The history of the SRS H Canyon

Located at the U.S. Department of Energy's (DOE) Savannah River Site (SRS), H Canyon's interior resembles a canyon because the processing areas resemble a gorge in a deep valley between steeply vertical cliffs. It is 1,028 feet long, 122 feet wide and 71 feet tall, with several levels to accommodate the various stages of material stabilization.

H Canyon was originally constructed in 1950 to produce nuclear materials in support of our nation's strategic defense weapons systems.

The facility's operations historically recovered uranium-235 (U-235) and neptunium-237 (Np-237) from aluminum-clad, enriched-uranium fuel tubes from Site nuclear reactors and other domestic and foreign research reactors using a chemical separations process.

The U-235 was recycled as fuel in SRS reactors, and Np-237 was irradiated in the reactors to create plutonium-238, the heat source in the radiologic thermo-electric batteries in NASA's deep-space probes.

In 1992, DOE concluded that recovery of enriched uranium for reuse in weapons programs was no longer necessary because of the reduction in the nation's nuclear weapons stockpile.

However, there was an inventory of highly enriched uranium (HEU) fuels and solutions in various stages of the SRS process. Through the remainder of the 1990s, H Canyon continued chemical separation operations to stabilize and manage the remaining HEU inventory.

In 2003, the HEU Blend Down campaign began, which turned HEU into low enriched uranium for use as fuel in the Tennessee Valley Authority power reactors to generate electricity.

From 2006 to today, H Canyon has completed a number of missions to disposition the large inventory of used nuclear fuels from foreign and domestic research reactors and excess enriched uranium and plutonium bearing materials across the DOE complex.

Today, this facility is the nation's only hardened nuclear chemical separations plant still in operation.

It is playing an important role in the efforts to eliminate or minimize nuclear materials, spent nuclear fuel, and waste left over from the legacy of its earlier production activities. It also stands ready with the versatility to sustain radioactive operations into the future.