

TechDirect, February 1, 2011

Welcome to TechDirect! Since the January 1 message, TechDirect gained 287 new subscribers for a total of 37,035. 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.

> Open Solicitation

ESTCP FY 2012 Solicitation for Demonstration of Environmental Technologies. The Department of Defense (DoD) Environmental Security Technology Certification Program (ESTCP) released its annual solicitation on January 13, 2011. This solicitation requests pre-proposals via Calls for Proposals to DoD organizations and Federal (Non-DoD) organizations as well as a Broad Agency Announcement (BAA) for Private Sector organizations. The DoD Call for Proposals requests pre-proposals related to: (1) environmental restoration; (2) munitions response; (3) resource conservation; and (4) weapons systems and platforms. The BAA and Non-DoD Federal Call for Proposals request pre-proposals in the following topics only: (1) management of contaminated groundwater; (2) in situ management of contaminated sediments; (3) military munitions detection, classification, and remediation; (4) recovery of threatened and endangered and sustainment of at-risk plant species; (5) inventory and monitoring technologies for vertebrate populations; (6) environmentally sustainable energetic materials and manufacturing processes. The submission deadline for pre-proposals is March 8, 2011. More information and detailed instructions at <http://www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations>.

> Upcoming Live Internet Seminars

Financing Reuse of Contaminated Properties - February 3, 2011, 2:00PM-4:00PM EST (19:00-21:00 GMT). How can EPA OSWER and its partners finance reuse of contaminated properties in a downturned economy? This session will present current challenges and forecasts with general redevelopment and its relation to contaminated properties. The presentation will discuss the critical role of partnerships in achieving success and share a lot of examples. For more information and to register, see <http://clu-in.org/live>.

CARE National Webinar - February 8, 23, and March 2. The national web cast provides an opportunity for potential CARE cooperative agreement applicants to learn more about the CARE program and ask questions about the 2011 CARE RFP. For more information and to register, see <http://clu-in.org/live>.

Your Role in Green Remediation Implementation and Case Studies in Green Remediation - This Year's Models and Tools (The 2010 NARPM Green Remediation Session Follow-on Webinars) - February 10, 2011, 1:00PM-3:15PM EST (18:00-20:15 GMT). In May 2010, EPA held its annual National Association of Remedial Project Managers (NARPM) meeting in Crystal City, VA, and for the third year in a row, one of our most attended sessions was on Green Remediation (GR). And like last year, we are offering those talks again to an online audience! EPA's definition of GR includes the practice of considering the environmental effects of a remediation strategy (i.e., the remedy selected and the implementation approach) early in the process, and incorporating options to maximize the net environmental benefit of the cleanup action. We've got more case studies and maturing policy and guidance that we'd like to share with an online audience. EPA's Technical Support Project, led by the Engineering Forum, has taken this full-day session and split it into three separate sessions that started in December. This last session is scheduled to be two hours and fifteen minutes long and will include policy and case studies, with time for Q&A along the way. For more information and to register for the last session, see <http://clu-in.org/live>.

Contaminated Sediments: New Tools and Approaches for in-situ Remediation - Session IV - February 14, 2011, 2:00PM-4:00PM EST (19:00-21:00 GMT). This seminar will feature SRP grantees Dr. Harold D. May and Dr. Danny Reible. Dr. May, Professor, Microbiology and Immunology, Medical University of South Carolina will present "Integrating Microbial Biostimulation and Electrolytic Aeration to Degrade POPs" and Dr. Reible, Bettie Margaret Smith Professor of Environmental Health Engineering, Department of Civil, Architectural and Environmental Engineering, University of Texas will present "Enhancing Biodegradation in Sediment Caps Using Carbon Cloth Electrodes." Dr. May will discuss bioaugmentation of Fox River (WI) sediment contaminated with polychlorinated biphenyls (PCBs) and persistent organic

pollutants (POPs), and testing with bioactive granulated activated carbon (GAC) containing PCB dechlorinating and degrading bacteria. He will also describe how electron donors and acceptors for microbial PCB dechlorination and degradation can be delivered electrochemically to further stimulate the biodegradation of these POPs. These methods show significant reductions in the concentration of weathered PCBs. Dr. Reible will show that although sediment capping is normally considered strictly a contaminant containment technology, it can trigger microbial processes to transform or detoxify both inorganic and organic contaminants. He will describe research exploring these microbial processes and ways of improving their effectiveness. The presentation will focus on how to enhance microbial transformation of hydrophobic organic compounds in sediment caps through the use of electrodes to change terminal electron acceptors and redox conditions. For more information and to register, see <http://clu-in.org/live>.

ITRC Quality Considerations for Munitions Response Projects - February 15, 2011, 2:00PM-4:15PM EST (19:00-21:15 GMT). This training introduces state regulators, environmental consultants, site owners, and community stakeholders to Quality Considerations for Munitions Response Projects (UXO-5, 2008), created by the ITRC's Unexploded Ordnance (UXO) Team. In this document, quality is defined as "conformance to requirements." To manage quality, the quality requirements of the project must first be understood. Requirements must be precisely stated and clearly understood by everyone involved. A plan is then put in place to meet those requirements. The UXO Team emphasizes taking a whole-system approach to designing, planning and managing a munitions response (MR) project to optimize quality. This training course is intended for an intermediate audience and assumes a basic understanding of specialized processes associated with MR projects. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

ITRC In Situ Bioremediation of Chlorinated Ethene - DNAPL Source Zones - February 17, 2011, 11:00AM-1:15PM EST (16:00-18:15 GMT). Treatment of dissolved-phase chlorinated ethenes in groundwater using in situ bioremediation (ISB) is an established technology; however, its use for DNAPL source zones is an emerging application. This training course supports the ITRC Technical and Regulatory Guidance document In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones (BioDNAPL-3, 2008). This document provides the regulatory community, stakeholders, and practitioners with the general steps practitioners and regulators can use to objectively assess, design, monitor, and optimize ISB treatment of DNAPL source zones. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

ITRC Mine Waste Treatment Technology Selection - February 24, 2011, 11:00AM-1:15PM EST (16:00-18:15 GMT). ITRC's Mining Waste Team developed the ITRC Web-based Mine Waste Technology Selection site (<http://www.itrcweb.org/miningwaste-guidance/>) to assist project managers in selecting an applicable technology, or suite of technologies, which can be used to remediate mine waste contaminated sites. Decision trees, through a series of questions, guide users to a set of treatment technologies that may be applicable to that particular site situation. Each technology is described, along with a summary of the applicability, advantages, limitations, performance, stakeholder and regulatory considerations, and lessons learned. Each technology overview links to case studies where the technology has been implemented. In this associated Internet-based training, instructors provide background information then take participants through the decision tree using example sites. Project managers, regulators, site owners, and community stakeholders should attend this training class to learn how to use the ITRC Web-based Mine Waste Technology Selection site to identify appropriate technologies, address all impacted media, access case studies, and understand potential regulatory constraints. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Unified Statistical Guidance - February 28, 2011, 2:00PM-4:00PM EST (19:00-21:00 GMT). The webinar will provide interested parties a broad introduction to the March 2009 Unified Guidance. The session will start with the purposes of the guidance and a summary of how it is organized. Speakers will provide a brief discussion on how the guidance might be used for diagnostic evaluation of data assumptions. Next, speakers will expand on a number of key guidance topics: statistical design and hypothesis testing: how to set-up statistical testing to simultaneously identify "dirty" groundwater with sufficiently high probability while minimizing the chance of labeling "clean" groundwater as "dirty"; the importance of background data: when might "moving windows" be needed? How should background be updated for intrawell testing? What if background levels are higher than compliance standards?; resampling and retesting: what benefits does retesting provide? How can it be done right?; and intrawell testing: why is spatial variation important? How can it be "fixed"? At the end of the presentation, time will be left for either phone-in or written questions. For more information and to register, see <http://clu-in.org/live>.

> New Documents and Web Resources

Innovations in Site Characterization: Streamlining Cleanup at Vapor Intrusion and Product Removal Sites Using the Triad Approach: Hartford Plume Site, Hartford, Illinois (EPA 542-R-10-006). Vapor intrusion from widespread hydrocarbon plumes at the Hartford Plume Site in the Village of Hartford, Illinois, resulted in numerous residential housing fires and forced residents to move from their homes. To address public concerns at the Site, EPA Region 5 worked with oil company stakeholders from the area and used the best management practices (BMPs) of EPA's Triad Approach to expedite the investigation, mitigation, and cleanup processes. The Hartford Plume Site case study provides a detailed example of the strategies and technologies used at the site that are available to environmental practitioners to use at large and small hydrocarbon sites. Sufficient detail is provided for practitioners to learn the basic elements of designing and implementing site characterization, mitigation, and remedial efforts at complex hydrocarbon sites (September 2010, 359

pages). View or download at <http://clu-in.org/techpubs.htm> .

The Incorporation of an Ecosystem Services Assessment into the Remediation of Contaminated Sites. This document was prepared by Sarah Slack, a National Network for Environmental Management Studies (NNEMS) grantee under a fellowship from the U.S. EPA. This report recommends an approach for assessing a site's ecosystem services (the benefits that humans derive from ecosystems) prior to site remediation as a means to qualitatively or quantitatively track ecosystem changes associated with cleanup activities and to identify opportunities for avoiding or mitigating a cleanup project's negative effect on the ecosystem. Based on literature research and personal communications, the report presents background information on the concept of ecosystem services, as well as steps interested parties can take to mitigate or avoid impacts to ecosystem services at a site level throughout the remediation process. The report outlines replicable practices that remedial project managers can utilize when attempting to mitigate adverse impacts on an ecosystem. This report also describes the current state of data collection methods and issues pertinent to the ecosystem service assessment process, with the ultimate aim of fostering production of a replicable methodology that can lead to greener cleanups (August 2010, 34 pages). View or download at <http://clu-in.org/techpubs.htm> .

Second Volume of Environmental Restoration Monograph Series Now Available from SERDP/ESTCP. In Situ Remediation of Chlorinated Solvent Plumes (2010), the second monograph in an Environmental Restoration Monograph Series, describes the process design and engineering for physical, chemical, and biological technologies used to treat complex chlorinated solvent plumes. For more information, please visit

<http://www.serdp.org/News-and-Events/News-Announcements/Program-News/Second-volume-of-Environmental-Restoration-Monograph-Series-now-available/%28language%29/eng-US>

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 14 resources, events, projects and news items were added to EUGRIS in January 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 resource was posted on EUGRIS:

Urban Soil Sealing in Europe - European Environment Agency (2011). Soil sealing is the covering of the soil surface with materials like concrete and stone, as a result of new buildings, roads, parking places but also other public and private space. Depending on its degree, soil sealing reduces or most likely completely prevents natural soil functions and ecosystem services on the area concerned. View or download at

http://www.eea.europa.eu/articles/urban-soil-sealing-in-europe?utm_campaign=urban-soil-sealing-in-europe&utm_medium=email&utm_source=EEASubscriptions .

> Conferences and Symposia

2011 Air Force Restoration and Technology Transfer Workshop, San Antonio, TX, March 7-11, 2011. The Workshop, led by the AFCEE Environmental Restoration Division (AFCEE/ER) in partnership with the AFCEE Restoration Branch of the Technical Division, brings together hundreds of professionals from military services, industry, academia, local, state, and federal agencies, to focus on the latest in environmental restoration approaches and solutions. The emphasis of the 2011 Restoration and Technology Transfer Workshop is on restoration policy and program management. The Workshop includes a multiple-track agenda of informative plenary presentations, optional short courses and technical sessions on a variety of topics, plus an exhibit hall and networking opportunities. For more information and to register, see

<http://www.baskow.com/client/rtw2011/> .

Practical Models Supporting Remediation of Chlorinated Solvents, Atlanta, GA, March 22-23, 2011. Explore a subset of the publicly-available simulation and data analysis tools that can be used alone or in combination to answer questions such as: Will source remediation meet site goals? What will happen if no action is taken? Should I combine source and plume remediation? What is the remediation timeframe? What is a reasonable remediation objective? The model discussion will focus on the unique features of selected models and how those features can support strategy development. Emphasis will be on REMChlor, a newly released tool that simulates both source and plume remediation. By providing the ability to simulate sites where conditions change in space and time, REMChlor can provide information equivalent to the types of output from more sophisticated numerical models. For more information and to register, see <http://srnl.doe.gov/csqs/> .

Vapor Intrusion Pathway: A Practical Guideline ITRC 2-day Classroom Training, Princeton, NJ, April 18-19, 2011.

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> .

Gulf Oil Spill Focused Topic Meeting, Society of Environmental Toxicology and Chemistry (SETAC), Pensacola, FL, April 26-28, 2011. This program includes a diverse group of oil spill assessors and responders with expertise in toxicology, chemistry, modeling and tracking of oil, technology development, emergency response, environmental management and

risk communication. The meeting Steering Committee is charged with promoting scientific discourse and thought-provoking analysis through a dynamic interactive program. The primary goal is developing science-based recommendations for improving oil spill response and tracking, control techniques, management and effects assessment. For more information and to register, see <http://gulfoils spill.setac.org/> .

11th International HCH and Pesticides Forum, Gabala, Republic of Azerbaijan, September 7-9, 2011. The aim of 11th International HCH and Pesticide Forum is to present and discuss the problems connected with a huge amount of obsolete pesticides in the regions of Southern Caucasus and Central Asia region, Central European and EECCA Countries and many others around the Globe, their inventories, present amounts and elimination, which had started successfully during the previous 9th and continued during the 10th Fora. This Forum is undertaken under the framework of the Stockholm Convention on Persistent Organic Pollutants (POPs) and other international agreements and directives. Special attention will be given to solve the problems with obsolete pesticides in the Southern Caucasus and Central Asia region, areas where pesticides have long been produced and applied during Soviet era. Alpha-HCH, beta-HCH and Lindane (gamma-HCH) have recently been listed as POPs in the Stockholm Convention together with 6 other new POPs. For more information and to register, see <http://www.hchforum.com> .

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 41 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. To unsubscribe, send a blank email to [subst\('Email.UnSub'\)](mailto:subst('Email.UnSub')). 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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