

Geo-Congress 98

Risk-Based Corrective Action and Brownfields Restorations

Proceedings of Sessions of Geo-Congress 98

Geotechnical Special Publication Number 82

Boston, Massachusetts, USA

18 – 21 October 1998

Editors:

**Craig H. Benson
Jay N. Meegoda**

**Robert B. Gilbert
Samuel P. Clemence**

ISBN: 978-1-7138-5188-2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (1998) by American Society of Civil Engineers
All rights reserved.

Printed with permission by Curran Associates, Inc. (2022)

For permission requests, please contact American Society of Civil Engineers
at the address below.

American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, VA 20191
USA

Phone: (800) 548-2723
Fax: (703) 295-6333

www.asce.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Contents

An Overview of Brownfields Restorations

The Greening of New Jersey's "Brownfields" as Viewed by the Department of Environmental Protection	1
Richard J. Gimello and Phyllis E. Bross	
Innovation in Brownfields Site Assessment.....	16
Gerard F. McKenna	

Tools for Risk-Based Corrective Action (RCBA)

Development of Risk-Based Remediation Strategies	30
Stephen T. Washburn and Kristen G. Edelmann	
The Evolution of Risk-Based Corrective Action.....	44
Jim Rocco and Leslie Hay Wilson	
A Risk-Based Approach for a National Assessment	55
Gene Whelan and Gerard F. Laniak	
Overview of ASTM Proposed Standard Guide to the Process of Sustainable Brownfields Redevelopment	75
Michael B. Taylor, James R. Rocco, and James Gibson	
Risk Evaluation in Brownfield Slurry Wall Containments by Contaminant Transport and CalTOX Models	92
Shailesh Chirputkar and Dorairaja Raghu	

Case Histories: I

Hitting a Home Run for the Giants Stadium: A Risk Management Approach to Site Investigation and Remediation.....	109
Amanda L. Spencer and Gregory P. Brorby	
Impact of Remedial Landfill Cover Systems and Gas Extraction Systems on Groundwater VOC Concentrations	121
Lisa R. Blotz, Robert B. Gilbert, and James R. Stout	
Lessons Learned: An Assessment of Performance for Completed Remediation Projects.....	141
Lizan N. Koerner, Lisa R. Blotz, and Robert B. Gilbert	
Uncertainties Associated with the Preliminary Ecological Risk Assessment Process: Case Study	159
Harold A. Tuchfield, Julia Schulten, Joseph Voor, Thomas Peel, and Leo Gentile	

Past Performance and Emerging Trends

Risk-Sharing Mechanisms for Brownfields Redevelopment	178
Lawrence S. Bacow	

An Analysis of the Success of RBCA in Tennessee UST Site Management.....	196
Kimberly Davis and Chris Bolton	
Integration of Risk Management and Project Management for Efficient RCRA Corrective Action.....	209
Gerald Phillips, James R. Rocco, and Lesley Hay Wilson	
Development of a Site Corrective Action Cost Comparison Model Based on the ASTM RBCA Guide and Decision Theory.....	217
Lesley Hay Wilson and James R. Rocco	
Engineering Controls for Risk Reduction at Brownfield Sites.....	229
Hilary I. Inyang, John L. Daniels, and Vincent Ogunro	
<i>Case Histories: II</i>	
Site Remediation and Brownfields Redevelopment of the Former Koppers Seaboard Site, Kearny, New Jersey.....	253
Michael L. Hornsby and Peter W. Sawchuck	
Brass Factory to Regional Mall: A Model Brownfield.....	267
William F. Kay Jr., and Elizabeth C. Barton	
Case History of a Successful “Brownfields” Site in Wichita, Kansas. Part 1: Innovative Approaches to Funding and Liability.....	277
Mark P. Mitsch, Roger L. Olsen, and Jack Brown	
Case History of a Successful “Brownfields” Site in Wichita, Kansas. Part 2: Innovative Approaches to Remediation.....	284
Mark P. Mitsch, Roger L. Olsen, and Jack Brown	
Subject Index.....	301
Author Index.....	303