

# Sludge Monofill Closure and Capping Plan

Closed Municipal Landfill, Spartanburg County, South Carolina

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## PROJECT DESCRIPTION

The site is a municipal sewage sludge monofill from two wastewater treatment plants, belt press sludge and alum sludge from a water filtration plant. In 1996, SCDHEC requested the initiation of permit closure and post-closure plans. Rogers & Callcott established a schedule for closure activities and post-closure care plans and designed the methane collection system and the final cap.

## ROGERS & CALLCOTT SERVICES

**Monofill Closure:** The first step in final site preparation was thorough grading to minimize penetration by rocks and future undergrowth, then a methane recovery trench and venting system were installed. A 40-mil geomembrane liner material was chosen for the final cap. The liner was engineered to be welded and air tight by ASTM specifications and tested accordingly by use of a construction and observation testing program. A final construction certification was submitted to SCDHEC. During final closure activities, silt fences and riprap dams were employed to minimize erosion, along with grassing of the soil cap. This sludge monofill occupies 1.7 acres, with average depth of 20 feet. The final result of this project was an aesthetically pleasing open space compatible with the rural surrounding and capable of sustaining potential wildlife.

**Site Monitoring Procedures and Reporting:** Groundwater and landfill gas monitoring wells were installed by Rogers and Callcott. Semi-annual groundwater and quarterly gas monitoring is performed by Rogers & Callcott field scientists. Analyses of site samples are performed by the Rogers & Callcott laboratory. Semi-annual reporting, as required by SCDHEC, is completed by Rogers & Callcott, along with statistical analyses regarding the significance of metals concentrations. The monitoring cost was reduced significantly after successfully lobbying for a reduction in the monitoring frequency and test parameters.

