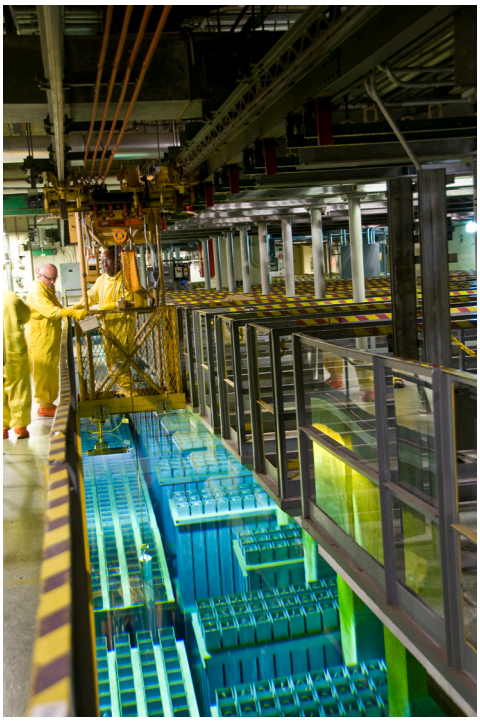
facts

ABOUT THE SAVANNAH RIVER SITE

# L Area Complex

Personnel at the Savannah River Site (SRS) have extensive experience in safely receiving and storing a wide variety of spent nuclear fuel (SNF) assemblies from both domestic and foreign research reactors. Since 1964, SRS has received more than 2,290 casks containing over 45,000 SNF assemblies.

Since 1996, the L Area Complex (LAC) has received about 9,500 SNF assemblies in 444 casks from off-site sources. Fuel types include high and low enriched uranium spent fuel. LAC has received and handled about 10 different SNF transportation casks weighing up to 65,000 pounds. LAC also made about 360 on-site spent fuel casks transfers during this time.



*LAC employees move a fuel assembly to its storage location in L Basin.*

**L Area**

Underwater storage facilities, called disassembly basins, were located in all five SRS production reactor areas. These facilities were designed to store SNF and target assemblies discharged from the reactor cores. This storage allowed the nuclear material to cool after being irradiated in the reactors. The basins were also used to prepare the nuclear materials for transport to the F and H area processing facilities.

In 1996, L Basin equipment was reconfigured to safely handle and store SNF from off-site (foreign and domestic) research reactors. In February 1997, the first off-site fuel was received and stored in L Basin. To avoid the cost of operating multiple facilities, SRS decided in 1998 to consolidate all of SRS's stored spent fuel into the much larger, recently refurbished L Basin. By 2003, L Basin was SRS's only fuel receipt and storage facility.


*The L Area Complex.*

L Basin has concrete walls 3 feet thick and holds 3.5 million gallons of water with pool depths of 17 to 30 feet. Although all spent fuel assemblies are now "cool" enough to no longer require

water cooling, the water provides shielding to protect workers from radiation. Current DOE plans call for the continued receipt of about 7,500 more off-site SNF assemblies through the year 2019. L Basin has adequate storage capacity to support current receipt and disposition plans.

**The Future of SNF at SRS**

DOE plans to use conventional processing, through the H Canyon chemical separations facility, as the final disposition of all aluminum-clad SNF currently stored at SRS as well as planned receipts of foreign and domestic research reactor SNF through 2019. This plan also includes exchanging SRS's stainless steel and zirconium clad fuel for aluminum-based fuel stored at the Idaho National Laboratory. Conventional processing of the SNF will provide additional uranium for the HEU Blend Down program for use in commercial production of electricity and produce liquid waste to be vitrified in SRS's Defense Waste Processing Facility.



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