

process these materials for beneficial reuse or disposal off Site, and is committed to do so to meet its commitments to the State of South Carolina. Based on its unique capabilities, SRS is functioning as a "gateway for surplus nuclear materials disposition" for the DOE Complex.

- Use unique capabilities at SRS to consolidate surplus nuclear materials from research and other sources in the US and abroad to improve security and support nonproliferation (i.e. to avoid having these materials fall into the wrong hands).

Recent security upgrades at SRS allow the safe and highly secure storage and monitoring of Nuclear Materials. SRS supports Nuclear Nonproliferation and Homeland Security by consolidating and storing nuclear materials from foreign and domestic research reactors. Consolidation and safe storage at SRS helps to protect national security.

- Work with NNSA to develop and implement comprehensive and long-term plans for the consolidation, safe storage, and disposition of surplus nuclear materials.

SRS can safely store the surplus nuclear material at SRS and the material planned for transfer to SRS. Existing facilities and facilities now under construction will enable the processing of surplus nuclear material at SRS for beneficial reuse or disposal. There are other surplus nuclear materials not currently at SRS that will have to be consolidated, safely stored and dispositioned. Accurate inventories, coupled with comprehensive plans for consolidation, storage, processing, and disposition will enable DOE to complete plans for the safe and efficient management of surplus nuclear materials. EM and NNSA are working with other agencies to complete these plans.

The scope of Nuclear Material Disposition includes the following:

- **Plutonium (Pu)** – 12.8 MT of EM's surplus, non-pit plutonium
  - Solid Form – Approximately 5,300 55-gallon drums
  - Material exists throughout the EM Complex
- **Highly Enriched Uranium (HEU)** – 7.5 MT of excess HEU
  - Solid Form – Approximately 3,000 55-gallon drums
  - Material exists throughout EM and NNSA Complex
- **Spent Nuclear Fuel (SNF)**
  - 18 MTHM Aluminum-Clad SNF and 20 MTHM Stainless Steel/Zirconium-Clad SNF
- **Miscellaneous Nuclear Materials**
  - Depleted Uranium Oxide (11,000 MT, ~16,000 55-gallon drums)
  - Heavy Water (~500,000 gallons; 10,000 55-gallon drums)

#### Nuclear Material Critical Results

1. Integrate EM and NNSA Nuclear Material disposition capabilities to optimize strategic effectiveness (Develop Nuclear Materials System Plan to promote strategic alignment and effective decisions).
2. Continue aggressive plutonium and HEU stabilization and disposition processing.
3. Conduct operational reviews to identify opportunities for improved performance (reduce cost, reduce waste, increase throughput, and identify disposition alternatives).
4. Develop basis for increasing canister plutonium loading.

**Appendix I****Acronym List**

ARP	Actinide Removal Process
ARRA	American Recovery and Reinvestment Act
DOE	Department of Energy
DWPF	Defense Waste Processing Facility
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
HEU	Highly Enriched Uranium
HW	Hazardous Waste
LDRD	Laboratory Directed Research and Development
LEU	Low Enriched Uranium
LLW	Low Level Waste
LTS	Long-term Stewardship
MLLW	Mixed Low Level Waste
MOX	Mixed Oxide
MT	Metric Ton
MTHM	Metric Tons of Heavy Metal
MCU	Modular Caustic Side Solvent Extraction Unit
NERP	National Environmental Research Park
NNSA	National Nuclear Security Administration
RCRA	Resource Conservation and Recovery Act
RPAM	Real Property Asset Management
SNF	Spent Nuclear Fuel
SRNL	Savannah River National Laboratory
SRS	Savannah River Site
SWPF	Salt Waste Processing Facility
TRU	Transuranic Waste
TYSP	Ten Year Site Plan
WIPP	Waste Isolation Pilot Plant