## SAVANNAH RIVER SITE



## **EXARENTIAN SET SET SET UP:** KAREN

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

For several years, DOE sought viable alternatives to properly secure and disposition our nation's excess SNM, but decided SRS was best to consolidate the nation's excess plutonium. SRS assisted the DOE Complex in saving millions of taxpayer dollars through the safe receipt and storage of the excess plutonium from SRS's FB Line as well as the Rocky Flats Environmental Technology Site in Colorado and the Hanford Site in Washington. Today, KAC is receiving shipments of excess plutonium from Los Alamos National Laboratory (LANL) in New Mexico and the Lawrence Livermore National Laboratory (LLNL) in California. In addition, shipments of highly enriched uranium (HEU) from LLNL, LANL and Y-12 are in progress.

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.





Nuclear materials from across the DOE complex are being consolidated at the K Area Complex.

KAC, in tandem with SRNL, has the capability to perform all necessary container surveillance activities.

The Savannah River Site is owned by the U.S. Department of Energy, and is managed and operated by Savannah River Nuclear Solutions.



The KAC is DOE's only Category 1 SNM storage facility designated for interim safe storage of plutonium and HEU 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.



Plutonium metal and oxide are stabilized and sealed in safety-class weided 3013 containers. Which are then packaged in a 9975 Type B shipping container, consisting of a stainless steel outter drum assembly, CelotexTM insulation, lead shielding, a secondary containment vessel and a primary containment vessel housing a 3013 continer. 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.

In recent years, significant security upgrades have been implemented in the KAC to ensure the continued safe storage of SNM until it can be dispositioned. In addition, a full range of plutonium-handling options, including stabilization and repackaging, are currently being evaluated for KAC. These changes will further enhance the DOE's ability to manage excess plutonium and other SNM until final disposition is achieved.

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