

Project Name

Phase IA Closure of Southern Ocean Landfill

Client

Southern Ocean Landfill, Inc. /Transtech Industries

Services Provided

- Developed Overall Strategic and Innovative Closure Plan
- Negotiated with State and Local Agencies to Obtain Closure Plan Approval
- Provided Engineering Closure Design Services
- Obtained Required State/Local Permits
- Prepared Remedial Investigation Workplan

Project Description

Southern Ocean Landfill (SOLF) is a 52-acre closed landfill in Ocean Township, Ocean County, New Jersey consisting of a 12-acre lined area and a 40-acre unlined area. In order to properly close the site, SAI, working with its Client Transtech Industries, proposed the concept of Beneficial Reuse utilizing recyclable materials for the proper grading and capping of the lined area of the landfill.

This approach, which included all technical, environmental and permitting strategies, was developed by SAI and led to the NJDEP's willingness to issue permits for the project. Also, the proposed plan provided the sufficient revenues generated from the Beneficial Reuse of recyclable materials for the closure and post-closure activities.

Approach

The Plan for the site closure of the lined area involved regrading side slopes and capping using recyclable materials (construction and demolition debris (C&D), Kaofin and mixed broken glass). A total of over 600,000 cubic yards of recyclables was included in the Plan. The Plan also included a synthetic membrane cap and vegetative layer. SAI previously used such materials in other projects with favorable results. For this project, SAI developed an innovative concept using recyclable materials as fill to cap the site and revenues generated from these materials would allow for the performance of the engineering, permitting and construction efforts related to the closure and post-closure.

In order to obtain Plan approval, Transtech engaged in negotiations with State and local agencies as well as the Pinelands Commission and was able to obtain a Memorandum of Agreement (MOA) allowing use of recyclables. Based on DEP and Pinelands approval, the lined area was regraded with recyclable materials and capped with a synthetic membrane.



In parallel with the closure of the lined area, SAI was retained by Ocean County to perform a Remedial Investigation/Feasibility Study for groundwater for the entire site. The results of the study indicated that there was a plume of groundwater contamination that did not extend beyond the property boundary. Based on the results of the study, SAI recommended that the unlined area be capped with a membrane in order to slow down the release of leachate to groundwater.

Due to the high costs involved in capping the unlined area, the concept of funding the closure with revenue-generating materials was not viable. Ocean County successfully lobbied the New Jersey State Legislature and obtained a \$15 million appropriation, which was sufficient to fund closure of the unlined area as well as long-term operations and maintenance.

The overall project, which was the first of its kind in the Pinelands, resulted in remediation of one of the largest potential threats to the coastal aquifers of the region.

SAI/Transtech initiated the unlined area project with their own resources. After gaining support of NJDEP, Ocean Township, Ocean County and the Pinelands Commission, the completion of a major remediation was possible.

