

GEOSYNTHETICS IN LANDFILLS AND OTHER BARRIER SYSTEMS

This course is designed to provide the most recent findings from research and the state-of-practice to both expert practitioners and novices in the use of geosynthetics in waste containment barrier systems. The course is offered by a team of world class experts that will provide a unique combination of experiences from research, engineering practice, installation and material specifications. Following an overall introduction (including objectives, limitations, basic concepts and example applications), the course material then focuses on leachate collection system design, geomembranes and geosynthetic clay liners (GCLs) interaction with fluids typically encountered in landfills, mining and brine ponds. Important new findings on the performance of composite liners under realistic exposure conditions will be presented. Emphasis is also given on the need to consider the interaction of both geosynthetic and soil components of the overall barrier system to ensure adequate performance.

ABOUT THE SPEAKERS

Dr. A (Malek) Bouazza is a Professor in Civil Engineering at Monash University, Australia and Visiting Professor at Zhejiang University, China. He has also held a number of visiting scholar positions at University of Missouri-Columbia, USA, Arizona State University, USA, Cardiff University, U.K and Queen's University, Canada. He is a Fellow of the Institution of Engineers (FIEAust). His research has been recognised by a number of awards including, recently, the 2015 R.M. Quigley Award (honourable mention) from the Canadian Geotechnical Society, the 2014 E.H. Davis Memorial Award from the Australian Geomechanics Society, the 2014 Zeng Guoxi Lecture from Zhejiang University, China, the 2013 International Geosynthetics Society (IGS) Plaque for significant contributions to the International Geosynthetics Society and outstanding technical contributions to the geosynthetics discipline, and the 2010 Telford Premium Prize, Institution of Civil Engineers, U.K. 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. In addition to his academic commitments, Dr Bouazza engages extensively with industry and conducts regularly peer reviews, third party reviews and expert consultation for containment-system engineering projects such as landfills, mining waste containment facilities, heap leach pads, shale/coal gas recovery ponds, industry process liquid ponds and similar.

Dr Kerry Rowe is a Professor and Canada Research Chair in Geotechnical and Geoenvironmental Engineering in the Department of Civil Engineering at Queen's University, Canada. His research and consulting has been in the fields of Geotechnical, Geosynthetic, Hydrogeologic, Landfill and Geoenvironmental Engineering. Professor Rowe has been recognized by over 75 awards for his research including an NSERC Steacie Fellowship, Killam Prize, and Killam Fellowship, Sir John Kennedy Medal, The Queen Elizabeth II Diamond Jubilee Medal, and the Queen's University Excellence in Research Prize (2013). In 2013, the International Society for Soil Mechanics and Geotechnical Engineering created the R. Kerry Rowe Lecture to honour his seminal contributions to the development of geoenvironmental engineering. In 2017 he has delivered the ASCE Terzaghi Lecture. He is a fellow of the Royal Academy of Engineering and The Royal Society (of London). He is also a fellow of the Engineering Institute of Canada, Australian Institution of Engineers, Canadian Society for Civil Engineering, and the American Society of Civil Engineers. He is past president of the International Geosynthetics Society, the Canadian Geotechnical Society and the Engineering Institute of Canada. He has been involved in the design and/or peer review of hydrogeology and/or design for more than 50 landfills in Canada, US and other countries, has performed expert reviews of municipal solid waste landfills for the US EPA, US Dept. of Justice, Ontario Ministry of Environment, and Victorian Environmental Protection Authority, and of low level radioactive waste landfills for the Canadian Nuclear Safety Commission. He has served as an expert witness in a number of cases subject to litigation in USA, Canada, and Australia.



MONASH University

Department of Civil Engineering

Short Course

GEOSYNTHETICS IN LANDFILLS AND OTHER BARRIER SYSTEMS

Department of Civil Engineering,
23 College Walk
Seminar Room (Room 110)

Tuesday 9 May 2017



COURSE SCHEDULE

8:30- 9:00	Registration
9:10-9:10	Welcome (Malek Bouazza)
9:10- 9:40	Introduction, Basic concepts (Kerry Rowe)
9:40-10:20	Drainage layers and leachate collection systems (<i>Geosynthetic drainage layers, Long term performance of leachate collection systems, How to use (and NOT use) geotextiles in LCS systems</i>) (Kerry Rowe)
10:20-11:00	Geosynthetic clay liners (<i>Bentonite properties, hydration, unsaturated properties</i>) (Malek Bouazza)
11:00-11:20	Coffee Break
11:20-12:00	Geosynthetic clay liners (<i>Hydraulic conductivity, chemical compatibility, ion exchange, gas permeability</i>) (Malek Bouazza)
12:40-13:10	Geomembranes (<i>Material characteristics, Processes affecting short-term/long term performance, Diffusion</i>) (Kerry Rowe)
13:10-14.00	Lunch
14:00-14:40	Composite liner performance and Issues: <i>Heat effects</i> (Malek Bouazza)
14:40-15:40	Composite liner performance and Issues: <i>Flow Aspects, leakage</i> (Kerry Rowe)
15:40-16:10	Composite liner performance and Issues: <i>Strength Aspects</i> (Malek Bouazza)
16:10-16:30	Coffee Break
16:30-17:00	Construction issues (Fred Gassner, Golder Associates)

17:00-17:30	BPEM and CQA (Kapila Bogoda, EPA Vic)
17:30-18:00	Geomembranes specifications and quality control (John Scheirs, ExelPlas)
18:00	Close

GENERAL INFORMATION

Registration: The number of places is limited to 35 and will be filled in order of receipts of registrations. Participants are encouraged to make registrations in advance by using the online registration form.

Fees: The fee for registration is **\$650** (GST inclusive). The registration fee includes the course, reference material, light lunch and refreshments. Student registration is **\$100**

Refunds, less a handling fee of \$100, will be made in the event of cancellation, provided notification is received in writing 5 days prior to the event. For cancellations received after this date no refund will be given but substitute delegates are welcome.

Venue: Monash University, Department of Civil Engineering, Seminar Room, 23 College Walk, Clayton Campus

Parking: Daily ticket parking is available on campus at 10 Research Way (see campus map), download the campus map from the following link
http://www.monash.edu/data/assets/pdf_file/0010/716/86/3-Claytoncolour.pdf

FURTHER TECHNICAL INFORMATION


Technical Information regarding the short course can be obtained from Prof. A (Malek) Bouazza at:

Tel.: 03 9905 4956
Email: malek.bouazza@monash.edu

REGISTRATION

Please register online through Monash University by using the following link:

<https://shop.monash.edu/geosynthetics-in-landfills-and-other-barrier-systems-100491.html>



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