

Closing Dumpsites



Why Close Dumpsites?

What Are the Technical
Challenges of Closing a Dumpsite?

What Are the Steps to Closing a
Dumpsite?

Services We Provide

SCS Experience Closing Dumpsite

SCS ENGINEERS

Environmental Consultants and Contractors



Closing Open Dumps

Proven experience

With more than 45 years of experience helping leaders in solid waste including those in developing countries with challenging solid waste issues.

Tailored solutions

One size doesn't fit all. We help you develop a robust, tailored closure program using the most appropriate technologies for each situation.

Full service

Get everything you need from one team. We'll help you with all aspects of closing your dumpsite from planning to implementation. This may include educating city officials and politicians. SCS will be there for every step.

Why Close a Dumpsite?

- Pollutant and contaminant releases from dumpsites degrade environmental conditions that impact human health (air quality, groundwater and surface water quality, soil contamination, etc.)
- Remediation and closure of these dumpsites is critical to mitigate the environmental and public health impacts
- Many dumpsites pose slope stability issues resulting in slides that endanger humans

What Are the Technical Challenges?

- Grading and geometry
- Stability concerns
- Liquids management
- Biogas management
- Fire suppression
- Final cap construction
- Road access and security
- Post-closure maintenance
- End use

Services We Offer

- Assess Existing Conditions
- Feasibility of Closure Strategies and Configuration Options
- Regulatory Review
- Design Access Road and Site Access
- Final Cover System Design
- Drainage Plans
- Leachate Collection and Removal System
- Biogas system
- Post-Closure Care





What are the Steps to Closing a Dumpsite?

1. Establish the Boundaries.	Where are the outer limits of waste? Where can waste be moved if slope stability is an issue? Develop a site plan of the current situation.
2. Plan, Design and Build an Access Road.	The road is critical for constructing the final cap and for maintenance during post-closure.
3. Obtain the Proper equipment and Talented Equipment Operators.	The grading of the site prior to capping is key to slope stability and liquids management. Provide training and good compensation for talented equipment operators.
4. Design the Final Geometry and Cap.	This may require relocation of waste to provide slope stability.
5. Design a System to Address Biogas.	Biogas will find the path of least resistant and this should not be off-site to nearby buildings. Design a system to either vent or collect the biogas to keep it from migrating off-site.
6. Construct the Cap and Biogas System.	The initial activity involves placement of an intermediate cover soil layer to enable compaction of in-place wastes. A well designed and constructed cap will encourage stormwater runoff, minimize leachate generation, smother subsurface fires and reduce fugitive air pollutant emissions.
7. Develop a Cap Maintenance Plan and Implement It!	This may be a 30 year undertaking.



Some of our projects:

Fresh Kills Landfill Closure, New York City

For over two decades SCS has worked with the City of New York to close one of the world's largest dump sites. SCS provided a full range of engineering, construction support, and scientific services associated with filling and closure of the 16,000-tpd Fresh Kills Landfill, the world's largest landfill. The City of New York took a progressive approach to complying with New York State Department of Environmental Conservation regulations and the NYSDEC Consent Orders, and closed the landfill with the intent of implementing end use plans that will enhance the region. Currently, the 2,200 acre site is being transformed into a park that will be almost three times the size of Central Park. The project is the world's largest landfill-to-park.

SCS services included site investigations, conceptual and final designs for phased closure of the mounds, capping, stormwater management, landscaping, wetlands remediation, shoreline improvements, and LFG controls and monitoring.

Control Open Dump Conversion, San Cristobal, Dominican Republic

We assisted the US Agency for International Development (USAID), and the US Environmental Protection Agency (US EPA) transform the Municipality of San Cristobal's open dump into an engineered landfill. San Cristobal is the third largest city in the Dominican Republic.

The current open dump lacks controlled access, bottom liner system, groundwater or surface water monitoring, biogas controls, soil cover and waste compaction. We are assisting the Municipality with a roadmap for addressing these key issues and to transition from the existing dump site to an engineered landfill. This includes a conceptual design, a landfill phasing plan for construction, bottom liner system, relocation of existing waste, leachate collection and management, stormwater management, biogas management, and final cover. In addition, the project provides a financial estimate of required investment to implement all phases of the project including closure and post closure care.

Landfill Partial Closure with Alternative Cover, Berkeley County Solid Waste Management Facility, Moncks Comer, SC

We designed the capping system as an Intermediate Alternative Final Cover System under the Research Development and Demonstration (RD&D) rules in South Carolina. The partial closure capping system includes a ClosureTurf® as the final cover system to control odor, trap more LFG, reduce GHG emissions, and significantly reduce landfill cover maintenance costs.

The final cover system helped conserve on-site borrow soils, reduce construction costs and greatly reduces post closure care and maintenance such as mowing. The cover also improves stormwater quality and nearly eliminates the need to clean channels and the stormwater basin. The cover can withstand extreme weather conditions, and the material has a long-life expected to be as long as the post-closure care period.

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