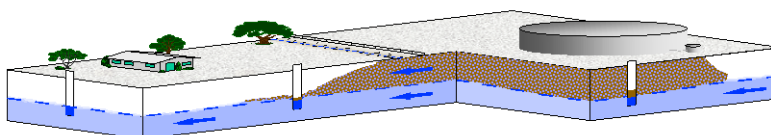


Present the 17th Annual Short Course

CONTAMINATED AND HAZARDOUS WASTE SITE MANAGEMENT

Theory, Practice & Outdoor Field Demonstrations



June 11-15, 2012
Toronto, Ontario, Canada

GOWEN Environmental and the **International Association of Hydrogeologists** present *Contaminated and Hazardous Waste Site Management*, a comprehensive course that provides a solid theoretical and practical foundation in contaminated site management. The Course has been developed especially for individuals who manage, regulate, investigate, remediate, or are impacted by contaminated sites. Managing these sites is a multidisciplinary task, therefore, integrating several disciplines is necessary to efficiently and economically manage or make decisions regarding site issues.

Course Overview - Registration includes:

- **5 days** of in-depth discussions by **15 leading environmental**, soil, sediment and groundwater **experts** representing academia, consulting, and government from across North America. These experts will provide a comprehensive overview of hydrogeology and geochemical principles, site assessment procedures, risk assessment and risk management tools, remediation technologies, and management issues relating to contaminated and hazardous waste sites.
- **Networking Lunch at Outdoor Demonstration Day**
- **2 - Evening optional computer based workshops** on computer modelling and environmental management support software. The workshops will start on the Monday night and will incorporate established and innovative computer modelling and support software used in groundwater characterization and remediation; risk assessment; environmental decision support; and contaminated site management.
- **1,200 page notebook** and **resource CD-ROM**.
- **1 half-day of hands-on technical demonstrations on Site Characterization and Remediation Technologies.**
- **4.7 Continuing Education Units (CEUs)**
- **Optional Excursions to the CN Tower Observation Deck and Niagara Falls**

COMPARE THE CONTENT to other Courses----- COMPARE THE VALUE
No other Course of this kind gives a greater value for the registration fee.

The Only Contaminated Sites Management Course You Will Ever Need!

Introduction

Over the last 30 years, countries around the world have developed and implemented guidelines and standards for the **investigation, mitigation, and remediation of contaminated properties**. In all sectors of the economy, high profile contaminated sites, human health issues, litigation, and enormous cleanup costs have heightened the awareness of environmental issues relating to contaminated properties. Contaminated soil, sediment or groundwater in prime real estate and sensitive ecological locations has resulted in the loss of millions of dollars due to lack of development or ineffective management of these properties.

GOwen ENVIRONMENTAL was founded to provide **specialized and leading-edge environmental training** and networking through courses, conferences, and workshops. This Course was developed to provide a medium for the transfer of **unbiased information** and technology to clean up contaminated properties. The Course has evolved over the last sixteen years into an **internationally recognized solution-based training** program that brings together participants, regulators, consultants, and academics from across the globe.

International Association of Hydrogeologists (IAH) (www.iah.org) is an international organisation for scientists, engineers and other professionals working in the fields of groundwater resource planning, management and protection. It was founded in 1956 and has grown, with the increasing social and environmental importance of groundwater, to a membership of more than 3,500 members in more than 135 countries.

The Course is firmly established as far as content and instruction. The Course is sponsored by one of the largest environmental associations in North America and largest groundwater resource protection associations in the world. Over the last fourteen years, the Course has received support and sponsorship from major environmental associations world-wide. The instructors represent academia, government, and the private sector; all are leaders in their respective fields. This framework provides for an unbiased transfer of information that provides individuals who own, regulate, investigate, remediate or are impacted by contaminated properties with a solid theoretical and practical foundation in contaminated site management. The management of these sites is a multi-disciplinary task. This course integrates all the disciplines necessary to successfully, efficiently and economically manage or make decisions regarding these sites.

Course participants will receive theoretical and practical foundations, as well as important information regarding regulatory compliance aspects of contaminated site management. This knowledge will be coupled with a hands-on approach to understanding the tools and techniques for managing contaminated sites. Some experience is helpful, but not necessary, as the Course teaches basic principles before addressing more advanced topics.

This is the only one week indoor-outdoor course being offered globally that covers all issues related to managing subsurface contamination, from theory to practice. **The Course's 15 instructors** are from academia, private industry, and government in North America and **are recognized as leading experts and teachers in their respective fields**. These instructors will provide students with access to a broad base of practical experience and an excellent opportunity to network with leading professionals.

Regardless of your level of expertise, the combination of information presented during this Course will not be found elsewhere and will provide you with the knowledge and confidence to effectively manage contaminated sites. **This Course will provide participants with the competitive edge required in this rapidly evolving field.**

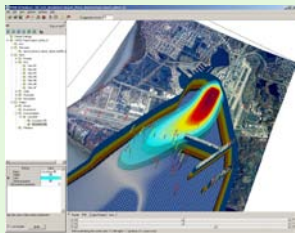
As part of the education process, selected case histories of soil, sediment and groundwater investigations, remediation projects and risk assessments will be studied to further emphasize the practical aspects of each lecture topic. While a good number of 2-3 day short courses are offered on some aspects of contaminated site management, there are few one-week courses offering the opportunity for in-depth learning of a more complete range of issues. The extent of recent developments in the science and technology of contaminated and hazardous waste site management is such that one would be required to attend many short courses in order to be brought up to speed. Our intensive one-week course, with additional workshops and outdoor demonstrations, is an attractive alternative for busy professionals.

This week-long course allows for a half-day of outdoor seminars to demonstrate the various site characterization and remediation technologies currently being used on sites across North America today. Three optional nightly seminars will provide the attendee with hands-on computer workshops to demonstrate the application of environmental decision support software, groundwater modeling and risk assessment modeling tools.

The majority of courses provide two or three instructors to cover an extensive array of topics in two days and charge the same amount for registration for two days as this course charges for five. The 15 instructors in this course, along with the many technology demonstrators, will provide students with a unique access to a very broad base of practical experience and an excellent opportunity to network with leading professionals.

This Course provides an unparalleled synthesis of technical information and applied knowledge in contaminated and hazardous waste site management.

Instructors and Course Topics

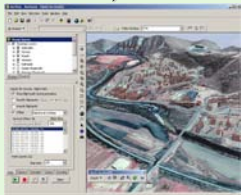
<p>Monday June 11, 2012</p> 	<p>Course Offerings:</p> <ul style="list-style-type: none">• <i>Overview of Contaminated and Hazardous Waste Site Management</i>• <i>Principles of Contaminant Hydrogeology</i>• <i>Soil Chemistry of Hazardous Materials</i>• <i>Practical Model Applications for Risk Assessment and Site Remediation</i> <hr/> <p>Evening:</p> <ul style="list-style-type: none">• <i>Groundwater Modelling Workshop</i>
---	--

Gareth Owen is the President of GOwen Environmental Limited and has spent the last 21 years training other environmental professionals in the discipline of contaminated and hazardous waste site management. Mr. Owen has managed more than 950 contaminated sites including site and risk assessments, remedial plan development and expedited site closures for sites contaminated with hydrocarbons, chlorinated solvents, heavy metals, and radioactive waste. He has provided technical and/or managerial support to clients on over 3,600 sites worldwide. He has managed and provided program and project support on contaminated site investigations and remediation for soil, water, and sediment in every jurisdiction and at every level of government in the provinces and territories of Canada, and advised private and public sector clients on similar issues worldwide. He has worked with and instructed most regulatory agencies in Canada responsible for contaminated and hazardous waste site management. His decision in 2001 to no longer participate in the investigation or the remediation of contaminated sites as a consultant or contractor, ensures the provision of sound and unbiased technical and managerial support to all his clients. It also ensures no conflict of interest with any environmental consulting or contracting firm providing contaminated site management services. Mr. Owen's principal responsibilities have included providing support to government agencies and multinational corporations in managing large and complex environmental programs and projects. His principal experience relates to contaminated site project management and closure as well as environmental program management. *Mr. Owen will provide a detailed overview of Contaminated and Hazardous Waste Site Management.*

Dr. Ken Howard, University of Toronto, is a certified and chartered hydrogeologist, with broad experience in all aspects of groundwater resource evaluation, management and protection. As Director of the Groundwater Research Group at the University of Toronto, he has worked on numerous applied projects in Canada, U.K., the West Indies, equatorial Africa and Australia. He has published over 50 articles on topics that range from numerical flow modeling and contaminant migration to environmental isotopes and borehole geophysics. Dr. Howard will cover the Principles of Hydrogeology and will provide an overview of scientific principles Monday evening. *After attending this lecture, the attendee will have an increased understanding of the physical and chemical processes that determine how contaminants are transported in the subsurface.*

Dr. Jim Dragun is a soil chemist who founded and is president of Dragun Advantage LLC. For 18 years, he has led a team of chemical engineers, civil engineers, environmental engineers, geotechnical engineers, mechanical engineers, environmental specialists, geologists, hydrogeologists, chemists, toxicologists, and biologists. Dr. Dragun and his associates have solved environmental issues for major companies and governments in six continents (Africa, Asia, Australia, Europe, North America, and South America). He has been the Editor-in-Chief of the Journal of Soil & Sediment Contamination for over 15 years. Also, he is a full professor at the University of Massachusetts, Amherst and at Wayne State University, Detroit, Michigan. Dr. Dragun has authored or co-authored nine books and over 70 technical publications. His accomplishments are listed in Who's Who in the World, Who's Who in America, Who's Who in Science and Engineering, and American Men and Women of Science. *Dr. Dragun will lecture on the principles that govern the proper estimation of migration and degradation potential of chemicals in topsoil, and in the saturated and unsaturated zones. These principles apply to chemical behaviour in solid and hazardous waste treatment and disposal units employing or impacting soil and other geologic materials-- landfarms, landfills, deep well injection systems, compost piles, and sites affected by leaks, spills, and other types of accidental or deliberate chemical releases with a focus on why site remediation and site characterization programs fail to meet desired clean-up milestones through a lack of understanding of the fundamental principles of soil chemistry of hazardous materials.*

Miln Harvey, Ph.D., P.Eng. is a Senior Hydrogeologist with Schlumberger Water Services in Waterloo, and the Manager of the Training Division. He is a specialist in finite difference and finite element groundwater modeling using MODFLOW and FEFLOW, and in the integration of GIS data for conceptual and numerical groundwater model development and the visualization of model results. Dr. Harvey has more than 18 years experience as a hydrogeologist and environmental engineer, of which the past 10 years have been spent at Schlumberger Water Services developing groundwater models to assess regional groundwater protection strategies through WHPA delineation and groundwater contamination impacts through fate and transport modeling. Over this period, he has delivered more than 80 professional groundwater short courses in North America and abroad. They have included open enrolment courses for groundwater flow and contaminant transport modeling using Visual MODFLOW and FEFLOW, GIS data management and analysis, aquifer performance test analysis, groundwater modeling for mining applications and water quality data management and modeling, as well as specialized on-site custom courses using a variety of software tailored to specific client training needs. *Dr. Harvey will lecture on Practical Model Application for Risk Assessment and Site Remediation. Participants of this lecture will have increased knowledge of model applications, model selection, and model development and evaluation.*

<p>Tuesday June 12, 2012</p> 	<p>Course Offerings:</p> <ul style="list-style-type: none"> • <i>Site Characterization and Conceptual Model Development</i> • <i>Soil and Groundwater Characterization Tools and Techniques</i> • <i>Sediment Characterization Tools and Techniques</i> <hr/> <p>Evening:</p> <ul style="list-style-type: none"> • <i>Environmental Data Management Workshop Toronto City Tour or Web-based Project Management Tools</i>
--	--


Gareth Owen will lecture on site characterization with a focus on conceptual model development and the path and process of site characterization for closure, risk assessment and remediation.

Dr. David Rudolph is a Professor in the Department of Earth and Environmental Sciences at the University of Waterloo specializing in physical hydrogeology and groundwater protection and management. He is a geological engineer graduating from the University of Manitoba and received his M. Sc. and Ph. D. at the University of Waterloo in Hydrogeology. His specific areas of research activity include field investigation and numerical modeling related to groundwater flow and contaminant transport with a special interest in fractured sediment and unsaturated porous media. Dr. Rudolph has worked extensively in the development and application of field data collection techniques for application to groundwater resource management problems and unsaturated zone flow and transport investigations. He also participates extensively with municipal authorities both nationally and internationally in the development of groundwater protection and management strategies. *Dr. Rudolph will lecture on Subsurface Characterization Tools and Techniques with a focus on Soil and Groundwater Sampling.*

Dr. Paul Sibley is an Assistant Professor at Guelph University who specialises in the assessment of potentially contaminated environmental media (water, soils, and sediments). His current fields of research include assessment of water and sediment quality, invertebrate toxicology, benthic invertebrate community assessment in streams and lakes, impacts on riparian zones. His relevant research experience includes: collecting, and processing site-specific water, sediment and soil samples for physical, chemical, and biological characterisation, analysis and interpretation of water, sediment, and soil quality data from field surveys and risk assessments, and development of provincial and federal water and soil quality guidelines and objectives for metals, petroleum hydrocarbons, pesticides and priority substances. Dr. Sibley has extensive knowledge of the fate and effects of contaminants in both aquatic and terrestrial environments. *Dr. Sibley will present the Practical Considerations for Collection of Sediment Samples for Chemical and Biological Assessment. Participants in this lecture will gain an understanding of the issues associated with and factors that might influence the collection, handling, storage, and transportation of potentially contaminated sediments.*

Jim Love is CEO and a Managing Partner with the Chelsea Group with over 30 years of experience in both senior business and IT roles. His consulting career has included roles as Global Vice President for DMR Group later Fujitsu Consulting, where he ran an international consulting practice. Prior to that he was a principal with Ernst & Young where he joined after a long career in IT in the financial services sector. Jim has in-depth expertise in a range of areas including Lean & Six Sigma, Organizational Change, Strategic Planning, Performance Metrics and CRM. He is regarded as an expert in the strategic use of IT and continues to advise large companies on strategic technology issues including Strategic Alignment, IT governance as well as Project and Portfolio Management. His clients have included very large private sector companies such as Inco, Bell Canada, the Royal Bank, and Cisco Systems. He has also done significant work in the public sector with a wide range of companies. *Jim will conduct a workshop on the use of web-based project management tools for contaminated site programs and projects.*

Janet Magurn is President and Co-Founder of EarthSoft, Inc. Ms. Magurn is one of the leading experts in the world on EDD formats for managing environmental data. Ms. Magurn has thirty years of experience in data management and decision support for environmental data. Ms Magurn's recent responsibilities include managing EarthSoft software development projects, coordinating programming resources, writing system specifications, responding to requests for proposals, managing project budgets, data migrations, and testing software. Ms. Magurn consults regularly for multiple US EPA Regions and states on EDD formats and designs. Ms. Magurn has trained over 800 people to use EQUIS on multiple continents. *Ms. Magurn will provide a workshop on environmental data management with respect to application integration and better site characterization and remediation decision-making.*

<p>Wednesday June 13, 2012</p> 	<p>Course Offerings (AM):</p> <ul style="list-style-type: none"> • <i>Overview of Human and Ecological Risk Assessment</i> • <i>Health and Safety at Hazardous Waste Sites</i> <hr/> <p>Afternoon:</p> <ul style="list-style-type: none"> • <i>Outdoor Demonstrations of Contaminated Site Technology and Techniques</i> • <i>(Networking Lunch - Provided)</i>
--	---


Dr. Marie BenKinney is a Principal Scientist with Exponent Environmental Group (a multi-disciplinary consulting firm providing environmental science and engineering services). She is an ecotoxicologist with more than 21 years of experience specializing in ecological risk assessment. Dr. BenKinney has designed, directed, and contributed to numerous environmental programs ranging from small site-specific and product-specific assessments to large multimillion-dollar site assessments and product development programs. Her work frequently includes assisting in developing negotiation and litigation strategies, and representing clients in public presentations, technical meetings, and negotiation sessions. She was previously employed for 15 years at Mobil Oil Corporation, where she was responsible for environmental testing and consultation activities concerning product registration, product safety stewardship, facility environmental issues concerning water quality and effluent discharges, site assessments and ecological impact assessments, and spill prevention management. Dr. BenKinney is a technical expert in aquatic testing procedures, and in assessing the fate, exposure, and environmental effects of petroleum hydrocarbons. *Dr. BenKinney's lecture will provide an introduction to the underlying concepts and general approaches for Human Health and Ecological Risk Assessment (HERA).*

Participants of this lecture will gain an understanding of the role of HERA in contaminated site assessment and remediation, basic components of HERA, complexity of planning a HERA, identifying HERA objectives, basic approaches to toxicity and exposure assessments, receptor and risk characterization, and dealing with uncertainty in HERA.

Randall Stegner is President of E-Education Associates Ltd. and is responsible for occupational health and safety training in the United States and in Canada. His background encompasses twenty years experience in environmental, health & safety services, including sixteen years experience as a trainer for USEPA, GZA GeoEnvironmental and Northeastern University. He has developed numerous training programs, including the 40 hour General Site Worker, the Environmental Sampling Course, and the Ozone Depleting Substances curriculum. Most recently, Randy was employed by Water Technology International Corporation on behalf of Environment Canada to develop and deliver a USEPA approved "National Environmental Safety Program" for public and private personnel across Canada. He maintains credentials as a Certified Safety Professional, Canadian Registered Safety Professional and a Professional Geologist. *Mr. Stegner will be discussing and demonstrating occupational health and safety issues for contaminated and hazardous waste sites.*

Outdoor demonstrations of site characterization and remediation technologies will be held at a location near the hotel from 12:30 p.m. to 4:30 p.m. Full-scale soil and groundwater remediation technologies, and drilling, geophysical, and sampling and analysis equipment will be demonstrated. The temperature in early June in Toronto ranges from 10-22 C. Attendees should have appropriate apparel, such as rain gear, casual work clothes, and good walking shoes or boots. Cameras and camcorders are permitted.



<p>Thursday June 14, 2012</p> 	<p>Course Offerings:</p> <ul style="list-style-type: none"> • <i>Soil Remediation Techniques and Technologies</i> • <i>Groundwater Remediation Techniques and Technologies</i> • <i>Sediment Remediation Techniques and Technologies</i>
---	--

Dr. David Reisman, Director, Engineering Technical Support Center, National Risk Management Research Laboratory U. S. Environmental Protection Agency, has worked for the U. S. Government since 1976 with the National Park Service (Park Ranger), the National Institute for Occupational Safety and Health (Information Specialist), and in many positions with the Environmental Protection Agency (EPA). He served for several years as a Temporary Advisor to the World Health Organization (WHO) in Geneva, Switzerland, and has authored many environmental health criteria documents for both EPA and WHO. David holds a Masters Degree in interdisciplinary environmental sciences from Miami University, and has completed additional graduate work in engineering at the University of Cincinnati. For over 15 years, David assisted in the development of risk assessment guidance for the EPA Office of Research & Development in the waste, ambient and drinking water and hazardous air pollutants areas. As Director of the EPA's Engineering Technical Support Center he serves all 10 EPA regions, and assists regional personnel and contractors in site characterization, technology selection and treatability study design. The Center works on over 100 Superfund, RCRA and Brownfields sites each year, and

David coordinates the Center's and their contractors' assistance on these sites. David is the recipient of many Government awards and has received several medals for his outstanding work in supporting EPA's regional personnel. *Dr. Resiman will lecture on soil and sediment remediation technologies and techniques.*

Dr. David Jewett is the Director of the Subsurface Remediation Branch of the U.S. EPA's National Risk Management Research Laboratory, Ground Water and Ecosystems Restoration Division located in Ada, Oklahoma. Dr. Jewett leads a team of geochemists, environmental scientists, environmental engineers, hydrogeologists, microbiologists, and soil scientists conducting research and providing technical support related to site characterization and remedial technology development, evaluation, and implementation at hazardous waste sites in order to protect and restore ground water, surface water, and ecosystem resources. He is a hydrogeologist with over 25 years of site characterization and subsurface remediation experience in government, industry, and academia. His research interests include site characterization techniques, contaminant fate and transport, ground water flow and solute transport modeling, and ground water/surface water interactions. Dr. Jewett was a hydrologist specializing in applied research and technical support and the former Director of the U.S. EPA's Center for Subsurface Modeling Support before accepting the responsibilities as Chief of the Subsurface Remediation Branch. Dr. Jewett has a B.S. in geology from Syracuse University, a M.S in geology from The Wichita State University, and a Ph.D. in hydrology from the Department of Hydrology and Water Resources at The University of Arizona. Prior to joining the U.S. EPA, Dr. Jewett was on the faculty of the Department of Geology at Indiana University Purdue University Indianapolis. He also has several years experience as a hydrogeologist and project manager in the environmental remediation industry. *Dr. Jewett will lecture on groundwater remediation techniques and strategies through comparisons and case studies highlighting: Air Sparging; Dynamic Vapour Extraction; Flushing/Stripping; Source Removal; Bioremediation; Bioslurping; UV/Ozone/Hydrogen Peroxide Oxidation; Granular Activated Carbon Systems; Air Strippers; Oxygen Enhancement; Zero-Valent Iron (Funnel-and-Gate) and Physical and Hydraulic Containment.*

Jeff Daniel is a Principal and Senior Project Manager with Conestoga-Rovers & Associates (CRA). Mr. Daniel manages CRA's surface water and environmental design groups and surface water/sediment modeling group. Mr. Daniel has over 18 years of experience in the surface water and environmental fields. During his career, Mr. Daniel has focused on the investigation and cost-effective remediation of sediment projects of varying sizes, including the Willow Run Creek Site in Michigan which involved the removal of approximately 370,000 cubic yards of contaminated sediments and surrounding impacted soil, and a sediment dredging design project which included dredging of over 225,000 CY of impacted sediment from the Ottawa River in Toledo, Ohio and dewatering using geotubes. Construction on the Ottawa River project was completed in 2009/2010. Mr. Daniel is currently managing a major sediment assessment for a 14-mile stretch of a major river in West Virginia. Mr. Daniel has presented courses on sediment management and naturalized restoration in the United States and Canada. *Mr. Daniel will lecture on Sediment Remediation Technologies.*

<p>Friday June 15, 2012</p>	<p>Course Offerings:</p> <ul style="list-style-type: none"> • <i>Contaminated Site Management</i> • <i>Environmental Law Applicable to Contaminated Sites</i> • <i>Excursion to Niagara Falls in the Afternoon for International Attendees</i>
---------------------------------	--

Gareth Owen will lecture on contaminated site project management issues with a focus on remedial and risk management planning/costing and remedial optimization.

Harry Dahme is the Senior Partner in the Environmental Law Group of Gowlings in Toronto. Mr. Dahme has expertise in the full range of environmental law services. He has acted for a wide variety of clients in dealing with such matters as contaminated lands, in developing corporate environmental due diligence programs, obtaining environmental approvals and providing expert opinion in respect of environmental matters generally. *Mr. Dahme will lecture on Canadian Environmental law as well as basic legal principles related to contaminated property and environmental investigations.* After attending this lecture, the attendee will have increased knowledge of Canadian Environmental Law applicable to contaminated and hazardous waste site management and private sector liability for clean-up of contaminated sites.

Hotel Accommodations and Course Lecture Location



The course will be held at the Westin Harbour Castle, Toronto. The Hotel is a CAA/AAA Four Diamond hotel located in the heart of downtown Toronto adjacent to Lake Ontario's waterfront. The Westin Harbour Castle, Toronto is proud to offer numerous environmentally friendly features and initiatives throughout the hotel. We



are the only hotel in downtown Toronto whose lobby is 100% reliant on green energy. The Chartroom Bar and Lounge is also powered by green energy, making it a completely eco-friendly spot to relax after a day at the Course. Each guest room features motion-sensor temperature controls to help conserve energy, as well as recycling bins and energy efficient lighting. Those guests who have arrived on business will discover recycling bins and energy efficient lighting in our meeting spaces as well. Watch the light dance off Lake Ontario from the vantage of your Lakeview Room before and after each day at the Course and enjoy walks or runs



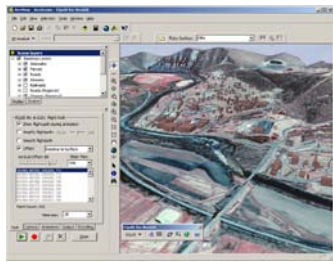
along the City of Toronto Boardwalk. Bathed in natural light and decorated with modern furnishings and soothing earth tones, these fresh and inviting retreats are perfectly suited for work and relaxation. A block of rooms has been reserved at a substantially reduced rate of \$189.00, below most corporate and government rates for a standard room. You must, however, make your reservation by May 21,

2012 by referring to the GOWen Environmental. The rate is also good for two days before and after the course.

The hotel is steps from Toronto's key attractions including Royal Ontario Museum, Air Canada Centre, Bloor Yorkville shopping district, Eaton Centre, CN Tower, Art Gallery of Ontario, Theatres, Science Centre and Rogers Centre. The website for the Toronto Westin Harbour Castle is

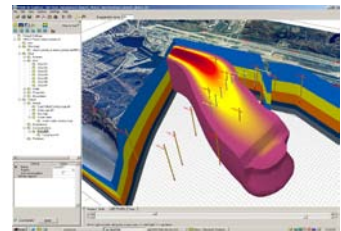
<http://www.starwoodhotels.com/westin/property/overview/index.html?propertyID=1084>

Computer Workshops



On Monday, Tuesday, and Thursday evenings, optional computer modelling workshops will be held to demonstrate the application of environmental decision support software, and groundwater and risk assessment modelling tools. Participants in these workshops will become familiar with Environmental Data Management for site characterization and cleanups at storage tank sites and contaminated sites (EarthSoft, Inc., Massachusetts), web based project management tools for environmental project and programs (Eproject Inc., Washington) and the input parameters required to build and calibrate groundwater flow models (Waterloo

Hydrogeologic, Waterloo, Canada). Participants will be introduced to various graphical tools for evaluating well capture zones, determining preferred flow and contaminant migration pathways, and optimizing groundwater remediation systems. The workshops will use examples from existing sites in Canada and the United States to evaluate risk assessment, natural attenuation, endpoint analysis, three-dimensional groundwater flow, preferred migration and exposure pathways, and the effectiveness of groundwater treatment systems. The workshops will be conducted by experts from the United States and Canada.



Course Schedule

The course is offered in two sessions. The first session takes place from Monday, June 6 to Wednesday evening, June 8 after the Outdoor Demonstration Session. The second session takes place from Wednesday morning, June 8 to Friday afternoon, June 10. On-site registration will occur Monday, June 6 at 07:30 - 08:30, for those individuals taking the first session or the entire course. For those attending the second session only, registration will be Wednesday, June 8 at 07:30. The Course will meet daily from 8 a.m. to 12 noon and from 1 to 5:30 p.m. with two breaks in the morning of 15 minutes and two breaks in the afternoon for 15 minutes. Friday will begin at 8:30 a.m. and end at 3:00 p.m. Computer-based workshops will be held as optional night sessions on Monday and Tuesday (7 - 9 p.m.).

Registration and Course Fee

Advanced registration is strongly advised. Due to the hands-on nature of this Course (demonstrations, workshops, and lectures), enrolment is limited and applications will be accepted on a first come first served basis. The Course has been filled to capacity the past nine years.

Please register on-line through the Course **Registration Webpage** or mail the downloaded application form with a cheque or training authorization by May 26, 2012. For those requiring time to obtain authorization, we suggest faxing the same application form with payment to follow or registering online with a payment to follow option. Registered participants will receive confirmation of registration and information package.

Early Registration (payment received by April 27, 2012)	<input type="checkbox"/> \$1,695 Canadian + \$220.35 (HST)
Member of Affiliated Organization or Association *	<input type="checkbox"/> \$1,695 Canadian + \$220.35 (HST)
Non-Member	<input type="checkbox"/> \$1,895 Canadian + \$246.35 (HST)
Group Rate (5 or more) / Remote Community	<input type="checkbox"/> \$1,595 Canadian + \$207.35 (HST)
Regulatory Agency Rate	<input type="checkbox"/> \$1,495 Canadian + \$194.35 (HST)
Previous Course Attendees (5 spaces available)	<input type="checkbox"/> \$895 Canadian + \$116.35 (HST)
For individuals who choose to take only one of the two sessions:	
Session Rate (1) or (2) (3 days)	<input type="checkbox"/> \$1,395 Canadian + \$181.35 (HST)

**Please contact us to determine if your Organization is affiliated with the Course or if they want to become an affiliate of the Course.*

Note registration is processed in Canadian currency; the United States Registration costs that are shown are approximate and may vary with Conversion Rates. Please make cheques payable to GOWen. The full fee is due April 27, 2012, for early registration and June 1, 2012 for all others. Fees received before May 9, 2012. Cancellations received after May 9, 2012 will have 50% of the registration fee refunded. Substitutions of course participants may always be made.

The registration fee covers all course materials, all breaks, lunch, use of computers and software in nightly workshops, outdoor demonstration day and entry to the CN Tower and the optional trip to Niagara Falls for international participants.

Course Materials

Students will receive over 1,200 pages of notes and a resource CD-ROM in an attractive binder. In addition, they will receive a certificate of completion. It is recommended that course participants bring a knapsack or a carry-on bag to transport course materials.

CEUs

The allocation is 3 CEUs for the first session, 2.7 CEUs for the second and 4.7 CEUs for the entire course. The CEUs are accredited by the International Association for Continuing Education and Training (IACET).

Web and Resource Site

To gain more information on the course and talk to previous years participants please refer to the course and Contaminated and Hazardous Waste Site Resource Page located at www.contaminatedsite.com.



Contaminated & Hazardous Waste Site Management – Theory, Practice & Outdoor Field Demonstrations

GOWen Environmental Limited
 Suite 966, 3044 Bloor Street West
 Toronto, Ontario, Canada M8X 2Y8

Westin Harbour Castle
 Toronto, Ontario Canada
 June 11-15, 2012

Telephone: (416) 259-6911
 E-mail: gowen@contaminatedsite.com

Last	First	Initial
Title		
Company/Organisation Name		
Business Address		
City	Province/State	Postal or Zip Code
Telephone	Facsimile	Email

Please help us process your application faster and more efficiently.

Early Registration (payment received by April 27, 2012)	<input type="checkbox"/> \$1,695 Canadian + \$220.35 (HST)
Member of Affiliated Organization or Association	<input type="checkbox"/> \$1,695 Canadian + \$220.35 (HST)
Non-Member	<input type="checkbox"/> \$1,895 Canadian + \$246.35 (HST)
Group Rate (5 or more) / Remote Community	<input type="checkbox"/> \$1,595 Canadian + \$207.35 (HST)
Regulatory Agency Rate	<input type="checkbox"/> \$1,495 Canadian + \$194.35 (HST)
Previous Course Attendees (5 spaces available)	<input type="checkbox"/> \$895 Canadian + \$116.35 (HST)
For individuals who choose to take only one of the two sessions:	
Session Rate (1) or (2) (3 days)	<input type="checkbox"/> \$1,395 Canadian + \$181.35(HST)
Payment Method	
<input type="checkbox"/> Secured Online Registration Form at www.contaminatedsite.com under Registration or Call in Credit Card .	
<input type="checkbox"/> Cheque to follow – (please make cheques payable to GOWen Environmental Limited)	
<input type="checkbox"/> Purchase Order/Training Authorization to follow – (P.O. # _____ must be submitted with this form)	
How did you hear about the Course?	

Scan and Email: gowen@contaminatedsite.com

The full fee is due April 27, 2012, for Early Registration and June 1, 2012 for all others unless prior arrangements for invoicing have been made. Substitutions of course participant may always be made.

EMAIL OR MAIL BACK TODAY

** Please contact us to determine if your Organization is affiliated with the Course or if they want to become an affiliate of the Course.*

Cleaning Up the Mess (Excerpt from ECO Canada - Newsletter)

The Canadian contaminated sites sector has grown quickly over the past few years, driven by a combination of regulatory and economic pressures. In 2008, ECO Canada's Contaminated Sites Report - When Supply Does Not Meet Demand - affirmed that between 2004 and 2019, the federal government would commit up to \$4 billion to clean up properties that it owns or that fall under federal responsibility. This includes more than 4,400 federal contaminated sites as well as 28,000 non-federal properties.

In conjunction with high profile cases such as the BP oil spill, these industry-wide changes have led to heightened awareness on issues relating to contaminated sites, encouraging countries around the world to develop and implement stricter guidelines and standards for the investigation, mitigation and remediation of contaminated sites. However, like most environmental work, the skills needed to clean up these sites are multidisciplinary and require a unique set of cross-sectoral competencies from employees.

There are a number of environmental training facilities currently operating in Canada, but GOWen ENVIRONMENTAL is the only facility in the world that offers a one week indoor-outdoor course covering all issues related to managing subsurface contamination, from theory to practice. The fifteen instructors leading the course come from all across North America with backgrounds in academia, private industry and government, and are recognized as leading experts and educators in their respective fields.

The course is a joint project between GOWen ENVIRONMENTAL, the Association for Environmental Health and Sciences and the International Association of Hydrogeologists and was founded to provide leading-edge environmental training and networking through courses, conferences and workshops. This year will mark the 16th anniversary of its annual Contaminated and Hazardous Waste Site Management Course, a comprehensive course that provides a solid theoretical and practical foundation in contaminated site management. The course integrates several different disciplines and has been developed specifically for individuals who manage, regulate, investigate, remediate or are impacted by contaminated sites.

Below is one comment of the many comments we have received about the course.

Subject: Great Course in Toronto !!

Please go to www.contaminatedsite.com to check-out the course coming-up in Toronto. This is truly a world-class course and this year it is held right in Canada! Perry Sarvas and Kip Hawley both attended and it was the best training they have ever had. This year looks even better! Feel free to call Perry or Kip if you want a participants perspective. I strongly recommend this course, especially for those who want some in-depth contaminated or hazardous waste site management training, contaminated site program or project management or risk-assessment. If you having been waiting a long time for training, I think you will be very pleased with this course.... fill-out your 15-11 form today since there is relatively little time to process your request!

Jim Gehrels
Groundwater Group Leader
Northern Region
Ministry of Environment & Energy