

## **Nuclear Materials Management**

Nuclear Materials Management (NMM) operations at K Area provide an interim safe storage location for much of the U.S. Department of Energy's (DOE) excess plutonium.

In the coming decade, new plutonium facilities are being planned to be built at the Savannah River Site (SRS), under a Record of Decision issued by the DOE in 2000. This makes SRS the nation's cornerstone of excess plutonium management and disposition.

The DOE saved millions of dollars during cleanup at the Rocky Flats Environmental Technology Site in Colorado by providing safe and secure storage of its excess plutonium material at SRS. Shipments are now ongoing from the Hanford Site (Washington) and are expected to begin soon from the Lawrence Livermore National Laboratory (California) and Los Alamos National Laboratory (New Mexico).

The K Area Complex (KAC) is DOE's only special nuclear material (SNM) storage facility designated for interim safe storage of plutonium at SRS. The building formerly housed K Reactor, which produced nuclear materials to support the United States nuclear weapons program during the Cold War. It was the DOE's last operating production reactor, finally shutting down in 1992. The facility was chosen as the most recent DOE Complex plutonium storage facility for several reasons:

- The facility underwent stringent, well-documented seismic and structural upgrades during the restart campaign of 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 cost benefit.

Since K Area was chosen, significant security upgrades have been implemented to ensure adequate protection of the material.

The plutonium shipped to KAC is hermetically sealed inside specially-built containers, called 3013 cans, that are in turn nested in robust, state-of-the-art, shipping containers called 9975s. Prior to being packaged at the other sites, the plutonium is placed in a stable form for safe storage.

Continuous upgrade projects are under way in KAC to ensure the plutonium is safely and securely stored until the Mixed Oxide Fuel Fabrication Facility, being constructed in SRS's F Area, is operational. Eventually, the plutonium will be converted to mixed oxide fuel for beneficial reuse.

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