyon), as the future of the facilities was evaluated. However, in May 1994, the Defense Nuclear Facility Safety Board issued a recommendation to DOE, urging for a capability to stabilize legacy cold war materials, spent fuel and neptunium, throughout the U.S. DOE weapons complex, including SRS.

Several possibilities for stabilizing the legacy cold war material were evaluated, but in 1997 DOE issued the Phased Canyon Strategy that allowed H Canyon to begin stabilizing materials. Immediately upon issuance of the decision, H Canyon began dissolving Mk 16/22 spent nuclear fuel from SRS weapons production reactors. In the ensuing years since the 1997 restart, H Canyon and HB Line have completed stabilization of various other nuclear materials.

In 2001, an Interagency Agreement was signed between DOE and the Tennessee Valley Authority (TVA). Under the agreement, DOE was to provide low enriched uranium (LEU) to TVA for use to generate power. In 2003, H Canyon began blending DOE-owned highly enriched uranium (HEU) with natural uranium to form a LEU solution suitable for conversion to fuel. This fuel could then be used in commercial power reactors operated by TVA. Initial shipments began to TVA's vendors starting in July 2003, and culminated in their generation of electricity from SRS uranium starting in April 2005. To date, 335 trailers of LEU have been shipped to TVA. That amount of LEU is enough to provide power for all the homes in South Carolina for 8.5 years or every home in the U.S. for 47 days. The amount of HEU blended down to date is equivalent to nearly 600 nuclear weapons. The disposition of LEU helps meet environmental cleanup and nuclear nonproliferation goals.

Today, H Canyon is preparing for a future LEU blenddown campaign. It recently restarted the Second Uranium Cycle, the third process in purifying and decontaminating the uranium, for the first time in more than a year.

H Canyon is also being used as a Test Bed for new technologies in the spent nuclear material field. Initially started for safeguards and nonproliferation purposes, the purpose of the test bed has been expanded to include special nuclear material accountability, environmental monitoring and compliance, and improved process control.

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