



TechDirect, February 1, 2013

Welcome to TechDirect! Since the January 1 message, TechDirect gained 746 new subscribers for a total of 33,854. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at <http://clu-in.org/techdirect>. All previous issues of TechDirect are archived there. The TechDirect messages of the past can be searched by keyword or can be viewed as individual issues.



TechDirect's purpose is to identify new technical, policy and guidance resources related to the assessment and remediation of contaminated soil, sediments and groundwater.



Mention of non-EPA documents or presentations does not constitute a U.S. EPA endorsement of their contents, only an acknowledgment that they exist and may be relevant to the TechDirect audience.

> Special Announcements

ESTCP FY 2014 Environmental Technologies Solicitation. The Department of Defense's (DoD) Environmental Security Technology Certification Program (ESTCP) released a solicitation on January 10, 2013, requesting proposals for demonstrations of environmental technologies. Researchers from Federal organizations, universities, and private industry can apply for ESTCP funding via the appropriate solicitation. All proposals must respond to a Topic Area associated with the solicitation. Topic Areas for non-Federal and non-DoD Federal solicitations differ from DoD topics. ESTCP projects are formal demonstrations in which innovative technologies are rigorously evaluated. ESTCP demonstrations are conducted at DoD facilities and sites to document improved efficiency, reduced liability, improved environmental outcomes, and cost savings. This solicitation requests pre-proposals via Calls for Proposals to Federal organizations and via a Broad Agency Announcement (BAA) for Private Sector organizations. Pre-proposals are due by Thursday, March 14, 2013. For more information and detailed instructions for DoD, Non-DoD Federal, and BAA proposers, see <http://www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations/Environmental-Technologies-Solicitation>.

Registration is Open for 2013 Interstate Technology & Regulatory Council (ITRC) Teams. The 2013 ITRC Teams are: Biochemical Reactors for Mining-Influenced Waters, Contaminated Sediments - Remediation, DNAPL Site Characterization, Environmental Molecular Diagnostics, Geophysical Classification for Munitions Response Projects, Groundwater Statistics and Monitoring Compliance, Petroleum Vapor Intrusion, and Risk Assessment. Team descriptions are available at http://www.itrcweb.org/Documents/TeamResources_OutreachMaterials/2013-Team-Descriptions-revised-Jan-13.pdf. For more information on membership and to register, see <http://www.itrcweb.org/Membership/Welcome>.

> Upcoming Live Internet Seminars

Mining-Influenced Water: Treatment Technologies - February 6, 2013, 12:00PM-2:00PM EST (17:00-19:00 GMT). This is the second webinar within the series to focus on mining-influenced water (MIW) - any water whose chemical composition has been affected by mining, mineral or metallurgical processing. The webinar will feature speakers from EPA, a private consulting firm, and a university research institute, who will discuss case studies and MIW treatment options. Specifically, the speakers will discuss: passive treatment 101: an overview of the technologies; West Virginia Water Research Institute project on passive treatment of MIW; and MIW treatment at the Leviathan Mine Superfund Site, California. For more information and to register, see <http://clu-in.org/live> .

ITRC Green & Sustainable Remediation - February 7, 2013, 11:00AM-1:15PM EST(16:00-18:15 GMT). Many state and federal agencies are just beginning to assess and apply green and sustainable remediation (GSR) into their regulatory programs. This training provides background on GSR concepts, a scalable and flexible framework and metrics, tools and resources to conduct GSR evaluations on remedial projects. The training is based on the ITRC's Technical & Regulatory Guidance Document: Green and Sustainable Remediation: A Practical Framework (GSR-2, 2011) as well as ITRC's Overview Document, Green and Sustainable Remediation: State of the Science and Practice (GSR-1, 2011). Beyond basic GSR principles and definitions, participants will learn the potential benefits of incorporating GSR into their projects; when and how to incorporate GSR within a project's life cycle; and how to perform a GSR evaluation using appropriate tools. In addition, a variety of case studies will demonstrate the application of GSR and the results. The training course provides an important primer for both organizations initiating GSR programs as well as those organizations seeking to incorporate GSR considerations into existing regulatory guidance. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

ITRC Soil Sampling and Decision Making Using Incremental Sampling Methodology Parts 1 and 2 - February 12 and 14, 2013. This 2-part training course along with ITRC's web-based Incremental Sampling Methodology Technical and Regulatory Guidance Document (ISM-1, 2012) is intended to assist regulators and practitioners with the understanding the fundamental concepts of soil/contaminant heterogeneity, representative sampling, sampling/laboratory error and how ISM addresses these concepts. Through this training course you should learn: basic principles to improve soil sampling results, systematic planning steps important to ISM, how to determine ISM Decision Units (DU), the answers to common questions about ISM sampling design and data analysis, methods to collect and analyze ISM soil samples, the impact of laboratory processing on soil samples, and how to evaluate ISM data and make decisions. In addition this ISM training and guidance provides insight on when and how to apply ISM at a contaminated site, and will aid in developing or reviewing project documents incorporating ISM (e.g., work plans, sampling plans, reports). For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

Hardrock Mining Geochemistry and Hydrology, Workshop 1 - February 13, 2013, 1:00PM-3:00PM EST (18:00-20:00 GMT). EPA's Region 10, the Office of Research and Development (ORD), and the Office of Superfund Remediation and Technology Innovation are hosting a three-part workshop series on evaluating the potential for contaminant release from hardrock mine sites. Presenters include experts from EPA Headquarters, Regions, and ORD; the U.S. Geological Survey; and the U.S. Forest Service. The workshops are open to all agencies, tribes, consultants, and the general public. During this workshop, presenters will discuss current characterization tools used to predict the potential for acid rock drainage and metal mobility, introduce participants

to geochemical modeling at mine sites, and demonstrate how geochemical data is applied in models. Registration for part 2 will be open by February 13, 2013, and registration for part 3 will be open by February 19, 2013. For more information and to register, see <http://clu-in.org/live>.

ITRC Use and Measurement of Mass Flux and Mass Discharge - February 21, 2013, 11:00AM-1:15PM EST (16:00-18:15 GMT). The ITRC technology overview, Use and Measurement of Mass Flux and Mass Discharge (MASSFLUX-1, 2010), and associated Internet-based training provide a description of the underlying concepts, potential applications, description of methods for measuring and calculating, and case studies of the uses of mass flux and mass discharge. This Technology Overview, and associated Internet-based training are intended to foster the appropriate understanding and application of mass flux and mass discharge estimates, and provide examples of use and analysis. The document and training assumes the participant has a general understanding of hydrogeology, the movement of chemicals in porous media, remediation technologies, and the overall remedial process. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

ITRC Use of Risk Assessment in Management of Contaminated Sites - February 26, 2013, 2:00PM-4:15PM EST (19:00-21:15 GMT). This training course identifies how various risk-based approaches and criteria are applied throughout the processes of screening, characterization, and management of contaminated sites. The training course and associated overview document, Use of Risk Assessment in Management of Contaminated Sites (RISK-2, 2008), are intended for risk assessors and project managers involved with the characterization, remediation, and/or re-use of sites. The training and overview document provide a valuable tool for federal and state regulatory agencies to demonstrate how site data collection, risk assessment, and risk management may be better integrated. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Military Munitions Support Services - Hazard Assessment - March 1, 2013, 1:00PM-4:45PM EDT (18:00-21:45 GMT). This is one of the monthly webinar sessions for the Military Munitions Support Services (M2S2) community. During this session, speakers will make presentations on techniques and methodologies used to assess hazards and risks posed by munitions and munitions constituents as part of the investigation and remediation of munitions projects. For more information and to register, see <http://clu-in.org/live>.

ITRC LNAPL Training Parts 1, 2, and 3 - March 5, 7, 14. Light non-aqueous phase liquids (LNAPLs) are organic liquids such as gasoline, diesel, and other petroleum hydrocarbon products that are immiscible with water and less dense than water. LNAPLs are important because they are present in the subsurface at thousands of remediation sites across the country, and are frequently the focus of assessment and remediation efforts. Part 1 of this training course explains how LNAPLs behave in the subsurface and examines what controls their behavior. Part 1 also explains what LNAPL data can tell you about the LNAPL and site conditions. Relevant and practical examples are used to illustrate key concepts. Part 2 addresses LNAPL characterization and site conceptual model development as well as LNAPL recovery evaluation and remedial considerations. Specifically, Part 2 discusses key LNAPL and site data, when and why those data may be important, and how to get those data. Part 2 also discusses how to evaluate LNAPL recoverability. Part 3 uses the LNAPL conceptual site model (LCSM) approach to identify the LNAPL concerns or risks and set proper LNAPL remedial objectives and technology-specific remediation goals and performance metrics. Part 3 also provides an overview of the LNAPL remedial technology selection framework. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

> New Documents and Web Resources

Optimization Review: Ogallala Ground Water Contamination Superfund Site, Operable Unit 2 (Tip Top Cleaners), Ogallala, Nebraska (EPA-542-R-13-014). This document provides project background and information about the optimization review conducted at the Ogallala Ground Water Contamination Superfund Site, including information about site-specific background; the conceptual site model; optimization findings related to subsurface performance and response and component performance; and optimization recommendations related to improving effectiveness, reducing cost, technical improvement, considerations for gaining site close out, and environmental footprint reduction (January 2013, 41 pages). View at <http://clu-in.org/techpubs.htm> .

Analysis of the Benefits of Green Remediation Best Management Practices for Local Air Quality. This document was prepared by Charlene V. Lawson, a Student Diversity Internship Program intern working with staff of the U.S. EPA Office of Superfund Remediation and Technology Innovation. This report highlights the preliminary findings obtained from evaluating changes in local air quality following the application of selective catalytic reduction (SCR) technology using a gas-phase air quality model based on the Regional Atmospheric Chemistry Mechanism, version 2 (RACM2). The report also includes a short description of the RACM2 model, assumptions, data sources, and the overall approach used for the analyses (December 2012, 14 pages). View at <http://clu-in.org/techpubs.htm> .

Monitoring and Remediation Optimization Software (MAROS) Version 3.0. MAROS 3.0 has new features beyond version 2.2, and a new look-and-feel. The software is an excellent tool for quantitatively and objectively evaluating and optimizing both the monitoring frequency and network. It can help reduce project costs and support negotiations regarding monitoring programs with regulatory agencies and other stakeholders. It will also identify areas of increased uncertainty in the network where additional sampling points may be appropriate. It is also very good for assessing overall performance of the remedy, through the assessment of changes in the plume mass, center of mass location, and spread. This ability and the individual-well trend analysis capabilities (Mann-Kendall and linear regression) can be very helpful for five-year reviews. Download at <http://www.qsi-net.com/en/software/free-software/maros-30.html> .

Technology Innovation News Survey Corner. The Technology Innovation News Survey contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. Recent issues, complete archives, and subscription information is available at <http://clu-in.org/products/tins/> . The following resources were included in recent issues:

- Conceptual Model Scenarios for the Vapor Intrusion Pathway
- Five-Year Review Training and Tools
- Ground Water Sample Preservation at In-Situ Chemical Oxidation Sites: Recommended Guidelines
- A Handbook for Determining the Sources of PCB Contamination in Sediments
- Permeable Reactive Barrier Cost and Performance Report
- Permeable Reactive Barrier Downgradient of the Southern Source Area, Former Tecumseh Products Company Site, Tecumseh, Michigan: Construction Documentation Report
- Institutional Controls: A Guide to Planning, Implementing, Maintaining, and

Enforcing Institutional Controls at Contaminated Sites

- Laboratory Study of PCB Contamination and Mitigation in Buildings:
 - Part 1. Emissions from Selected Primary Sources
 - Part 2. Transport from Primary Sources to Building Materials and Settled Dust
 - Part 3. Evaluation of the Encapsulation Method
 - Part 4. Evaluation of the Activated Metal Treatment System (AMTS) for On-Site Destruction of PCBs

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 7 resources, events, projects and news items were added to EUGRIS in January 2013. These can be viewed at <http://www.eugris.info/whatsnew.asp> . Then select the appropriate month and year for the updates in which you are interested. The following resource was posted on EUGRIS:

Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance, UK Department for Environment Food and rural Affairs - Defra (2012).

This Guidance is intended to explain how local authorities should implement the regime, including how they should go about deciding whether land is contaminated land in the legal sense of the term. It also elaborates on the remediation provisions of Part 2A, such as the goals of remediation, and how regulators should ensure that remediation requirements are reasonable. View or download at <http://www.defra.gov.uk/publications/2012/04/10/pb13735contaminated-land/>

> Conferences and Symposia

Call for Poster Ideas Deadline Extended and Prize Announced!! National Brownfields 2013 Conference, Atlanta, GA, May 15-17, 2013. The National Brownfields 2013 Conference invites you to submit a poster that displays best practices and innovative ideas and technologies in environmental revitalization and economic redevelopment. Posters may present tools and technical information, results of projects and research, success stories, and other information related to the expansion, redevelopment, or reuse of brownfields property. Posters will be showcased in a dedicated Poster Gallery within the Exhibit Hall which will receive high foot traffic from the over 5,000 attendees. The deadline for submission has been extended to February 15, 2013, and the winner of the best overall poster will be featured in two publications. For more information and to submit a poster idea, see <http://www.brownfieldsconference.org> .

Facility Decommissioning Training Course, Baltimore, MD, March 5-7 and Las Vegas, NV, March 18-21, 2013. The purpose of the course is to provide information on the basic steps in the decommissioning process and impart lessons learned from past experiences in decommissioning. In this manner, elements learned at this training course will assist in decision-making, planning, and implementation associated with the decommissioning of various types of nuclear facilities. Moreover, a major objective of this training course is to demonstrate the need for early and complete project planning to achieve safe and cost-effective decommissioning of research reactors and other small nuclear installations. For more information and to register, see <http://www.dd.anl.gov/ddtraining/>.

LNAPLs: Science, Management, and Technology ITRC 2-day Classroom Training offered three times in 2013: King of Prussia, PA (April 9-10, 2013), Springfield, IL (June 4-5, 2013), and tentatively an additional class planned for Southern CA (October 2013). Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to develop and apply an LNAPL Conceptual Site Model (LCSM), understand and assess LNAPL subsurface behavior, develop and justify

LNAPL remedial objectives including maximum extent practicable considerations, select appropriate LNAPL remedial technologies and measure progress, and use ITRC's science-based LNAPL guidance to efficiently move sites to closure. Interactive learning with classroom exercises and Q&A sessions will reinforce these course learning objectives. For local, state, and federal government; students; community stakeholders; and tribal representatives, ITRC has a limited number of scholarships (waiver of registration fee only) available. For more information and to register, see <http://www.itrcweb.org/training> .

NOTE: For TechDirect, we prefer to concentrate mainly on new documents and the Internet live events. However, we do support an area on CLU-IN where announcement of conferences and courses can be regularly posted. We invite sponsors to input information on their events at <http://clu-in.org/courses> . Likewise, readers may visit this area for news of upcoming events that might be of interest. It allows users to search events by location, topic, time period, etc.

If you have any questions regarding TechDirect, contact Jeff Heimerman at (703) 603-7191 or heimerman.jeff@epa.gov. Remember, you may subscribe, unsubscribe or change your subscription address at <http://clu-in.org/techdirect> at any time night or day.

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