



FINAL PROGRAM

SECOND BIENNIAL SOUTHEASTERN *IN SITU* SOIL AND GROUNDWATER REMEDIATION CONFERENCE

February 23 and 24, 2010

Redox Tech, the Association of Environmental and Engineering Geologists, and the Groundwater Professionals of North Carolina (GWPNC) have finalized the program for the Second Biennial Southeastern In Situ Soil and Groundwater Remediation Conference on February 23 and 24th 2010 in Raleigh, North Carolina. The conference will provide a forum for providing the state of the art for a wide range of in situ remediation technologies.

On the first day of the conference, recognized speakers from around the country will present on their area of expertise. On the second day, case studies will be provided by consultants and vendors on the application of emerging technologies, with lessons learned. The Conference should provide a valuable opportunity for groundwater professionals to keep abreast of recent developments in remediation technologies, while potentially earning continuing education credits.

FEBRUARY 22, 2010 - REGISTRATION

Registration, sign-in and display booth setup is from 6:00 p.m to 8:00 p.m. Pre-registration is advised but registrations openings may be available at the conference.

FEBRUARY 23, 2010 - AGENDA

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| 7:00 to 8:15 | Continental Breakfast Provided as Part of the Conference Registration |
| 8:15 to 8:30 | Opening Remarks; John Haselow, Redox Tech, LLC |
| 8:30 to 9:00 | The State of Practice in <i>In Situ</i> Remediation; Dick Brown, ERM |
| 9:00 to 9:30 | Retrospective on Twenty Years of Peroxygen ISCO Research; Professor Rick Watts, Washington State University |
| 9:30 to 10:00 | Permanganate for <i>In Situ</i> Remediation; Matt Dingens, Carus Chemicals |
| 10:00 to 10:30 | Mid-Morning Break |
| 10:30 to 11:00 | Activated Persulfate Chemical Oxidation and Its Impact on Microbial Populations; Phil Block, FMC Chemicals |
| 11:00 to 11:30 | The Value of ISCO Treatability Studies: When Should They be Conducted and How do Results Support the Design Process; Michelle Crimi, Clarkson University |
| 11:30 to 12:00 | Superoxide Catalysts for In-Situ Reduction of VOCs; Dan Bryant, Geo-Cleanse International |
| 12:00 to 1:00 | Lunch Provided as Part of the Conference Registration |
| 1:00 to 1:30 | Field Characterization of Mass Transfer in a NAPL Source Zone; Bo Stewart, Praxis |
| 1:30 to 2:00 | Zero Valent Iron Technology; John Vogan, EnviroMetal Technologies, LLC |
| 2:00 to 2:30 | In Situ Chemical Reduction Technologies: Differentiators and Technology Implementation; Jim Mueller, Adventus Americas |
| 2:30 to 3:00 | Mid-Afternoon Snack |
| 3:00 to 3:30 | Current Practice and Advances with nZVI Technology; Dan Elliott, GeoSyntec |
| 3:30 to 4:00 | Frequently Asked Questions about Applying Bioaugmentation for Chlorinated Solvent Remediation; Robert Steffen, Shaw Environmental |
| 4:00 to 4:30 | Pneumatic Fracturing for Delivery of Remediation Amendments; Deborah Schnell, Pneumatic Fracturing, Inc. |
| 4:30 to 5:00 | Combined Remedies for Effective Remediation of NAPL Sites; Jim Cummings, EPA |
| 5:00 to 6:30 | Social Hour - Sponsored by Redox Tech and Adventus Americas |

FEBRUARY 24, 2010 - AGENDA

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| 7:15 to 8:15 | Continental Breakfast provided as part of the conference registration |
| 8:10 to 8:40 | New "Directions" in <i>In Situ</i> Remediation: A DOE perspective; Brian Looney, Savannah River National Laboratory |
| 8:40 to 9:00 | The Formation and Stability of Arsenic Precipitates in Groundwater using EHC-M; John Vogan, The Adventus Group |
| 9:00 to 9:20 | An Innovative Hot Spot Remedial Approach for a Wood Treating Site in Mississippi; Thomas Richardson, International Paper |
| 9:20 to 9:40 | Full-Scale Enhanced Bioremediation of CVOCs in a Sand and Gravel Aquifer; Tim Adams, Roux Associates |
| 9:40 to 10:00 | Use of Chemical Oxidation Coupled with Bioaugmentation to Treat Groundwater Underneath a Day Care Facility; David Robinson, The Whitman Companies |
| 10:00 to 10:20 | Mid-Morning Break |
| 10:20 to 10:40 | Use of Existing SVE System for Aerobic Co-Metabolic Degradation of Chlorinated Hydrocarbons; Jim Zubrow, Key Environmental |
| 10:40 to 11:00 | Bioaugmentation Approaches for Effective Bioremediation of Mixed Contaminant Sites; Phil Dennis, SIREM |
| 11:00 to 11:20 | Fluorescent Dye Tracing For Defining Chlorinated Ethene Plume Remediation Target; Eric Klingel, Zapata Engineering |
| 11:20 to 11:40 | Surfactant Enhanced Recovery of LNAPL Pilot Testing in a Debris Fill Unit, Charlotte Air National Guard; Helen Corley, AMEC Earth & Environmental |
| 11:40 to 12:00 | A comparison of aqueous PCE and TCE degradation using persulfate with lime, sodium hydroxide, or no additional amendment; Joe Rossabi, Redox Tech LLC |
| 12:00 to 1:00 | Lunch provided as part of conference registration |
| 1:00 to 1:25 | Applicability of bacteria, <i>Thio bacillus</i> , in Combating Acid Mine Drainage: A Case Study; Pradeep Kumar, Central Mine Planning & Design Institute (India) |
| 1:25 to 1:45 | International Chemical Oxidation Remediation Lessons Learned; Isaac Aboulafia, MECx |
| 1:45 to 2:05 | Enhancing the Deliverability of NZVI in a Fractured Bedrock System Using Hydraulic Fracturing and Pressurized Injection; Michael Borda, Golder Associates |
| 2:05 to 2:25 | Results of Tandem In-Situ Chemical Oxidation and Accelerated Anaerobic Bioremediation; Keith M. Gaskill, SESCO Group |
| 2:25 to 2:40 | Snack Break |
| 2:40 to 3:00 | "Stepped" In Situ Chemical Oxidation of contaminant Mass in Vadose Zone Soils; Bon Lunardini, P.E., URS Corporation |
| 3:00 to 3:20 | Oxidant Stability vs NOD – Comparison of Peroxide, Persulfate and Permanganate, Neil Thomson, University of Waterloo |
| 3:20 to 3:40 | Successful Bioremediation of Potential Chlorinated Solvent DNAPL; Christie Zawtocky, Hart and Hickman, PC |
| 3:40 to 4:00 | Secondary Water Quality Impacts From In Situ Injectable Substrates and Chemicals; Tony Lieberman, Solutions-IES, Inc. |
| 4:00 to 4:20 | Accelerated Site Cleanup Using a Sulfate-Enhanced In Situ Remediation Strategy; Timothy Parker, EOS Remediation, LLC |
| 4:20 to 4:30 | Closing Remarks, Dr. John Haselow Redox Tech, LLC |

COST

The cost of registration for the conference is \$250, and the registration includes continental breakfast, snacks and lunch. **Members of the Groundwater Professionals of North Carolina, Association of Environmental and Engineering Geologists, students, and faculty receive a \$50 discount on registration. State of North Carolina employees should call to receive a reduced rate.** Each participant is responsible for their own dinner and lodging. Redox Tech is the promoter and main sponsor of the conference and is not directly profiting from the conference. The cost covers direct costs such as the conference room, lunch, beverages, snacks and A/V equipment rental. Participation is limited to the first 300 registrants. Registration is fully refundable up to two weeks prior to registration, less an administrative fee of \$25. If you cannot attend, your registration may be transferred to another participant. Single day registrations are not available.

CONFERENCE SPONSORS



EVENT SPONSORS

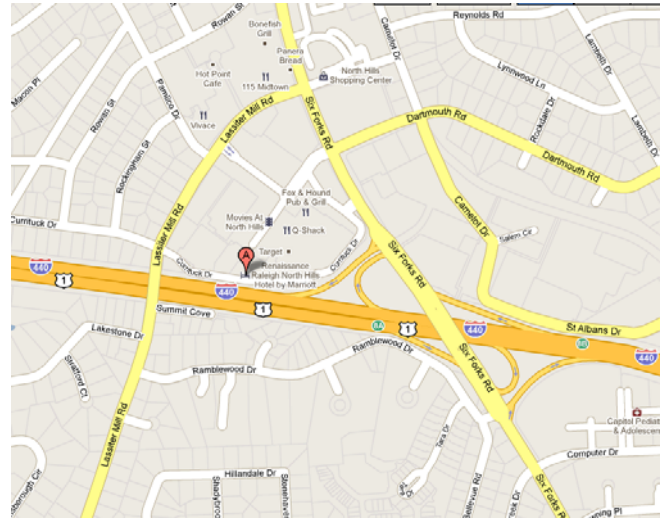


EXHIBITORS



HOTEL

The conference is being held at the Renaissance Marriott Hotel at North Hills, 4100 Main at North Hills Street, Raleigh, North Carolina. The hotel is located at Exit 8 off the I-440 Beltline. A block of rooms has been reserved at a discounted pre-registration rate of \$149 per night. The block of rooms is being held until February 2nd, 2010. Click [this link](#) and check availability, and the discounted rate will appear. There are other hotels located in the area, but if you will need a room, reserve one because hotels in the area have limited availability.



DISPLAY BOOTHS

For booth registration information, please contact John Haselow at Redox, 916 678 0140.

REGISTRATION INFORMATION

Name _____
(Name as you wish it to appear on your badge)

Company _____

Mailing address _____

City/State/Zip _____

Phone (office) _____ Fax _____

Email _____

PAYMENT METHOD (Payment MUST accompany this registration form)

Payor : _____ Company _____ Individual _____

Check (Payable to **REDOX TECH, LLC**) _____

Credit card: _____ Mastercard _____ Visa _____ Corporate card? _____

Card Number _____ Exp.Date _____

Card Verification Number (on back of card) _____

Name as it appears on card _____

Cardholder's signature _____

MAIL completed registration form to:
Redox Tech, LLC
200 Quade Drive
Cary, NC 27513

or FAX to: 919-678-0150
Attn: Conference

or EMAIL to:
conference@redox-tech.com

Contact John Haselow
at 919-678-0140 for display
booth registration information