facts

ABOUT THE SAVANNAH RIVER SITE

General Separations Area Consolidated Unit

Background

GSACU in 2008, after closure.

Workers grout underground tanks as part of the GSACU closure.

The final cleanup of one of the highest priority waste areas at SRS and in the DOE complex is complete, thanks to the aggressive implementation of a Record of Decision issued by the Department of Energy (DOE), the South Carolina Department of Health (SCDHEC) and the Environmental Protection Agency (EPA) Region 4. Through the agreement, four nearby waste units were consolidated with the Old Radioactive Waste Burial Ground (ORWBG), SRS's highest risk surface unit, to form the General Separations Area Consolidation Unit (GSACU). Cleanup of these four discrete units was combined under one remedial action. The action eliminated off-site disposal and saved the taxpayer more than $150 million.

The ORWBG is a 76-acre section of land located, near the other GSACU waste units, at the center of SRS. The burial ground received radioactive waste from 1952-1972 with a small additional quantity of waste being disposed in 1974. The ORWBG contains over 600,000 curies of radioactive materials and over 93 tons of hazardous waste. The area also contains 22 underground tanks that were formerly used to store radioactive solvents. In 1998, SRS installed a soil cover over a majority of the ORWBG to reduce surface radiation levels, reduce storm water infiltration to the waste layer, and mitigate contaminant migration to the groundwater.

- Besides the ORWBG, the GSACU consists of: H Area Retention Basin (HRB), Warner's Pond, H Inactive Process Sewer Line (HIPSL) and HP-52 Ponds. The HRB was a single 200-foot by 120-foot inactive retention

basin that, from 1955 to 1972, received contaminated wastewater from chemical separations facilities and from the H Area Tank Farm.

- Warner's Pond was a 1-acre holding pond constructed in 1956 as an emergency holding pond to receive contaminated overflow from H Canyon.
- The HIPSL transported liquid waste from H Canyon to the closed H Area Seepage Basins, and runs from H Canyon through the Warner's Pond area to the basins.
- The HP-52 Ponds were originally built in response to a spill of radioactive liquid waste in 1967 from H Tank Farm. The two ponds were drained but residual contamination made further cleanup necessary. The contaminated soil was buried at the HP-52 Ponds location.

Environmental Concerns

Today all of the remedial action has been competed for the GSACU. A comprehensive remedy was implemented that is protective of human health and the environment. The remedy effectively isolates the more than 7 million cubic feet of radioactive and hazardous waste that was disposed in the ORWBG and 55,000 cubic yards of contaminated soil from the nearby units.

Environmental Actions and Plans

Remedial actions have been implemented that include:

- Closing 22 empty solvent tanks by grouting them in place.
- Moving 25,000 cubic yards of radioactively contaminated soil from Warner's Pond to the ORWBG.
- Moving 10,000 of radioactively contaminated soil from HP-52 Ponds to the ORWBG.
- Moving 15,000 cubic yards of contaminated soil from HRB to the ORWBG.
- Moving 5,000 cubic yards of contaminated soil from the HIPSL to the ORWBG

Once the contaminated soil was removed a cover system was placed over each of these units to limit the migration of rain water to any remaining contamination.

Final closure of the ORWBG consisted of the installation of an engineered geosynthetic cover system over the entire 76 acres. In addition to these actions institutional controls were also selected as part of the remedy to ensure that the cover system remains intact and undisturbed.

Field work on the final closure of the GSACU began in December 2003 and was completed in 2007, under budget and ahead of schedule.

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

Savannah River Nuclear Solutions, LLC
A Fluor Daniel Partnership℠