U.S. ENVIRONMENTAL PROTECTION AGENCY

TechDirect, April 1, 2010

Welcome to TechDirect! Since the March 1 message, TechDirect gained 200 new subscribers for a total of 35,775. 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.

> Upcoming Live Internet Seminars

Vadose-Zone Monitoring as a Key to Groundwater Protection and Optimization of Remediation Strategies - April 7, 2010, 1:00PM-3:00PM EDT (17:00-19:00 GMT). VMS is a novel vadose zone monitoring technology that is designed to provide in-situ, real time information on hydrological and chemical conditions of the percolating water in deep sections of the vadose zone. The data collected by the monitoring system provides early detection of subsurface pollution and allows optimization of remediation conditions. Up-to-date the system has been successfully implemented in several research projects on water flow and contaminant transport in various hydrological and geological setups including: (a) floodwater infiltration from stream channels and reservoirs, (b) land use impact on groundwater quality, (c) influence of intensive agriculture on groundwater quality, and (d) controlled remediation conditions of a contaminated vadose zone. For more information and to register, see http://clu-in.org/live .

ITRC Risk Assessment and Risk Management: Determination and Application of Risk-Based Values - April 8, 2010, 11:00AM-1:15PM EDT (15:00-17:15 GMT). This training course describes the development and application of risk-based screening values. The first module provides a review of key risk assessment concepts related to risk management. The second module focuses on the process by which risk-based levels are derived in different states. The third module examines the application of risk assessment to remediation operations in two case studies providing examples of how risk assessment has actually been implemented, based upon research and case studies conducted by the ITRC Risk Assessment Resources team. This training course describes a number of the reasons behind variations in risk-based screening values and their use in risk management. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

ITRC Quality Considerations for Munitions Response Projects - April 13, 2010,

2:00PM-4:15PM EDT (18:00-20:15 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 .

Field Operations Records Management System II Lite (FORMS II Lite) Training for Acquiring Superfund Analytical Services in Region 6 - April 22, 2010, 9:00AM-1:00PM EDT (13:00-17:00 GMT). The FORMS II Lite software is a flexible and easy-to-use, stand-alone, Windows-based application that simplifies and accelerates the sample documentation process. FORMS II Lite software is the preferred means of creating Contract Laboratory Program sample documentation. FORMS II Lite reduces the generation of hand written documents by nearly 70 percent. Specifically, FORMS II Lite generates sample labels, bottle tags, and Chain of Custody (COC) forms; tracks samples from the field to the laboratory; facilitates electronic capture of sample information into databases; and exports data electronically as .xml, .dbf, or .txt files. For more information and to register, see http://clu-in.org/live .

Assessing EDCs in the Field: New Approaches to Old Challenges - April 22, 2010, 1:30PM-3:30PM EDT (17:30-19:30 GMT). The Superfund Research Program (SRP) presents "Assessing EDCs in the Field: New Approaches to Old Challenges" featuring Dr. Gerald (Gary) Ankley (USEPA/ORD Mid-Continent Ecology Division) and Dr. Nancy Denslow (University of Florida). Dr. Ankley will focus on the problems EDC present for ecological risk assessment and will talk about the types of assessment tools needed and their potential applications. Dr. Denslow's presentation will show how molecular biomarkers and "omics" technologies may be useful in risk assessment, focusing on a Lake Apopka study of largemouth bass, fathead minnows, and organochlorine pesticides. This is the first session of the RiskeLearning Spring/Summer 2010 series "Ecological Risk: New Tools and Approaches." For more information on the series, see http://www.niehs.nih.gov/research/supported/srp/events/riskelearning/. To register, see http://clu-in.org/live .

ITRC Use of Risk Assessment in Management of Contaminated Sites - April 27, 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 .

> New Documents and Web Resources

Ecological Revitalization Project Profiles. EPA has developed this Web site to

summarize timely information about the use of ecological revitalization at contaminated properties. Ecological revitalization refers to the process of returning land from a contaminated state to one that supports a functioning and sustainable habitat. Although the final decision on how a property is reused is inherently a local decision that often rests with the property owner, EPA actively supports and encourages ecological revitalization, when appropriate, during and after the assessment and cleanup of contaminated properties under its cleanup programs. This Web site contains information about completed and on-going projects where ecological revitalization was involved in solutions to various environmental concerns. These profiles provide information on site history, contaminants of concern and the ecological revitalization approach taken at each site. Technical considerations, long-term stewardship and operation and maintenance requirements are also included in each profile. View and use at http://www.clu-in.org/products/ecorev/ .

Nanotechnology Project Profiles. EPA has developed this web site to summarize information about selected full-, field- and pilot scale applications of nanotechnology. Nanotechnology is an emerging technology that is generally defined as the ability to create and use materials, devices and systems with unique properties with a size of approximately 1 to 100 nanometers (nm). Applications of nanotechnology in environmental protection draw on nanomaterials' unique properties and include (1) sensors for improved monitoring and detection capabilities, and (2) treatment and remediation techniques for cost-effective and rapid site cleanup. Projects for this Web site are collected using information from technical journals and conference proceedings, as well as information obtained from technology vendors and site managers. The project profiles contain information on the types of contaminants treated, the type of nanomaterial used, the nanomaterial vendor, the length of operations, project scale and status, location, cost, monitoring and performance results, and points of contact and references. View and use at http://www.clu-in.org/products/nano/ .

Verification of Remediation of Land Contamination. A new report by Environment Agency explains how to check whether the remediation of land contamination has proved successful and met the intended goals. This new report offers guidance on designing a verification programme to increase confidence in the outcome of a remediation strategy. Four key stages are involved in the verification process: developing the remediation strategy, developing the verification plan, implementation of the verification plan, and long-term monitoring and maintenance. This report encourages the use of an evolving conceptual model, with uncertainties being reappraised as more information becomes available. Multiple lines of evidence should be collected to support the primary remediation goal, which is usually to reduce the level of a contaminant in soil or groundwater (February 2010, 87 pages). View or download at http://publications.environment-agency.gov.uk/pdf/SCHO0210BRXF-e-e.pdf .

A Framework for Assessing the Sustainability of Soil and Groundwater Remediation. This document presents the first phase of work by the United Kingdom's Sustainable Remediation Forum (SuRF UK), which is a framework for assessing the sustainability of soil and groundwater remediation, and for incorporating sustainable development criteria in land contamination management strategies. It helps assessors to identify the optimum land and/or groundwater remediation strategy and/or technique. Assessment of sustainable remediation is defined by SuRF-UK as "the practice of demonstrating, in terms of environmental, economic and social indicators, that the benefit of undertaking remediation is greater than its impact and that the optimum remediation solution is selected through the use of a balanced decision-making process" (March 2010, 63 pages). View or download at http://www.claire.co.uk/surfuk .

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 33 resources, events, projects and news items were added to EUGRIS in March 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 report was featured on EUGRIS:

Proceedings from the 9th meeting of the International Committee on Contaminated Land, Helsinki September 16th and 17th 2009. The 16-17th of September 2009 the Finnish Ministry for Environment hosted the 9th meeting of the International Committee on Contaminated Land. 47 participants attended the meeting, representing over 20 different countries and organisations. The meeting consisted of presentations and discussions focusing on issues such as management of excavated soils or contaminated sediments, best practices in remediation or soil protection, prevention and assessment of soil contamination. An international overview of the practices on the management of excavated soils was also heard by several interesting presentations from almost every continent. View or download presentations, abstracts and other resources at http://www.iccl.ch/meeting_helsinki.html .

> Conferences and Symposia

Call for Abstracts!! Green Remediation: Environment - Energy - Economics, Amherst, MA, June 15-17, 2010. The conference will address the full range of environmental, energy and economic aspects of green and sustainable remediation, taking into account the energy requirements of treatment systems, air emissions, water use requirements and impacts on water resources, land and ecosystem use and impacts, energy use and renewables, material consumption, reuse, and waste generation. The conference will provide a forum for scientists, regulators, managers, and other stakeholders from around the globe to interact and share new knowledge in both basic and applied research in green and sustainable remediation. Poster abstracts are encouraged in all areas of green and sustainable remediation, from basic to applied research, from case studies to demonstration projects. For more information and to submit a poster abstract, see http://www.umass.edu/tei/conferences/GreenRemediation/GreenCallForAbstracts.html .

2010 Environmental Monitoring & Data Quality (EMDQ) Workshop, Louisville, KY, April 12-16, 2010. This Workshop is open to all interested members of the environmental community involved with Department of Defense (DoD) sites or projects including representatives from the services, other federal agencies, state, local, and tribal governments, academia, and the private sector. It will include technical training sessions, technical presentations, a Q&A Forum, component meetings, a plenary session featuring distinguished speakers, an update on the DoD Environmental Laboratory Accreditation Program (ELAP), an informal poster session, and networking opportunities with members of the environmental community. For more information and to register, see http://www.regonline.com/2010emdqworkshop .

The Alpha and the Omega and Points in Between Conference, Chicago, IL, April 13-14, 2010. This two-day joint conference on contaminated sediment sites is sponsored by the U.S. EPA, U.S. Army Corps of Engineers/ERDC and the Sediment Management Work Group. Sessions to include: Source Control, Site Characterization and the RI/FS, Making Sense of Monitoring / Defining Endpoints, and Case Studies from Selected Leading Sediment Sites. For more information and to register, see http://www.smwg.org/2010_Joint_Conference_Info.htm .

Moral Heat: Ethical Dimensions of Environmental Regulation and Economics in the 21st Century, New York, NY, April 20, 2010. With presentations from a number of distinguished and well-known academics, business leaders, regulatory officers, and

ethics scholars, this multidisciplinary conference will explore the intersections and tensions between the ethics of environmental sustainability, the workings of markets, and the roles of government and civil society in protecting and advancing an ecologically-responsible common good in the 21st century. For more information and to register, see http://www.fordham.edu/MoralHeat .

2010 Conference on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April 21-23, 2010. This conference is hosted by the U.S. EPA and the U.S. Army Corps of Engineers. It will provide a forum for discussion among professionals from the private and public sectors regarding design and construction issues at hazardous waste sites including current approaches, management techniques, lessons learned, and application of technologies. An informal discussion session will be held on Wednesday evening, April 21, 2010, to discuss Groundwater Restoration: Expectations versus Reality. On April 22 and 23, 2010, there will be six panel sessions across the topic areas of project management, corporate perspective, remediation technologies, characterization & design, and treatment optimization. For more information and to register, see https://superfund.usace.army.mil/2010DCHWS .

Vapor Intrusion Pathway: A Practical Guideline ITRC 2-day Classroom Training, Cambridge, MA, July 12-13, 2010. The ITRC 2-day Vapor Intrusion Pathway class is planned for Cambridge, Massachusetts (July 12-13) and Atlanta, Georgia (October 4-5). 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. This course meets continuing education requirements of Massachusetts Licensed Site Professionals (LSPs). For more information and to register, see http://www.itrcweb.org/crt.asp .

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 96 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.
