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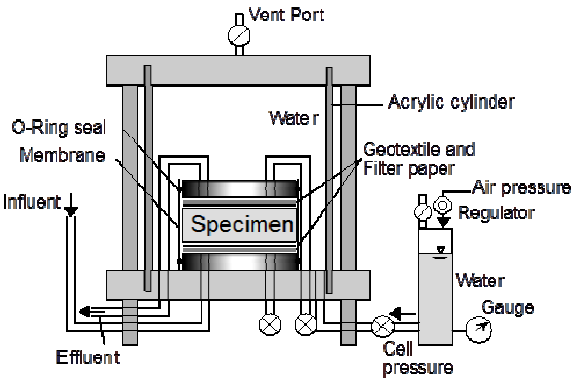
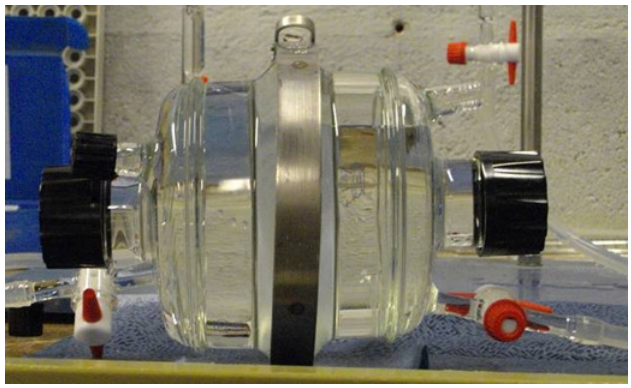
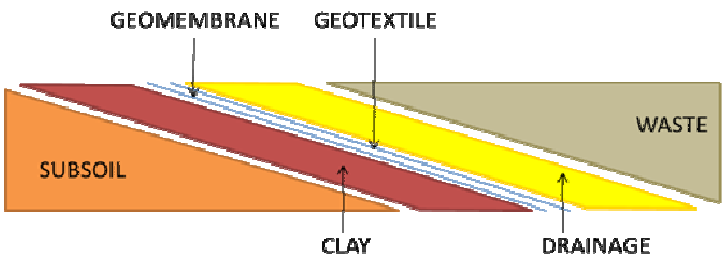
Guest Editor:
Prof. Abdelmalek Bouazza



Scheme of a flexible-wall permeameter (After Naka et al, 2012)



Diffusion cell (After Touze-Foltz*et al,2012)*



Typical lining system (After Dixon et al, 2012)

GEOTECHNICAL ENGINEERING

SEPTEMBER 2012 SPECIAL ISSUE ON GEOSYNTHETCS AND SANITARY LANDFILL

Guest Editor: Prof. Abdelmalek Bouazza

PROFESSOR ABDELMALEK BOUAZZA is very prominent in technical and professional society activities and serves on a number of international technical committees. Currently, he is a member of the International Geosynthetics Society (IGS) council and chair of the Asian Activities Committee of the International Geosynthetics Society. He is a core member of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) Technical Committee No5 (TC5) on Environmental Geotechnics, Vice-President of the Australasian Chapter of the International Geosynthetics Society (ACIGS), co-chair of the International Geosynthetics Society Education Committee and a member of the Standard Australia committee C20 on Geosynthetics. He is editorial board member of 5 International Journals and very active as a reviewer for several international journals.

Professor Abdelmalek Bouazza has published widely in international journals and refereed conferences and is the author or co-author of more than 180-refereed publications... His skills and experience in the area of waste containment facilities and geosynthetics are well recognized in Australia and abroad. He has been invited to deliver and contribute to several keynote lectures and state of the art reports in international conferences in Africa, Asia, Europe and North America, and delivers short courses on geosynthetics, and liners and cover systems for waste containment facilities on a regular basis locally and internationally. In addition to his academic commitments, Professor Abdelmalek Bouazza gives specialist advice for the industry both nationally and internationally.

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PREFACE

Geosynthetics are extensively used in waste containment facilities either as part of cover or bottom lining systems. Their aim is to reduce water ingress into the containment, to control gas migration in the case of the cover liners, and to limit contaminant migration to levels that will result in negligible impact in the case of bottom liners. This special issue gives an overview of the research effort conducted in various part of the world on the theme of this special issue. It contains ten papers addressing important aspects related to waste containment design including the important interaction between waste or soil and lining systems, geomembrane wrinkles, hydrocarbon diffusion, geosynthetic clay liners and interaction with acid mine drainage and acidic solutions, settlement and its mitigation through the use of geosynthetics and finally concluding with an overview of the use of geosynthetics in landfills in Asia and in Perth, Australia.

Finally, I wish to express my appreciation to the authors for their effort and time in the preparation of a set of very high quality papers. I am very much indebted to the reviewers for their highly competent efforts. Last but not least, I would like to gratefully acknowledge the assistance and encouragement of Professor A. Balasubramaniam, Editor in Chief, during the preparation of this issue.

Abdelmalek Bouazza
Guest Editor

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ACKNOWLEDGEMENT

The September 2012 Issue of the journal has Prof. Abdelmalek Bouazza from Monash University as the Guest Editor. We are greatly indebted to Malek to bring this flavour of Geosynthetics and Sanitary Landfill to our Journal through the contributions from invited authors.

There are ten excellent papers authored by: N. Dixon, K. Zamara, D.R.V. Jones and G. Fowmes; R. K. Rowe, P. Yang, M.J. Chappel, R.W.I. Brachman and W.A. Take ; N. Touze-Foltz, M. Ahari, M. Mendes, C. Barral, M. Gardoni and L. Mazéas; P.J. Fox, C. Athanassopoulos, S. S. Thielmann and A. N. Stern; A. Naka, T. Katsumi, G. Flores, T. Inui, T. Ohta, T. Urakoshi and T. Ishihara; Y. Liu, W.P. Gates and A. Bouazza; S. Rajesh and B.V.S. Viswanadham; B.V.S. Viswanadham, S. Rajesh and A. Bouazza; H. B. Ng and B. Ramsey; and L. Du Preez, R. Beaman and I. Watkins. The topics covered waste/lining interaction systems; compacted clay liners in slopes; Diffusion of phenolic compounds through an HDPE geomembrane; Damages in Geomembranes due to Gravel in Underlying Compacted Clay; Mineral barriers against acid rock drainage; Geosynthetic Clay Liners Using Polymer Modified Geosynthetic Lining Systems for Modern Waste Facilities with Bentonite; Deformation Behaviour of Soil barriers of Landfill Covers; and Case studies in major metropolitan landfills These contributions will be of great interest to engineers and researchers who are dealing with Challenges in Geosynthetics and Sanitary Landfill Design Practice.
Prof. Abdelmalek Bouazza must be congratulated for single-handedly doing all the editorial works in bringing forth this Issue of the journal on an important and useful theme.
Sincere thanks are due to all the contributing authors.

The March, June and September 2012 Issues are all released well in time and the credits go to the Guest Editors and the in-house editorial teams.

K.Y. Yong
D.T. Bergado
T.A.Ooi
A.S.Balasubramaniam

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Special Issue on Geosynthetics and Sanitary Landfill
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