

Soil & Groundwater Closure Projects

Accomplishments
2004

Introduction

Safety

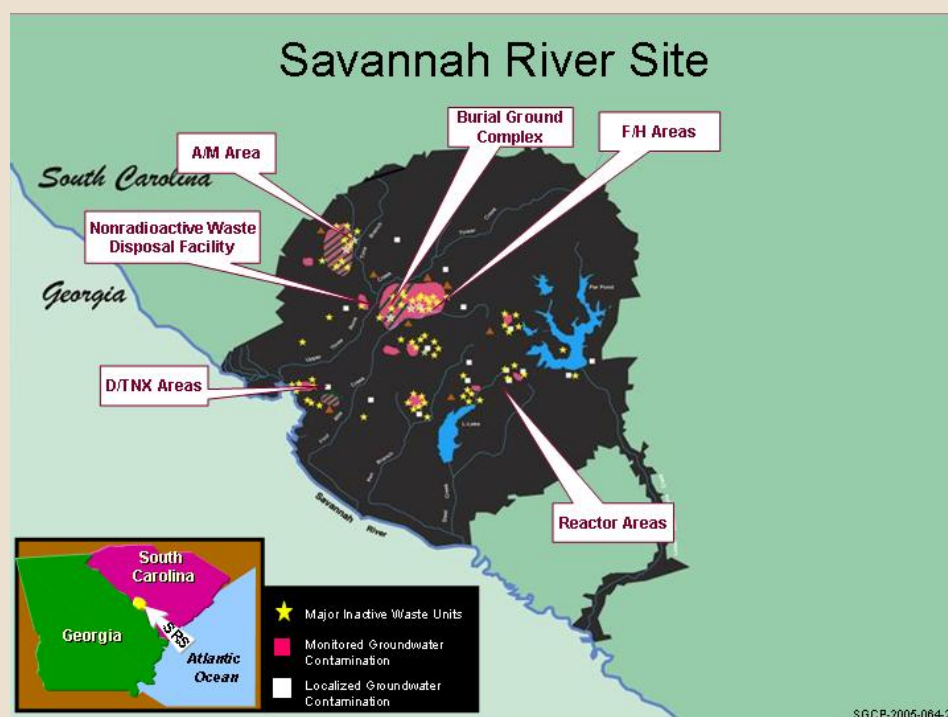
While achieving major remediation, Soil and Groundwater Closure Projects maintained its excellent safety record, reaching a milestone of 6 million safe hours of time passed since the last days away or lost time injury. This trend continues into 2005.

Soil and Groundwater Closure Projects

SGCP is responsible for cleaning up 515 waste and groundwater units to reduce risk and protect human health and the environment. Remediation of the waste sites and groundwater is regulated under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The SRS Federal Facility Agreement:

- Ensures that SRS cleanup satisfies RCRA and CERCLA requirements
- Includes cleanup schedules for SRS through 2025

In 2004, SGCP had completed 311 of the 515 units; another 50 units were in the remediation phase. By 2025, all inactive SRS waste sites that pose a risk to human health or the environment will be remediated and controlled, and contaminated surface and groundwater will be remediated, in remediation, or closely monitored.



Key Projects 2004

T Area Completion

SGCP achieved the remedial action start milestone at the TNX Operable Unit and completed de-watering activities at the New TNX Seepage Basin. SGCP also initiated a removal action at the X-001 Outfall Drainage Ditch in T-Area. In a major step toward T Area Closure, Site D&D turned the site over to SGCP to begin the remediation phase of the integrated closure efforts. After completing demolition of the last T Area building, SGCP will remediate soils and groundwater associated with the waste units, and consolidate most of the outlying contaminated soil to the center of T Area. This central area will then be covered with a geosynthetic cap to prevent groundwater contamination. Soil consolidation began earlier this year with the removal of 250 cubic feet of soil from the X-001 Outfall.



De-watering of the TNX Seepage Basin

General Separations Area Consolidated Unit

SGCP awarded the contract to construct a low permeability soil cover over the 76-acres of the GSACU. The GSACU was formed when three smaller high-risk waste units were consolidated into closure of the Old Radioactive Waste Burial Ground (ORWBG). The GSACU is the largest and highest risk project in SGCP. The start of final remedial action began in December 2003 and is expected to be complete in 2008. Contaminated material and soils at H Area Retention Basin, Warner's Pond, Inactive Process Sewer Lines, and the HP-52 Ponds are being excavated and consolidated with the ORWBG.



The GSACU consists of the ORWBG, Warner's Pond, H Area Retention Basin, and HP-52 Ponds.

Key Projects 2004

F&H Area Groundwater Projects

SGCP reached a major remediation milestone with the completion of the F and H Area barrier walls. The subsurface barrier walls, an integral part of the F&H Area Groundwater Projects, were constructed using a specialized drill rig and an onsite concrete batch plant to form underground grout columns. A total of 4,450 linear ft. of these grout columns, making up the barrier walls, will reduce the spread of groundwater contamination to Fourmile Branch.



Drill rig used to construct grout columns at F & H Groundwater

M Area Dynamic Underground Stripping

Construction at the Dynamic Underground Stripping (DUS) was nearly complete by the end of FY04. Operation of DUS is slated to begin in early 2005 and will remove approximately one million pounds of solvents from the subsurface and accelerate cleanup in M-Area by decades at SGCP's 2nd highest risk site (the A&M Area Groundwater Plume). DUS extracts material 15 times faster than soil vapor extraction and 75 times faster than the pump and treat system.



Approximately 3,980 feet of steam pipeline was installed for the DUS project

P Area Reactor Seepage Basin

SGCP achieved the remedial action start at the P Area Reactor Seepage Basin. SGCP is grouting the radioactively contaminated soil, removing and disposing of inactive process sewer lines in the basins, and installing a low permeability soil cover over all three basins. Additionally, the L Area Hot Shop slab, which is contaminated, will be removed and disposed of in the P Area Reactor Seepage Basin 3.

Key Projects 2004

P Area Burning Rubble Pits

SGCP completed remediation of these units by constructing a low permeability soil cover over debris left in the pit. Remediation of the solvent contaminated soils is being accomplished through passive soil vapor extraction technology.

Chemicals, Metals, and Pesticides (CMP) Pits

At the CMP Pits, SGCP began the first Enhanced Bioremediation treatment phase and received validated laboratory results that demonstrates that soil windrows 3 and 4 met remedial goals. The soil windrows are comprised of PCB and pesticide contaminated soils with added amendments and are regularly mixed to support the bioremediation of the contaminants. These amendments include equine manure, molasses, cotton seed hulls, and water.

Currently, approximately 4000 cubic yards of soil are undergoing bioremediation. By the end of FY04, SGCP had completed half of the enhanced bioremediation activities of soils planned for phase 1 of this project. The soil will be used to backfill an excavation site at the CMP Pits.

Central Shops Burning Rubble Pit

The N Area Central Shops/Rubble Pits 631-G and 3G/3GA achieved mechanical completion. Remedial action began four months ahead of schedule and was completed six months ahead of schedule. The remedial action is designed to maintain industrial land use through institutional controls managing this waste site cost effectively.

A Area Miscellaneous Rubble Pile

Mechanical completion of remediation activities was achieved during FY04. The Post-Construction Report milestone was completed four months ahead of schedule. The field investigation and characterization identified construction rubble and ash material as primary waste concerns. Final remediation includes a soil cover and an active soil vapor extraction technology to remove solvents from the subsurface soils.