

New York landfill value-engineered to meet difficult interface friction requirements & save money

Fresh Kills landfill is one of the largest landfills in the world, comprising a total of 2,200 acres. The site was closed in 2001, and area 6/7 was bid in 2006.



PROJECT DETAILS

Fresh Kills Landfill Closure

LOCATION

Staten Island, New York

PRODUCTS USED

TEXDRAINTM 300 DS6

GEOTEX 651

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CHALLENGE:

Fresh Kills is an extremely large site, and construction of the cap was to be completed over five construction seasons from 2006-2010. A 32-degree peak friction angle was required between the geocomposite and 40 mil LLDPE interface. It posed very difficult interface friction requirements for the geosynthetic materials. The design of the final cover was divided between two cross sections. For slopes less than 15%, the capping layer was a geocomposite gas venting layer, 40mil HDPE, and a 6 oz/sy nonwoven geotextile. For slopes greater than 15%, the 6 oz/sy nonwoven geotextile was replaced with a geocomposite drainage layer.

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SOLUTION:

The geocomposite was available in greater widths than expected, which increased the rate of installation and decreased the number of seams between geocomposite panels.

RESULT:

Between the Lining Technologies and Contracting Services business units, CETCO was able to supply all materials, value-engineer the project and install the materials. The closure project was completed on schedule and met the owners requirements, which saved the city of New York significant money.

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