



Environmental Protection
Administration, R.O.C.



Taiwan Association of
Soil and Groundwater
Environmental Protection



Department of Bioenvironmental
Systems Engineering, National
Taiwan University

Programme and Registration 2010 Taipei International Conference

on the
Investigation, Remediation and Management of
Soil and Groundwater Contaminated Sites

Conference: October 27 | Exhibition: October 25-27
GIS NTU Convention Center
Taipei, Taiwan, R.O.C.

2010conference.tasgep.org.tw



The goal of this conference is to provide a forum for administrators, researchers, and engineers from around Asia to exchange and promote advanced concepts, technologies, and products related to the remediation and management of soil and groundwater contaminated sites. More than thirty experts from various countries, including the United States, Canada, the United Kingdom, Australia, Japan, Korea, China, and Taiwan, will be invited to this conference. With their rich academic and practical backgrounds, these experts will provide cutting-edge reports to conference participants. The main conference agenda will include:

- Agricultural land contamination
- Brownfield management and health risk assessment
- Sustainable management of soil, groundwater, and sediments
- Advanced remediation technology

A Message from the Chair of the Organizing Committee

Welcome to Taipei and celebrate the 10th Anniversary of Taiwan Soil and Groundwater Remediation Achievement



Prof. Chen-Wuing Liu
Chair of the Organizing Committee
President, TASGEP

Year 2010 is the tenth anniversary of the promulgation of the Soil and Groundwater Pollution Remediation Act (SGWPRA) in Taiwan. In the last decade, administrators, researchers, and engineers in Taiwan worked together to develop regulations and technologies to discover and resolve soil and groundwater contamination.

Facing the next decade, there are still many challenges, thus we need to share our experiences and learn new concepts and technologies from the world. If you are interested in soil and groundwater protection and management, please do not hesitate to come to Taipei and attend this conference.

Programme Overview

International Conference Hall

Opening General Session		
Facilitator: Mr. Hung-Teh Tsai, Prof. Cheng-Wuing Liu		
0800-1200	Registration	
0840-0850	Opening Reception	Prof. Cheng-Wuing Liu (Taiwan)
0850-0900	Welcome Speech (1)	Dr. Shu-Hung Shen Minister, EPA (Taiwan)
0900-0910	Welcome Speech (2)	Mr. William A. Stanton Director, AIT (USA)
0910-0945	Keynote Speech (1) Current Status and Future Policies of Managing Contaminated Soil and Groundwater in Taiwan	Mr. Hung-Teh Tsai (Taiwan)
0945-1020	Keynote Speech (2) Regulation of Brownfield Sites in the UK using a Sustainable Risk Based Approach	Mr. Jonathan Atkinson (UK)
1020-1050	Tea Break	
Session A - Agricultural Land Contamination		
Facilitator: Prof. Dar-Yuan Lee, Prof. Jae E. Yang		
1050-1110	Soil Contamination and Soil Management: Bioavailability as the Key to Soil Quality Standards for Agriculture	Dr. Paul Römkens (Netherlands)
1110-1130	The Long Term Monitoring of Heavy Metal Concentrations in Farmland Soils and Its Use for Farmland Management	Mr. Kazunori Kohyama (Japan)
1130-1150	Monitoring and Management Strategies of Agricultural Land Contamination in Korea	Prof. Jae E. Yang (Korea)
1150-1210	Identification of Hyperaccumulating Weed Species in Unpolluted Sites: Theory and Confirmation	Prof. Qi-Xing Zhou (China)
1210-1230	Arsenic and Cadmium Contamination in Paddy Soils and Crops in Japan and Effects of Water Management on Arsenic and Cadmium Content in Rice Grain	Dr. Tomohito Arao (Japan)
1230-1330	Luncheon	

International Conference Hall

Session C - Sustainable Management of Soil, Groundwater, and Sediments		
Facilitator: Prof. Chia-Shyun Chen, Dr. Tissa Illangaskare		
1330-1350	Three Decades of Study and Experience: Understanding the Behavior of Non-aqueous Phase Liquids in Heterogeneous Porous Media- What Have We Learned to Solve Real-World Problems?	Prof. Tissa Illangaskare (USA)
1350-1410	Comparison of Chlorinated Volatile Organics Concentrations in Shallow Groundwater at Two Areas with Different Vadose Zone Sediments	Prof. Guang-Cai Wang (China)
1410-1430	Importance of Using Small-Scaled Technology for Site Characterization	Prof. Chia-Shyun Chen (Taiwan)
1430-1450	Challenges and Successes in Managing Contaminated Sites in Canada	Mr. Faramarz Bogzaran (Canada)
1450-1510	Tea Break	
1510-1530	Advances in Contaminated Sediment Remediation from the Lower Fox River OU1 Project	Dr. Jerry Eykholt (USA)
1530-1550	“Waste to Resource”: An Overview of Assessment and Technology in Sediment Remediation	Dr. David Moore (USA)
1550-1610	Break	
Forum		
Facilitator: Mr. Hung-Teh Tsai, Prof. Cheng-Wuing Liu		
1610-1730	Open Discussion	

John Locke Chamber

Session B - Advanced Remediation Technology		
Facilitator: Prof. Chih-Jen Lu, Mr. William Pickens		
1030-1050	Lessons Learnt during Bioremediation of over 150 Sites Contaminated with Chlorinated Aliphatic Hydrocarbons in Japan	Dr. Shrihari Chandraghatgi (Japan)
1050-1110	Bioremediation of Contaminated Sites Using Microorganisms: Blessing or Curse	Prof. Ji-Dong Gu (Hong Kong)
1110-1130	Bioremediation of Toxic Metals and POPs in Soils	Dr. Yong-Ming Luo (China)
1130-1150	Accelerated Site Cleanup Using a Sulfate-Enhanced In Situ Remediation Strategy	Mr. Gary Birk (USA)
1150-1210	In-situ Chemical Oxidation of a Tetrachloroethene Plume in Groundwater	Mr. William Pickens (USA)
1210-1330	Luncheon	

John Locke Chamber

Session D - Brownfield Management and Health Risk Assessment		
Facilitator: Prof. Chih-Ming Kao, Prof. Shane Que Hee		
1330-1350	Brownfield Remediation and Its Regulation – Rhodes Peninsula	Mr. John Coffey (Australia)
1350-1410	Brownfield Management and Health Risk Assessment in the U.S.	Prof. Shane Que Hee (USA)
1410-1430	Generic and Advanced Human Health Risk Assessment for Brownfield Regeneration	Prof. Paul Nathanail (UK)
1430-1450	Integration of Brownfield Management and Human Health Risk Assessment in SGPR	Ms. Shu-Hsing Hung (Taiwan)
1450-1510	Tea Break	
1510-1530	An-Shun Remediation Site Monitoring Management and The Residential Healthcare	Ms. Huang-Chen Chang (Taiwan)
1530-1550	Site Management and Redevelopment Experience in United Kingdom	Mr. Doug Laidler (UK)
1550-1610	Break	

Keynote Presentations



Mr. Hung-Teh Tsai is the Technical Superintendant and Executive Secretary of Soil and Groundwater Remediation Fund Management Board (SGRFMB), Environmental Protection Administration, R.O.C. He earned his master degree in the Graduate Institute of Environmental Engineering, National Taiwan University in 1984, and joined the EPA in 1987. Mr. Tsai has more than twenty years of experiences on air and water pollution prevention, solid waste management, environment monitoring, soil and groundwater protection.



Mr. Jonathan Atkinson, is a Technical Specialist in Groundwater and Contaminated Land, UK Environment Agency. He joined the Environment Agency in 1996. He has worked on risk assessment of developed closed landfill sites, landfill engineering and environmental control enforcement on licensed sites, and a variety of contaminated land projects. He has spoken at a number of UK and European Conferences on Risk Assessment, Land Remediation and Waste Management and Regulation of Brownfield sites.

Invited Speakers and Facilitators

Tomohito Arao	Senior Researcher, Soil Environment Division, National Institute for Agro-Environmental Sciences
Gary M. Birk	Director of Sales and Marketing, EOS Remediation, LLC, Solutions-IES, Inc.
Faramarz Bogzaran	Managing Director, Fluid Energy Recovery Corp.
Shrihari Chandraghatgi	President and CEO, EcoCycle Corporation
Huang-Chen Chang	Division chief and technical specialist of Environmental Protection Administration of Executive Yuan, Environmental Protection Bureau of Tainan City
Chia-Shyun Chen	Professor, Graduated Institute of Applied Geology, National Central University

John Coffey	Manager Special Projects, Contaminated Sites Division, Department of Environment, Climate Change and Water, New South Wales Australia
Jerry Eykholt	Lead Environmental Engineer, Foth Infrastructure & Environment, LLC
Ji-Dong Gu	Associate Professor, School of Biological Sciences, University of Hong Kong
Shu-Hsing Hung	Chief of Law Suit Execution Section, Soil and Groundwater Remediation Fund Management Board, Environmental Protection Administration
Tissa H. Illangasekare	AMAX Distinguished Chair and Professor, Environmental Science and Engineering Division Center for experimental Study of Subsurface Environmental Processes, Colorado School of Mines
Chih-Ming Kao	Professor, Institute of Environmental Engineering, National Sun Yat-Sen University
Kazunori Kohyama	Senior Researcher, National Institute for Agro-Environmental Sciences
Doug Laidler	Specialist, Contaminated Land: Applications in Real Environments (CL:AIRE)
Da-Yuan Lee	Professor, Department of Agricultural Chemistry, National Taiwan University
Chih-Jen Lu	Professor, Department of Environmental Engineering, National Chung-Hsing University
Yong-Ming Luo	Director, Key Lab of Soil Environment and Pollution Remediation Institute of Soil Science, Chinese Academy of Sciences (CAS)
David Moore	Service Line Lead-Water and Resource Management, Weston Solutions, Inc.
Paul Nathanail	Professor of Engineering Geology, University of Nottingham & Managing Director, Land Quality Management Ltd, University of Nottingham

William Pickens	Vice President, Principal Hydrogeologist, MWH Americas, Inc.
Shane Que Hee	Professor of Environmental Health Sciences, University of California at Los Angeles
Paul Römken	Senior Research Scientist Soil Quality and Contaminants, Alterra, Centre of Soil Science, Wageningen University and Research Centre
Guang-Cai Wang	Professor, School of Water Resources and Environment, China University of Geosciences
Jae E. Yang	Dean of College of Agriculture and Life Science, Department of Biological Environment, Kangwon National University
Qi-Xing Zhou	Dean, Professor in Environmental Science, Chief Scientist, Nankai University

(in alphabetical order)

Special Meeting Programme

Leader Hotel 10F

Special Meeting: Soil Environment Issues of South-East Asia Countries		
Facilitator: Prof. Zueng-Sang Chen		
1330-1335	Foreword and Introduction	Prof. Zueng-Sang Chen (Taiwan)
1335-1350	Achievement, Development and Experience of Remediation Technologies Applied to the Soil and Groundwater Contaminated Sites of Taiwan	Prof. Zueng-Sang Chen (Taiwan)
1350-1405	Soil Contamination with Asbestos in Korea: Causes, Issues and Legislation	Dr. Dong-Jin Kim (Korea)
1405-1420	Heavy Metal Pollution of Soil and Risk Alleviation Methods: Research Experiences in Japan	Dr. Tomoyuki Makino (Japan)
1420-1435	Remediation of Polluted Lands and Reuse of Liquid Waste for Irrigation Water in Indonesia	Dr. Dedi Nursyamsi (Indonesia)
1435-1450	Effects of Recent Lahar Deposits on the Major Groundwater Ions in Shallow Aquifer used for Irrigation and Fish Culture at Downstream Pasig-Potrero River Basin, Pampanga, Philippines	Dr. Mario Collado (Philippine)
1450-1505	The Remediation and Management of Soil and Groundwater Contaminated Sites in Thailand	Mr. Cherdchai Worakaensai (Thailand)
1505-1535	Open Discussion	
1535-1550	Summary and Conclusion	Prof. Zueng-Sang Chen (Taiwan)

Special Meeting Invited Speakers and the Facilitator

Zueng-Sang Chen	Distinguished Professor and Associate Dean, Department of Agricultural Chemistry, National Taiwan University
Mario Collado	Engineer IV – Section chief Design and Engineering, Water Resources Management Division, Bureau of Soil and Water Management
Dong-Jin Kim	Management Officer for Soil and Groundwater R&D, Soil & Groundwater Management Division, Ministry of Environment, South Korea
Tomoyuki Makino	Senior Researcher, National Institute for Agro-Environmental Sciences
Dedi Nursyamsi	Head of IAERI, Indonesian Agricultural Environment Research Institute
Cherdchai Worakaensai	Environmental Officer, Pollution Control Department, Ministry of Environment and Natural Resources, Royal Thai Government

(in alphabetical order)

2010 Taipei Soil and Groundwater Exhibition

This 3-day exhibition is integrated with the “2010 Taipei International Conference on the Remediation and Management of Soil and Groundwater Contaminated Sites”. More than twenty exhibitors will demonstrate their advanced technologies, equipment, chemicals products, and field experience which can be applied in the investigation and remediation of soil and groundwater contaminated sites. The full list of exhibitors

- Apollo Technology Co., Ltd. (Taiwan)
- Biotic Technology Co. (Taiwan)
- Cenpro Technology Co., Ltd. (Taiwan)
- Chinese Institute of Environmental Engineering (Taiwan)
- Cogent Environmental Ltd. (U.K.)
- DOWA ECO-SYSTEM Co., Ltd (Japan)
- EcoCycle (Japan)
- Environmental Protection Administration, R.O.C. (Taiwan)
- ERM (Taiwan)
- Industrial Technology Research Institute (Taiwan)
- Ion Science Ltd. (U.K.)
- J&L Environmental Technology Co., Ltd. (Taiwan)
- MWH (Taiwan)
- Ocean Best International Co., Ltd. (Taiwan)
- Pin-Pro Corporation (Taiwan)
- Startech Instruments Co., Ltd. (Taiwan)
- Sinotech Engineering Consultants, Inc. (Taiwan)
- Sinotech Engineering Consultants, Ltd. (Taiwan)
- Taiwan-Asahi Environmental Technology Co. Ltd. (Taiwan)
- TASGEP (Taiwan)
- Taiwan Environment Scientific Co., Ltd. (Taiwan)
- Today's Instruments Co., Ltd. (Taiwan)
- Weston Solutions Taiwan Ltd. (Taiwan)

(in alphabetical order)

Exhibition and Exhibitor Presentation Programme

Plato Chamber

Monday, October 25 - Wednesday, October 27	
0900-1700	Exhibition

Nietzsche Chamber

Monday, October 25		
1330-1400	The Bottlenecks Encountered During Contamination Investigation and Their Solutions	Apollo Technology Co., Ltd.
1420-1450	Environmental Forensic Technologies and Riskmap of Groundwater Contaminated Site	Industrial Technology Research Institute
1510-1540	Investigation and Remediation Case Study of Gasoline Station Contamination	Sinotech Engineering Consultants, Ltd.
1600-1630	Innovation for Sustainability	Sinotech Engineering Consultants, Inc.

(All sessions on Monday are presented in Mandarin)

Nietzsche Chamber

Tuesday, October 26		
1020-1050	Cutting Edge Sampling and Monitoring Technologies Applied in Groundwater Monitoring Wells	Startech Instruments Co., Ltd.
1110-1140	Case Study in Taiwan: In-Situ Petrol Station Soil Bioremediation of TPH Using Eox	J&L Environmental Technology Co., Ltd.
1330-1400	Advanced Portable Heavy Metal Analysis Instrument Applied in Soil and Groundwater Remediation	Today's Instruments Co., Ltd.
1420-1450	Contamination Remediation Project Case Study	ERM
1510-1540	How to Apply Biotic Test Kit in Soil and Water Quality Monitoring	Biotic Technology Co.
1600-1630	Advanced Hydrogeology Investigation and Remediation Technologies Developed for Contaminated Sites	Sinotech Engineering Consultants, Ltd.

(All sessions on Tuesday are presented in Mandarin)

Nietzsche Chamber

Wednesday, October 27		
1020-1050	PCE Remediation Case History	MWH
1110-1140	In-Situ Bioremediation at Chlorinated Solvent Sites – A Review of 97 Case Studies	AECOM
1330-1400	Company Products Demonstration	EcoCycle
1420-1450	Company Products Demonstration	Ion Science Ltd.
1510-1540	Company Products Demonstration	Cogent Environmental Ltd.

(All sessions on Wednesday are presented in English)

2010 Taiwan-United States Workshop on Bioremediation

Taiwan EPA and U.S. EPA started the bilateral program on site remediation to promote good environmental governance from the year 2005. Each year a training workshop is held in Taipei, Taiwan and U.S. EPA experts are invited as lecturers. In the past few years, workshops on Non-Aqueous Phase Liquids, Monitored Natural Attenuation, In-Situ Chemical Oxidation and Air-Based Remediation Technologies have been held. This year the theme of the workshop will be bioremediation.

Workshop Lecturers

Harry L. Allen, III, Ph.D.

Dr. Allen is an Environmental Scientist in the Environmental Response Team (ERT), U.S. Environmental Protection Agency, and serving as a national technical expert in the area of hazardous waste and emergency response. His technical specialty is bioremediation of soil contaminated with oil, wood treating waste, and pesticides. He has 30 years of experience in determining extent of contamination and exposure potential. During each cleanup he attempted to advance the state-of-the art of bioremediation technology through laboratory development of testing to facilitate biostimulation and bioaugmentation and to identify active biodegradation microbial cultures.

Michelle Simon, Ph.D., P.E.

Dr. Simon is a Technical Support Project Manager of U.S. Environmental Protection Agency and have worked on more than 110 contaminated sites, including Delaware Sand and Gravel, del Amo, Univar, and the Liapri bioremediation projects.

Harry L. Allen, IV

Mr. Allen began his professional career in the field of emergency response in 1998. He is now an On-Scene Coordinator at EPA's Region 9 office in San Francisco, where he manages time-critical cleanups. He travels extensively to assist first responders with cleaning up contaminated sites.

Workshop Programme

Plato Chamber

Thursday, October 28		
0900-0915	Opening remarks	Taiwan EPA
0915-0945	Introduction	Host
0945-1035	Overview of bioremediation. Highlighting aerobic, anaerobic, and co-metabolic bioremediation of persistent organic pollutants mediated by bacteria, fungi, and actinomycetes	Harry L. Allen III
1035-1105	Site remediation process including site discovery, problem definition, risk determination, source removal or stabilization, determining extent of contamination, establishing cleanup goals, remedy selection, implementation	Harry L. Allen IV
1105-1120	Break	
1120-1210	Bioremediation of sites polluted by petroleum products, wood treating chemicals, and pesticides	Harry L. Allen III
1210-1230	Issues for potential responsible parties and residents in the vicinities where bioremediation is employed	Harry L. Allen IV
1230-1330	Luncheon	
1330-1450	Design of bioremediation systems for groundwater (aerobic and anaerobic plus representative case studies)	Michelle Simon
1450-1505	Break	
1505-1535	Performance monitoring and statistical confirmation of cleanup success	Harry L. Allen IV
1535-1615	Case study: del Amo Bioventing	Michelle Simon
1615-1745	Using bench-scale and field pilot-scale studies to design bioremediation systems for contaminated soil	Harry L. Allen III

Plato Chamber

Friday, October 29		
0900-0930	Treatment Trains: Combining biological treatment with other technologies, such as volume reduction, to achieve cleanup goals	Harry L. Allen III
0930-1010	Biostabilization: Using compost and biosolids to stabilize soil contaminated with toxic organics and metals	Harry L. Allen IV
1010-1025	Break	
1025-1125	Case study: Dioxin remediation in Danang, Vietnam	Harry L. Allen III
1125-1155	Case study: Suisun Slough oil spill bioremediation project	Harry L. Allen IV
1155-1300	Luncheon	
1300-1330	Case study: Mining Sites biostabilization using biosolids	Harry L. Allen IV
1330-1400	Case study: Phytoremediation using hybrid poplar trees	Harry L. Allen III
1400-1415	Break	
1415-1615	Friday afternoon Breakout Sessions for Questions	Panel

Registration

This conference and exhibition is entirely free. On-line registrations will be accepted until October 5. For further information, please visit 2010conference.tasgep.org.tw for complete updated conference details.

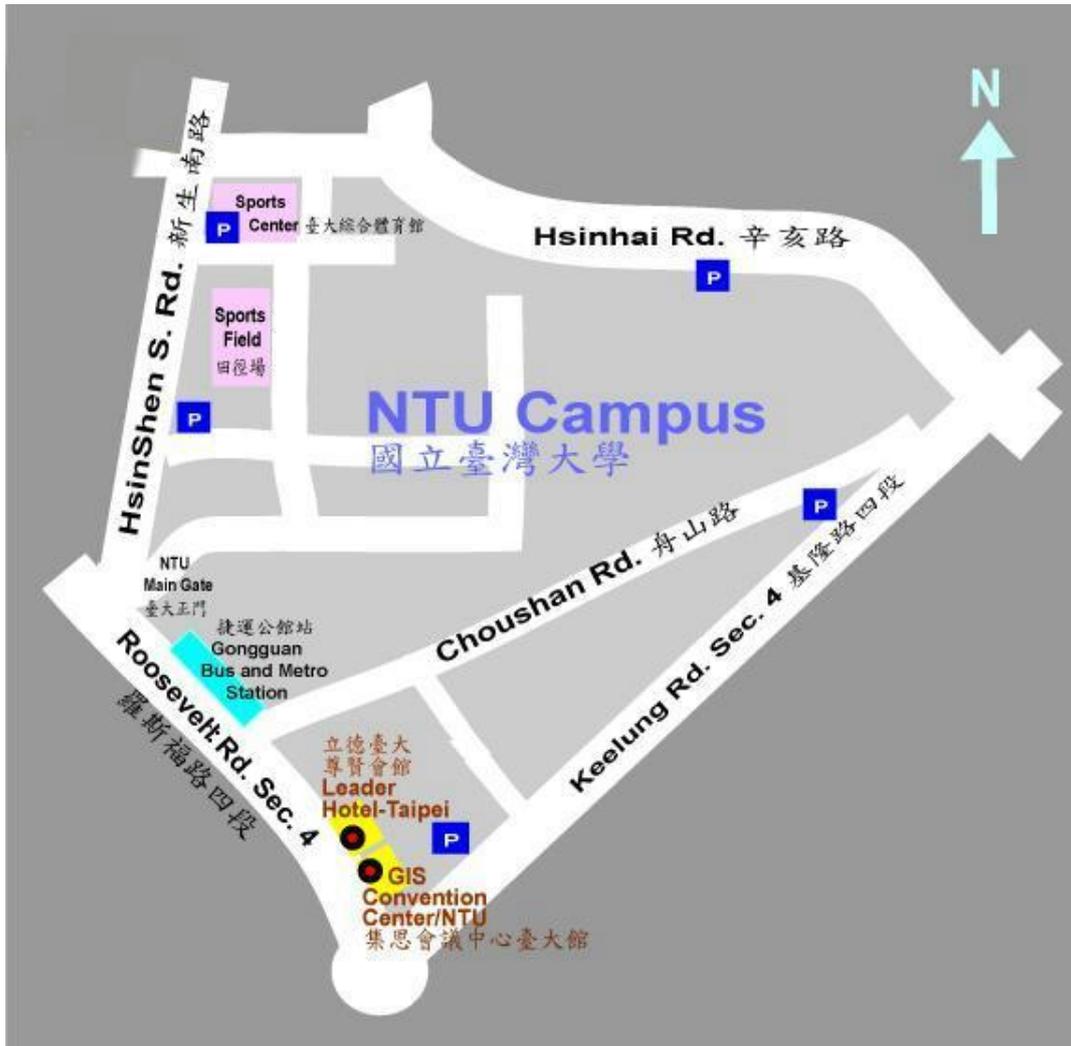
The participants of the conference are welcome to attend the **2010 Taiwan-United States Workshop on Bioremediation** on October 28 and 29. This 2-day workshop is also free and will be held at Plato Chamber, GIS NTU Convention Center. Those wishing to participate in this workshop can register on-line.

Contact

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Conference Location

GIS Convention Center, National Taiwan University

No.85, Section 4, Roosevelt Road, Taipei, Taiwan

Leader Hotel

No.83, Section 4, Roosevelt Road, Taipei, Taiwan

(All locations are near Exit 2, Gongguan Station, Taipei

Metro Xindian Line)