



## Geotechnical Webinar Series

### Myths and facts about GCL hydration: What you need to know

**Professor Abdelmalek Bouazza, Monash University**

Friday 9 Oct 2020 15.00 – 16:30 (AEST)

[https://zoom.uts.edu.au/j/ 92383189279](https://zoom.uts.edu.au/j/92383189279)

#### Abstract

Geosynthetic clay liners (GCLs) are now a common part of hydraulic barrier systems for many landfills, mining waste containment facilities and heap leach pads. GCLs commonly consist of a thin layer of bentonite contained between two layers of geotextile held together by needle-punching or stitch bonding. The main function of the GCL is to prevent or slow the flow of fluids often from a pollution source. Generally, it is expected that hydration will begin from subsoil or adjacent soil(s) at the time of installation and should be complete prior to significant contact with the fluids to be contained. Hydration immediately after installation is an important stage as it governs the potential occurrence of advective and/or diffusive transport of contaminants through the GCL because the ability of a GCL to perform its hydraulic sealing function is intimately linked to the hydration of the bentonite in the GCL and its resulting water content/saturation. This presentation will debunk some myths about GCL hydration.

#### Speaker's biography

Dr A (Malek) Bouazza is a Professor of Civil Engineering at Monash University. He has an international reputation for research in Geosynthetics and Environmental Geotechnics. His research has been recognised by numerous national and international awards. Professor Bouazza is very prominent in technical and professional society activities and serves on a number of international technical committees. Currently, he is the Chair of the International Soil Mechanics and Geotechnical Engineering (ISSMGE) Technical Committee TC 215 on Environmental Geotechnics and the Secretary of ISSMGE TC308 on Energy Geotechnics. In addition to his academic commitments, Dr Bouazza gives specialist advice for the industry both nationally and internationally. His work has included peer review of design for more than 30 municipal solid waste and hazardous landfills and tailings storage facilities in Australia, Thailand, Peru and other countries. He has led and co-wrote the key liner components of new landfill standard (Best Practice Environmental Management: Siting, design, operation and rehabilitation of landfills, EPA Publication 788) for the State of Victoria, Australia which is now used as a model for much of the country.