

Facts

from the
Savannah River Site

ENVIRONMENTAL STEWARDSHIP • NUCLEAR SECURITY • SCIENCE AND ENERGY

K Area Complex

The K Area Complex (KAC) provides for the handling and interim storage of our nation's excess plutonium and other special nuclear materials (SNM). In addition, K Area is a component of the U.S. commitment to international nonproliferation efforts to store plutonium in a safe and environmentally sound manner. The Savannah River Site (SRS) is the recognized leader for managing the plutonium surveillance program throughout the Department of Energy (DOE) Complex.

The KAC is DOE's only Category 1 SNM storage facility designated for interim safe storage of plutonium at SRS. The principal operations building formerly housed K Reactor, which produced nuclear materials to support the United States during the Cold War for nearly four decades. It was the DOE's last operating production reactor, shutting down in 1992. The facility was chosen as the premier DOE Complex plutonium storage facility for several reasons:

- It underwent stringent, well-documented seismic and structural upgrades during the early 1990s.
- It is a robust building, constructed of concrete walls many feet thick.
- Much of the security infrastructure was already in place.
- Necessary modifications were relatively minor, compared to the alternative of constructing a new building.

SRS has assisted the DOE Complex in saving millions of taxpayer dollars through the consolidation of surplus plutonium from SRS's FB Line, as the Rocky Flats Environmental Technology Site in Colorado, the Hanford Site in Washington, Los Alamos National Laboratory (LANL) in New Mexico and the Lawrence Livermore National Laboratory (LLNL) in California. In addition, K Area has received highly enriched uranium (HEU) from the Y-12 plant in Tennessee, Sandia National Laboratory in New Mexico, LLNL, and LANL.



K Area Complex



An operator uses a glovebox in K Area to handle a 3013 container that is used to store plutonium oxide

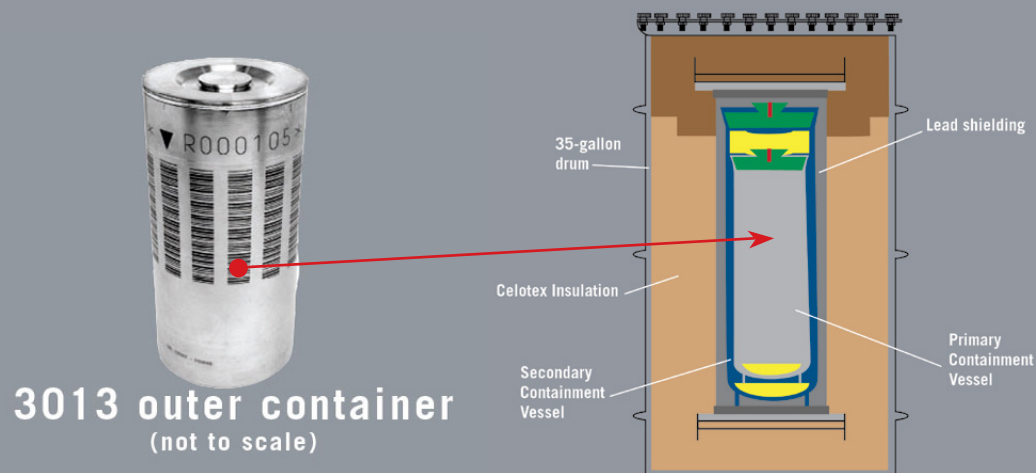


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In recent years, significant infrastructure and security upgrades have been implemented in the KAC to ensure the continued safe storage of SNM until it can be dispositioned. In addition, a plutonium down-blending mission was authorized in September 2016. Plutonium oxide is blended with an adulterant material, producing a mixture that is not usable for weapons. This mission is forecasted to continue for the next 30 years and is the primary focus for removal of surplus plutonium from the state of South Carolina. NNSA construction projects are ongoing to expand the capabilities of this process.



Plutonium metals and oxides are stabilized and sealed in safety-class welded 3013 containers; 3013s are then packaged in a 9975 Type B shipping container, consisting of a stainless steel outer drum assembly, Celotex™ insulation, lead shielding, a secondary containment vessel and a primary containment vessel housing the 3013 container. The 9975 drums are 18 inches wide and 35 inches tall, and when full weigh approximately 400 pounds. They are designed to withstand fires with temperatures of 1,475°F for 30 minutes.

Plutonium materials shipped to KAC are sealed inside DOE standard 3013 containers that are nested in robust, state-of-the-art, certified shipping packages called 9975s. Prior to being packaged at the other sites, the plutonium is stabilized in accordance with established standards for safe transportation and storage.



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