

INTERNATIONAL GEOSYNTHETICS SOCIETY, UK CHAPTER
15TH INVITATION LECTURE
Jointly with the British Geotechnical Association

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Godfrey Mitchell Theatre, Institution of Civil Engineers
One Great George Street, Westminster, London SW1P 3AA

Geomembrane performance in landfill

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Synopsis



Geomembranes are very low permeability synthetic barriers used to control fluid migration in a human-made system. Geomembranes have been used in forty six (46) different application areas and counting. Providing containment in areas such as environmental, geotechnical, hydraulic, transportation, and private development. This lecture will discuss laboratory and field performance of geomembranes related to landfilling of waste.

Historically, landfills have been the most common method of waste disposal around the world. Landfills are typically isolated from the environment via geomembranes to minimise contamination of groundwater and soil. They also have cover systems to prevent the emissions of methane and carbon

dioxide generated by decaying organic matter. Landfills are typically confined to as small an area as possible. Waste is compacted onsite to reduce volume and should be covered on a daily basis to control odour and minimise the harbouring of disease carrying vectors.

The concept of landfilling waste is by no means stationary. This paper presents trends and developments in regard to design, construction and operations of landfills. It will highlight results from exhuming geomembranes from several facilities. Some recommendations will be made in an effort to improve the state-of-the-practice of the containment industry.

Biography:

George Koerner is Director of the Geosynthetic Institute. He is in charge of laboratory accreditation, field certification and continuing education at the Institute. He also manages several research projects and has published over 300 technical papers in his 35 year association with polymers used in the ground. Dr. Koerner's Ph.D. is from Drexel University in Geotechnical Engineering. He is a registered professional engineer and a certified quality auditor. George has received many awards over the years, the most notable being IFAI's Environmental Technologies Award of Excellence 1995, ASCE's Geotechnical Engineer of the year in 2004 and the title of ASTM Fellow in 2013.



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