



TechDirect, October 1, 2010

Welcome to TechDirect! Since the September 1 message, TechDirect gained 227 new subscribers for a total of 36,193. 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 ground water.

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.

> Environmental Technology Verification (ETV) Program Soliciting Vendors

In-Situ Chemical Oxidation Techniques for Gas Sites. EPA's Environmental Technology Verification (ETV) Program through the Materials Management and Remediation Center is soliciting vendors and collaborators interested in verification testing of in-situ chemical oxidation techniques for gas station sites. For more information, please contact Amy Dindal at dindala@battelle.org or (561) 422-0113, or visit <http://www.epa.gov/nrmrl/std/etv/index.html>.

> Upcoming Live Internet Seminars

ITRC Perchlorate Remediation Technologies - October 7, 2010, 11:00AM-1:15PM EDT (15:00-17:15 GMT). This training introduces state regulators, environmental consultants, site owners, and community stakeholders to Remediation Technologies for Perchlorate Contamination in Water and Soil (PERC-2, 2008), created by ITRC's Perchlorate Team to assist reviewers in assessing the adequacy of perchlorate remediation projects. This course gives the student a background in the available remediation technologies to treat perchlorate contamination, discusses emerging technologies, and presents case studies of applications. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

ITRC LNAPL Training Parts 1, 2, and 3 - October 12, 13, and 14, 2010. 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> .

ITRC Use of Risk Assessment in Management of Contaminated Sites - October 19, 2010, 2:00PM-4:15PM EDT (18:00-20:15 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> .

ITRC Enhanced Attenuation of Chlorinated Organics: A Site Management Tool - October 21, 2010, 11:00AM-1:00PM EDT (15:00-17:00 GMT). This training on the ITRC Technical and Regulatory Guidance for Enhanced Attenuation: Chlorinated Organics (EACO-1, 2008) describes the transition (the bridge) between aggressive remedial actions and MNA and vice versa. Enhanced attenuation (EA) is the application of technologies that minimize energy input and are sustainable in order to reduce contaminant loading and/or increase the attenuation capacity of a contaminated plume to progress sites towards established remedial objectives. Contaminant loading and attenuation capacity are fundamental to sound decisions for remediation of groundwater contamination. This training explains how a decision framework which, when followed, allows for a smooth transition between more aggressive remedial technologies to sustainable remedial alternatives and eventually to Monitored Natural Attenuation. This training will demonstrate how this decision framework allows regulators and practitioners to integrate Enhanced Attenuation into the remedial decision process. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

FY11 Job Training Grant Guidelines, October 26, 2010, 2:00PM-4:00PM EDT (18:00-20:00 GMT). EPA provides funds to eligible entities, including non-profit organizations, to deliver environmental workforce development and job training programs focused on hazardous and solid waste management, assessment, and cleanup associated activities. Environmental Workforce Development and Job Training (EWDJT) grants are provided to recruit, train, and place, unemployed and under-employed, predominantly low-income and minority, residents historically affected by hazardous and solid waste sites and facilities with the skills needed to secure full-time, sustainable employment in the environmental field and in the assessment and cleanup work taking place in their communities. Formerly referred to as the "Brownfields Job Training Grants Program," the "Environmental Workforce Development and Job Training Grants Program," supports expanded environmental training outside the traditional scope of just brownfields but builds upon the existing

model and the capacity created through the Brownfields Job Training Program since its inception in 1998. For more information and to register, see <http://clu-in.org/live> .

Applications of Stable Isotope Analyses to Environmental Forensics (Part 3), and to Understand the Degradation of Chlorinated Organic Contaminants (Part 4) - October 27, 2010, 2:00PM-3:30PM EDT (18:00-19:30 GMT). This webinar will consider advanced topics in the applications of compound specific stable isotope analyses (CSIA). It will assume some understanding of the fundamental principles of CSIA as presented in Parts 1 and 2, available at <http://www.clu-in.org/live/archive/> . Part 3 of the webinar will discuss applications of CSIA to various problems in environmental forensics. Many ground water contaminants, such as fuel spills, are complex mixtures of many compounds. CSIA data can be combined with data on concentrations of individual compounds (as determined by conventional GC or GCMS analysis) to associate contamination in ground water plumes with specific sources or releases. The application of CSIA is also extremely valuable for single component contaminants, such as PCE or TCE, where data on concentrations as provided by GC and GCMS are of little or no use for correlation. Part 4 of the webinar will consider the degradation of chlorinated solvents and their transformation products and will focus particularly on the evolution of CSIA as a novel method for investigation of biodegradation at contaminated sites. Stable isotope analysis can provide a direct indication of the effects of degradation on specific contaminants, and in some cases an independent means to quantify the extent of degradation and estimate degradation rates. For more information and to register, see <http://clu-in.org/live> .

> New Documents and Web Resources

New CLU-IN Technology Focus Area on Nanotechnology. EPA has added a new Remediation Technology section to the CLU-IN website called "Nanotechnology: Applications for Environmental Remediation." The purpose of the new website area is to provide easy-to-access information to assist site managers when they are evaluating whether to use nanoscale zero-valent iron or other nanomaterials for hazardous waste site remediation. The website is divided into five sections: Overview, Guidance, Application, Training, and Additional Resources. As new information becomes available, the Nanotechnology: Applications for Environmental Remediation website will be updated with information from federal cleanup programs, state sources, universities, nonprofit organizations, peer-reviewed publications, and public-private partnerships. View and use at <http://www.clu-in.org/nano> .

September 2010 Superfund Green Remediation Strategy. The September 2010 Strategy reflects extensive public comment on the Agency's August 2009 Strategy and EPA response to the input. It also reflects refined EPA policy, modified activities within the key actions, and other developments as green remediation matures (September 2010, 32 pages). View or download at <http://www.epa.gov/superfund/greenremediation/>.

Superfund Remedy Report, Thirteenth Edition (EPA-542-R-10-004). The Superfund Remedy Report (SRR), Thirteenth Edition, formerly called the Treatment Technologies for Site Cleanup: Annual Status Report (ASR), was published by the EPA Office of Superfund Remediation and Technology Innovation (OSRTI) in September 2010. The SRR presents the analysis of Superfund remedial actions based on: (1) remedies selected in Records of Decision (ROD) and ROD amendments, and (2) actions modified in Explanation of Significant Differences (ESD), for fiscal years (FY) 2005 - 2008. The SRR also follows trends in remedy selection using ASR data from FY 1982 - 2004 combined with SRR data. The SRR analyzes remedies selected or modified in

594 decision documents, but does not include project-specific updates that were presented in past editions of ASR. In addition, SRR also includes brief project highlights related to green remediation, in situ bioremediation, and high resolution site characterization. The online version includes downloadable appendices with data for several key tables and figures in the report and new appendices that summarize all the remedy components selected for sources and groundwater in each individual decision document (September 2010, 144 pages). View or download at <http://clu-in.org/asr> .

New Cost and Performance Information on Cleanup Technologies. The Federal Remediation Technologies Roundtable (FRTR) recently announced the release of 26 new case study and technology assessment reports. These reports document the cost, performance, and lessons learned in implementing a wide range of hazardous waste site cleanup technologies in the field, ranging from large-scale demonstrations to full-scale applications. The remediation case studies and general technology assessment reports and other related FRTR information are available at www.frtr.gov. Visitors to the website can search these reports by remedial technology, optimization method, and other criteria. With these new additions, over 800 reports are now available in four areas over 400 cost and performance case study reports describing the use of remediation technologies; over 195 reports describing the use of site characterization and monitoring technologies; more than 125 case studies describing long-term monitoring/optimization of remediation technologies; and more than 90 reports describing the assessments of remediation technologies at hazardous waste sites. View at <http://www.frtr.gov/costperf.htm> .

Federal Remediation Technologies Roundtable Annual Summary of Activities: August 2010 - Highlighting Vapor Intrusion (EPA-530-F-10-001). This fact sheet, produced by the FRTR, summarizes activities of member agencies' remediation programs and describes recently published cost and performance case studies and reports. The 2010 fact sheet also highlights FRTR member agencies' Vapor Intrusion (VI) activities, which was the focus of the November 2009 FRTR meeting. A summary of that meeting and the presentations on Vapor Intrusion are posted on the FRTR website. In March 2010, FRTR launched the Vapor Intrusion Data Workgroup in partnership with several federal agencies. Recently, EPA Region 7 published a fact sheet, What you should know about Vapor Intrusion, to answer frequently asked questions about VI. EPA has on-line resources dedicated to VI that are available at <http://www.clu-in.org/vi/> , and <http://www.epa.gov/oswer/vaporintrusion/> (August 2010, 11 pages). View or download at <http://www.frtr.gov/publib.htm> . For hard copies, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 22 resources, events, projects and news items were added to EUGRIS in September 1-24, 2010. 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 resources were posted on EUGRIS:

NICOLE Sustainable Remediation Road Map (2010). It is important that risk-based management of contaminated land is achieved in a sustainable manner. NICOLE has recognised that a more comprehensive approach to remediation projects should incorporate sustainability (encompassing environmental, social and economic elements) alongside effective risk management. The Road Map sets out NICOLE's views on how to incorporate sustainability principles in remediation projects. View or download at http://www.nicole.org/documents/stream.aspx?o=2&fn=NICOLE_Docs_279.pdf .

NICOLE News: September 2010. The Network for Industrially Contaminated Land In Europe (NICOLE) publishes a periodic newsletter. This issue includes articles about: the Environmental Liability Directive, Working Group updates, the NICOLE Technology Award, Sustainable Remediation, Sustainable remediation webinar report, Forthcoming

events, NICOLE/Common Forum Position paper, NICOLE book chapter report, Common Forum developments, In situ metal precipitation in groundwater, NICOLE Douai workshop, NICOLE Trieste workshop, and Steam-air injection to remove CHC from fractured bedrock. View or download at <http://www.nicole.org/>.

> Conferences and Symposia

Vapor Intrusion Pathway: A Practical Guideline ITRC 2-day Classroom Training, Atlanta, GA, October 4-5, 2010. Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to learn the latest strategies to conduct site screening and investigations; determine what tools are appropriate to collect quality data and evaluate the results; apply multiple lines of evidence to ensure quality decision-making; build solutions for VI issues through understanding of mitigation options; and network with environmental professionals dealing with this interdisciplinary and complex pathway. Interactive learning with hands-on exhibits, classroom exercises, and frequent Q&A sessions will reinforce these course objectives and contribute to a practical understanding of this difficult pathway. For more information and to register, see <http://www.itrcweb.org/crt.asp>.

Interstate Technology and Regulatory Council (ITRC) 2010 Fall Meeting: 15 Years Advancing Environmental Solutions, St Louis, Missouri, October 25-29, 2010. Offers environmental professionals from across the country the opportunity to network and collaborate on innovative approaches to solving environmental challenges. This week-long, conference-style meeting features outstanding plenary and panel sessions and workshops, as well as ITRC Team meetings. Highlights include a retrospective look at ITRC's accomplishments to date and a prospective look at the newest advances in remediation. Registration is open to the over 500 current ITRC members and outside parties who wish to engage with ITRC (registration fee may apply). For more information and to register, see <http://www.itrcweb.org/2010FallMeeting.asp>.

Call for Abstracts!! Sixth Annual Conference on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April 13-15, 2011. The conference, hosted by the U.S. EPA and the U.S. Army Corps of Engineers, will facilitate information exchange among professionals from the private and public sectors regarding design and construction issues at hazardous waste sites including effective methods, remediation strategies, lessons learned, and application of technologies. Abstracts are due by November 12, 2010. For more information and to submit an abstract, see <https://superfund.usace.army.mil/2011DCHWS>.

Call for Abstracts!! International Conference on Sustainable Remediation 2011: State of the Practice, Amherst, MA, June 1-3, 2011. The Environmental Institute at the University of Massachusetts Amherst and the U.S. EPA Office of Superfund Remediation and Technology Innovation are pleased to announce the International Conference on Sustainable Remediation 2011: State of the Practice to be held in Amherst, Massachusetts June 1-3, 2011. The conference will bring together researchers and practitioners from around the globe to address the state of the practice and future needs in sustainable remediation across the themes of green chemistry, human health, and environmental response. Session presentations by scientists, practitioners, and regulators will feature new research, field applications, and lessons learned. Abstracts are encouraged in all areas of green and sustainable remediation as related to hazardous waste cleanup, from basic to applied research, from case studies to demonstration projects. The deadline for platform presentations is November 1, 2010. For more information and to submit an abstract, see

<http://www.umass.edu/tei/conferences/SustainableRemediation/callforabstracts.html> .

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. Currently there are 82 conferences and courses featured. 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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