

Saltstone Facilities

The Saltstone facilities safely stabilize and dispose of low-level radioactive liquid salt wastes produced and dispositioned at the Savannah River Site. The Saltstone facilities consist of two facility segments: the Saltstone Production Facility (SPF) and the Saltstone Disposal Facility (SDF).

Construction of SPF and the first two disposal vaults of SDF were completed between February 1986 and July 1988 and began radioactive operations on June 12, 1990. The facilities immobilize and dispose of salt waste from the Site's tank farms, which processes waste from the Site's two chemical separation facilities.



Most of Site's tank farm waste will be immobilized within two waste forms: glass, which will contain about 99 percent of the radioactivity, and cement-like grout, which will contain most of the volume. The highly radioactive, insoluble tank sludge is sent to the Defense Waste Processing Facility (DWPF) to be turned into glass. Soluble salts, primarily sodium nitrate (similar to fertilizer), must be treated to remove radionuclides contained in the salt solution. This separation will be accomplished in the Salt Waste Processing Facility (SWPF) when the facility is constructed and placed into operations, currently scheduled for 2014.

Until the SWPF begins operations, several interim treatment processes will be used to disposition salt waste. Radioactive contaminants (cesium, strontium, actinides) removed from the salt waste will be sent to DWPF, where they will be combined with sludge, turned into glass and stored in sealed stainless-steel containers until permanently disposed in a federal repository.

SPF receives the low-radioactive treated salt solution and stabilizes it by mixing the salt solution with cement, fly ash and slag. The resulting grout mixture, or slurry, is mechanically pumped into concrete disposal vaults that make up the SDF. There, the grout solidifies into a non-hazardous, low-radioactive waste form called "saltstone."



After filling, the vaults will be capped with clean concrete to isolate it from the environment. Final closure of the area will consist of covering the vaults with engineered closure caps, backfilling with earth and seeding to control water infiltration and erosion.

Extensive testing and analysis have concluded that the waste planned for disposal in the SDF will not result in releases of radioactive material to the environment that would exceed the U.S. Environmental Protection Agency drinking water standards. Wells near the edge of the disposal site are used to monitor groundwater to ensure that it meets the applicable standards.



SRS is owned by U.S. Department of Energy. The SRS Liquid Waste contract is managed by SRR, a team of companies led by URS Corp. with partners Bechtel National, CH2M Hill and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, Energy Solutions and URS Safety Management Solutions.

August 2011

