

CONTENTS

*Special Issue: A Selection of Papers from the Proceedings of the Fourth International Congress on Environmental Geotechnics,
Rio de Janeiro, Brazil, August, 2002*

<i>Foreword</i>	ix
Two-dimensional DNAPL migration affected by groundwater flow in unconfined aquifer	
M. Kamon (Kyoto, Japan), K. Endo (Ibaraki, Japan), J. Kawabata (Tokyo, Japan), T. Inui and T. Katsumi (Kyoto, Japan)	1
A review of NAPL source zone remediation efficiency and the mass flux approach	
K. Soga, J.W.E. Page (Cambridge, UK) and T.H. Illangasekare (Golden, CO, USA)	13
Studies of channel sediments contaminated with organics and heavy metals	
M.C. Barbosa, M. de Souza Soares de Almeida, D.F. Mariz (Rio de Janeiro, Brazil) and J.L.D.S.S. de Almeida (State of Tocantins, Brazil)	29
Recovery of dodecane, octane and toluene spills in sandpacks using ethanol	
A.M. Palomino (Atlanta, GA, USA) and D.G. Grubb (Malvern, PA, USA)	39
Bench- and field-scale evaluation of chromium and cadmium extraction by electrokinetics	
D.B. Gent (Vicksburg, MS, USA), R. Mark Bricka (Boston, MA, USA), A.N. Alshawabkeh (Mississippi State, MS, USA), S.L. Larson (Vicksburg, MS, USA), G. Fabian (Aberdeen, MD, USA) and S. Granade (Point Mugu, CA, USA)	53
Evaluation of bioventing on a gasoline–ethanol contaminated undisturbed residual soil	
P. Österreicher-Cunha, E. do Amaral Vargas Jr., J.R.D. Guimarães, T.M.P. de Campos, C.M.F. Nunes, A. Costa, F. dos Santos Antunes, M.I.P. da Silva and D.M. Mano (Rio de Janeiro, Brazil)	63
Bioleaching of heavy metals from a low-grade mining ore using <i>Aspergillus niger</i>	
C.N. Mulligan, M. Kamali and B.F. Gibbs (Montreal, Canada)	77
Field vapor extraction test and long-term monitoring at a PCE contaminated site	
J.-C. Chai and N. Miura (Saga, Japan)	85
Anaerobic biodegradation of an organic by-products leachate by interaction with different mine tailings	
K. Markewitz, A.R. Cabral (Sherbrooke, Canada), C.T. Panarotto (Caxias do Sul, Brazil) and G. Lefebvre (Sherbrooke, Canada)	93
Laboratory tests for reactive barrier design	
A.D. Gusmão (Brazil), T.M.P. de Campos (Rio de Janeiro, Brazil), M. de Melo Maia Nobre (Brazil) and E. do Amaral Vargas Jr. (Rio de Janeiro, Brazil)	105
A new procedure for treatment of oily slurry using geotextile filters	
M.B. Mendonça, M.C. Cammarota, D.D.C. Freire and M. Ehrlich (Rio de Janeiro, Brazil)	113
Soil vapor extraction of chlorinated solvents at an industrial site in Brazil	
M.M.M. Nobre and R.C.M. Nobre (Maceió, Brazil)	119
Natural attenuation of chlorinated organics in a shallow sand aquifer	
R.C.M. Nobre and M.M.M. Nobre (Maceió, Brazil)	129
Computational modelling of final covers for uranium mill tailings impoundments	
G.L.M. Leoni, M. de Souza Soares Almeida and H.M. Fernandes (Rio de Janeiro, Brazil)	139
Embedding expert knowledge in a decision model: evaluating natural attenuation at TCE sites	
N.A. Stiber (Washington, DC, USA), M. Pantazidou (Zografou, Greece) and M.J. Small (Pittsburgh, PA, USA)	151
Oil spills debris clean up by thermal desorption	
J.T. Araruna Jr., V.L.O. Portes, A.P.L. Soares (Rio de Janeiro, Brazil), M.G. Silva, M.S. Sthel, D.U. Schramm, S. Tibana and H. Vargas (Campos dos Goytacazes, Brazil)	161
Effect of NAPL entrapment conditions on air sparging remediation efficiency	
W.A.P. Waduge, K. Soga (Cambridge, UK) and J. Kawabata (Tokyo, Japan)	173