



TechDirect, March 1, 2013

Welcome to TechDirect! Since the February 1 message, TechDirect gained 418 new subscribers for a total of 34,224. 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.

> Upcoming Live Internet Seminars

Military Munitions Support Services Series - March 1, 28, April 22, May 30, July 25, and August 29. This new series of monthly webinars supports the Military Munitions Support Services (M2S2) community. 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> .

Hardrock Mining Geochemistry and Hydrology, Workshop 3 - Sampling, Monitoring and Remediation at Mine Sites - March 5, 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 workshop 3, presenters will discuss the principles of adaptive management at mine sites; monitoring during, before, and after mining; and implementation of adaptive management and source control at mine sites. For more information and to register, see <http://clu-in.org/live> .

FY13 EPA Environmental Workforce Development and Job Training Grant Application Guidelines/Request for Proposals Overview - March 7, 2013, 3:00PM-5:00PM EST (20:00-22:00 GMT). This seminar will provide prospective applicants an overview of the FY13 Environmental Workforce Development and Job Training Grant Application Guidelines requirements, including threshold and ranking criteria, frequently asked questions, tips for submitting a successful proposal, and a description of eligible use of grant funds. A questions and answers session will be included where applicants can ask the EPA questions and receive feedback. For more information and to register, see <http://clu-in.org/live> .

ITRC Biofuels: Release Prevention, Environmental Behavior, and Remediation - March 12, 2013, 2:00PM-4:15PM EDT (18:00-20:15 GMT). This training, which is based on the ITRC's Biofuels: Release Prevention, Environmental Behavior, and Remediation (Biofuels-1, 2011), focuses on the differences between biofuels and conventional fuels specific to release scenarios, environmental impacts, characterization, and remediation. The trainers will define the scope of the potential environmental challenges by introducing biofuel fundamentals, regulatory status, and future usage projections. Participants will learn how and when to use the ITRC biofuels guidance document for their projects. They will understand the differences in biofuel and petroleum behavior; become familiar with the biofuel supply chain, potential release scenarios and release prevention; be able to develop an appropriate conceptual model for the investigation and remediation of biofuels; and select appropriate investigation and remediation strategies. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

Superfund Redevelopment Initiative: Ecological Revitalization of Contaminated Properties - March 19, 2013, 2:00PM-4:00PM EDT (18:00-20:00 GMT). This Superfund Redevelopment Initiative webinar will provide an overview of formerly contaminated properties that have been successfully returned to an ecological land reuse. Participants will learn about the tools and resources that the EPA can provide to assist communities with ecological reuse of contaminated properties. Presenters will discuss cost-effective remedies that support ecological land reuse and how to address risk through remedy design. Stakeholders from the Chemical Commodities Inc. Superfund site in Olathe, Kansas, will present an in-depth case study of their site, which is now a pollinator migration corridor, restored native prairie habitat, walking trail, and teaching tool. Presenters will share lessons learned, community involvement, benefits of ecological reuse at a contaminated property and techniques for demonstrating success. For more information and to register, see <http://clu-in.org/live> .

> New Documents and Web Resources

New CLU-IN Focus Area on High-Resolution Site Characterization (HRSC). HRSC is a new EPA focus area that reflects the state-of-the-science for environmental site characterization. HRSC strategies and technologies use scale-appropriate

measurement and data density to delineate contaminant distributions in environmental media with greater certainty, supporting faster and more effective remedy selection, design and implementation. This website provides a description of the general concepts and benefits of HRSC and offers resources including case studies for sites where HRSC has been applied, information on practitioner forums, information on available training, and instructions on accessing available support for understanding and applying HRSC. View and use at <http://clu-in.org/hrsc> .

New CLU-IN Focus Area on Bioremediation. The new bioremediation focus area provides a general introduction to aerobic, anaerobic, and cometabolic biodegradation mechanisms, as well as guidance, and site specific information. Both in situ and ex situ technologies are addressed. View and use at <http://clu-in.org/bioremediation> .

Technology News and Trends (EPA 542-N-13-001). This issue highlights the use of nanotechnologies to chemically reduce chlorinated volatile organic compounds (CVOCs), metals and metalloids such as chromium and arsenic, and persistent organic compounds contaminating groundwater, soil, or sediment. Nanoscale materials typically used for remediation involve nanoscale zero-valent iron (ZVI), bimetallic nanoscale particles, or emulsified zero-valent iron (EZVI). The U.S. EPA's National Risk Management Research Laboratory and other agencies or organizations are researching remediation efficacy as well as fate, transport, and toxicity of these and other nanoscale materials with potential to adsorb or destroy contaminants as part of in situ or ex situ processes (February 2013). View at <http://clu-in.org/tnandt/0213> .

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:

- Development of a Design Tool for Planning Aqueous Amendment Injection Systems: ESTCP Cost and Performance Report
- EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings
- Evaluation of Empirical Data to Support Soil Vapor Intrusion Screening Criteria for Petroleum Hydrocarbon Compounds
- Integrated Field-Scale, Lab-Scale, and Modeling Studies for Improving the Ability to Assess the Groundwater to Indoor Air Pathway at Chlorinated Solvent-Impacted Groundwater Sites: Interim Report
- Fundamental Study of the Delivery of Nanoiron to DNAPL Source Zones in Naturally Heterogeneous Field Systems
- Photochemical Transformation of Munitions Constituents in Marine Waters
- Removal of PFOA from Water Using UV Treatment, Chemical Oxidation, & Adsorption by Activated Carbon & Zeolites
- Guidance on Passive Sampling Methods to Improve Management of Contaminated Sediments: Summary of a SETAC Technical Workshop
- Impacts of Sampling and Handling Procedures on DNA- and RNA-Based Microbial Characterization and Quantification

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 13 resources, events, projects and news items were added to EUGRIS in February. 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:

Human Health Risk Assessment of the Implications of Metal Contamination of

Water Sources (2012). This report produced by the Scottish Environment Protection Agency considers new data along with older information on the extent of environmental contamination associated with the former lead mining industry in the local area. View or download at <http://www.nhsdq.org.uk/Documents/RiskAssessment.pdf>.

> Conferences and Symposia

Facility Decommissioning Training Course, Baltimore, MD, March 5-7, Las Vegas, NV, March 18-21, and Deep River, Ontario, Canada, May 7-9, 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>.

AquaConSoil 2013 Conference, Barcelona, Spain, April 16-19, 2013. The AquaConSoil (formerly ConSoil) conference continues the tradition of serving as Europe's largest conference on applied knowledge of the management of soil-water systems. As organized by UFZ and Deltares, the conference themes address sustainable use of soil-water systems; resource management with a special focus on arid and semiarid regions; monitoring and assessment; remediation of contaminated water, soil, and sediment; and concepts and policies for sustainable management of soil-water systems and resource efficiency. For more information and to register, see <http://www.aquaconsoil.org/>.

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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