TechDirect, May 1, 2009

Welcome to TechDirect! Since the April 1 message, TechDirect gained 227 new subscribers for a total of 33,349. 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.

> Special Announcement

The U.S. EPA Technology Innovation and Field Services Division is looking for a few good people. Our Environmental Response Team (ERT) specializes in field support and technical expertise for EPA responses to oil spills, hazardous emergencies, potentially hazardous scenarios, environmental disasters and long-term remedial activities as well as detection and analytical method development for biological and chemical agents. ERT is active in providing both national and international assistance to remediate and limit damage to air, land and water and to evaluate threats to both human and ecological health. The ERT is prepared to respond to environmental emergencies 24 hours a day, seven days a week, 365 days a year.

The following three positions are being advertised only at http://www.USAJobs.gov. These positions are located in Las Vegas, Nevada. If interested, apply through USAJOBS. The intent of this announcement is to inform you that specific positions in our organization are being competed. **Please do not send information to me. I will not respond. Do not call me for information about these positions.** Again this information is provided as a service. Formal announcements of federal jobs occur on the USAJOBS site.

Two (2) Environmental Scientists GS 12/13
Announcement Number: HQOSWER-DE-2009-0037
Anticipate announcement the week of May 4, 2009
These two ERT environmental scientists will provide emergency response and air monitoring support for environmental emergencies across the US in support of the EPA emergency response, removal, remedial and homeland security programs. This involves providing on-site advice and technical support to EPA On-Scene Coordinators and Remedial Project Manager for site investigations, assessments, sampling and modeling projects. Recent projects include asbestos assessment, air modeling, perimeter monitoring and disaster response. Routine travel is over 10 days per month throughout the US in support of site clean up, national technical workgroups, and exercises.

One (1) Chemist GS 12/13

Announcement Number: HQOSWER-DE-2009-0039
Anticipate announcement the week of May 11, 2009
The Chemist position will be responsible for our Trace Atmospheric Gas Analyzer (TAGA) bus. This chemist needs to have MS/MS and GC/MS experience to be able to manage the TAGA MS/MS which provides real time monitoring for many organic and inorganic compounds at the ppbv level and the Agilent CG/MS for air sample analyses. In addition, this person will provide routine and emergency site advice and technical support on field analytical tools. Travel may be over 10 days per month throughout the US in support of site clean up, national technical workgroups and hazardous material and homeland security exercises.

> Upcoming Live Internet Seminars

Cumulative Risk Assessment Seminar Series: May 5, 19, June 2, 16, 30, and July 14. EPA's Office of Research and Development and Regions are sponsoring this series of seminars as a forum for discussing the current state of the art and practice of CRA. These seminars will provide information regarding guidance, resources, and recommendations for real world CRA for regulatory and non-regulatory applications. This seminar series is, in part, preparation for the EPA ORD/Regional Workshop on CRA being hosted by Region 5 in Chicago, IL for July 28-30, 2009. The seminar series is publicly open in support of advancing CRA while the workshop will primarily be internal to EPA to enhance policy and other deliberative discussions. 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 - May 7, 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 Use of Risk Assessment in Management of Contaminated Sites - May 12, 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 Phytotechnologies - May 14, 11:00AM-1:15PM EDT (15:00-17:15 GMT). This training familiarizes participants with ITRC's Phytotechnology Technical and Regulatory Guidance and Decision Trees, Revised (Phyto-3, 2009). This document provides guidance for regulators who evaluate and make informed decisions on phytotechnology work plans and practitioners who have to evaluate any number of remedial alternatives

at a given site. This document updates and replaces Phytoremediation Decision Tree (Phyto-1, 1999) and Phytotechnology Technical and Regulatory Guidance Document (Phyto-2, 2001). It has merged the concepts of both documents into a single document. This guidance includes new, and more importantly, practical information on the process and protocol for selecting and applying various phytotechnologies as remedial alternatives. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

Superfund Redevelopment Initiative (SRI) 10th Anniversary: Celebrating Success - May 21, June 18, July 16, September 17, and October 22. EPA's Superfund Redevelopment Initiative (SRI) celebrates its 10-year Anniversary in 2009! To mark this event, EPA is hosting a diverse series of seminars featuring Superfund site reuse success stories. This and successive webinars will present reuse case studies on multi-use, renewable energy, ecological reuse, and commercial reuse. For more information and to register, see http://clu-in.org/sri .

Brownfields, Renewables, and Carbon - US and EU Perspectives on Site Cleanup and Climate Change - May 26, 9:00AM-11:30AM EDT (13:00-15:30 GMT). The USEPA and members of the European Union "Rejuvenate" project are evaluating possible approaches to using biomass cultivation, soil rehabilitation and renewable energy generation as integral components of land rehabilitation and reuse at contaminated sites. Benefits could include energy production, carbon sequestration, and improved ecosystem functions among others. This seminar brings speakers from both sides of the Atlantic to present their findings and discuss how such approaches can help us reclaim expansive areas of impaired land and return them to productive and sustainable use. Speakers include the members of the Rejuvenate team, the U.K. Homes and Communities Agency, and the U.S. Environmental Protection Agency. The session is a collaborative effort and speakers will be presenting live from both the UK, where a conference on the topic is being held, and the US. For more information and to register, see http://clu-in.org/live .

Computational Toxicology: An Introduction to Key Concepts and Approaches - May 28, 1:30PM-4:00PM EDT (17:30-20:00 GMT). The Superfund Basic Research Program (SBRP), in collaboration with the U.S. Environmental Protection Agency's Office of Superfund Remediation and Technology Innovation (OSRTI), presents the Spring/Summer 2009 edition of Risk eLearning: "Computational Toxicology: New Approaches for the 21st Century." This series of online seminars will provide an introduction to the key concepts of computational toxicology along with case studies demonstrating the utility of these approaches (e.g. high throughput screening, computer modeling, informatics) to risk assessment. This seminar, the first of the series, will feature Dr. Kim Boekelheide, Professor of Pathology and Laboratory Medicine, Brown University and Dr. Robert Kavlock, Director of the National Center for Computational Toxicology (NCCT/ORD/USEPA). The seminar will draw from the findings of the 2007 National Research Council report "Toxicity Testing in the 21st Century: A Vision and a Strategy" and will overview National Center for Computational Toxicology (NCCT) efforts to provide innovative solutions to a number of persistent and pervasive issues facing EPA's regulatory programs. For more information and to register, see http://clu-in.org/live .

> New Documents and Web Resources

Final Report: Technical Assistance for the Burlington Northern Somers Site, Somers, Montana (EPA 542-R-09-002). This technical assistance report was prepared for EPA Region 8 to evaluate analytical transport modeling and other work

done at the Burlington Northern Somers site in Somers, Montana. The ground water pump and treat system, installed in 1994 to treat ground water contaminated by wood preservatives used in the treatment of railroad ties, was shut down in 2007 under a technical impracticability waiver. This report reviews the conceptual model developed for the site and evaluates the validity of assumptions of the analytical transport model, its consistency with site conceptual model, and the reasonableness of its conclusions. The report suggests an approach for evaluating plume stability prior to, and subsequent to, the shutdown of the pump and treat system and recommends how to evaluate site data collected during the two-year shutdown. The report also recommends point of compliance monitoring points for the site and evaluates the adequacy of the spatial distribution of ground water monitoring locations for monitoring of flow directions and contaminant transport (April 2009, 30 pages). View or download at http://clu-in.org/techpubs.htm .

Final Report: Technical Assistance for the Idaho Pole Site, Bozeman, Montana (EPA 542-R-09-001). This technical assistance report was prepared for EPA Region 8 to help evaluate the existing ground water remedies at the Idaho Pole site-a former wood treatment site contaminated with creosote and pentachlorophenol-in Bozeman, Montana. The report evaluates potential in situ treatment options for ground water "hot-spots" and the potential change from reinjecting treated water to discharging it to surface water. It also evaluates potential alternatives for the collection and in situ treatment of oil found beneath an interstate highway near the site. The report suggests a potential framework for discontinuing the existing pump and treat system and qualitatively reviews the ground water monitoring network to identify deficiencies and redundancies. The report also assesses whether adequate data exist to perform a capture zone analysis and outlines the steps involved in conducting the capture zone analysis. Finally, the report estimates the amount of water that might be produced from dewatering during installation of utilities along the interstate highway (April 2009, 34 pages). View or download at http://clu-in.org/techpubs.htm .

Reported Leaks, Spills and Discharges at Florida Drycleaning Sites. This paper presents data collected by the Florida Drycleaning Solvent Cleanup Program on reported spills, leaks and discharges of drycleaning solvent and solvent-contaminated wastes at 334 drycleaning facilities and 14 drycleaning wholesale supply facilities located in Florida. This information will be useful to those conducting contamination assessments and soil and groundwater remediation at contaminated drycleaning sites by helping to identify contaminant source areas. Since the bulk of the contaminant mass is generally located in close proximity to the discharge point, a better understanding of drycleaning equipment, operations and waste management practices, particularly former industry practices, will facilitate identification of contaminant source areas. This will enable investigators to focus sampling during site assessment activities to provide a more accurate picture of contaminant mass distribution in contaminant source areas that is necessary for successful site remediation. Information contained in this paper may also be useful to regulatory personnel conducting compliance inspections at drycleaning operations (April 2009, 14 pages). View or download at http://drycleancoalition.org/download/LeaksSpillsandDischarges.pdf .

Evaluating Natural Source Zone Depletion at Sites with LNAPL. Light, nonaqueous-phase liquid (LNAPL) refers to an organic compound that is immiscible with, and lighter than, water (e.g., crude oil, gasoline, diesel fuel, heating oil). When an LNAPL is released to the subsurface, it can migrate downward under the force of gravity and laterally at the water table. Larger LNAPL releases may migrate to the water table while leaving residual, immobile LNAPL along the migration path. The constituents, or chemicals, that compose the LNAPL may be removed over time by various mechanisms, such as sorption, volatilization, and dissolution. If not removed, the LNAPL "body" can function as a potentially long-lived source zone for secondary impacts to adjacent soil, soil gas, and groundwater. A simple, quantitative mass

balance assessment of source zones could conclude that, if some quantities of constituents are naturally being lost from the source zone at some rate due to natural processes, then the source zone itself must be depleting to some degree. The key question then becomes, at what rate is this natural source zone depletion (NSZD) occurring? This document addresses this and other questions associated with NSZD (April 2009, 76 pages). View or download at http://www.itrcweb.org/Documents/LNAPL-1.pdf .

Vapor Intrusion Mitigation Advisory. Designed to be used when the risk accorded to vapor intrusion has been estimated and measures are proposed to address the vapor intrusion pathway. Provides a framework that guides the reader through the decision process for 1) determining if mitigation is appropriate for the project site, 2) selecting a mitigation system that is protective of human health, and 3) ensuring that implementation is sustainable for the duration of mitigation. Emphasizes public participation and implementation considerations (e.g., operation and maintenance, monitoring) (April 2009, 77 pages). View or download at http://www.dtsc.ca.gov/SiteCleanup/upload/VI_Mitigation_Advisory_Apr09.pdf .

Triad Issue Paper: Using Geophysical Tools to Develop the Conceptual Site Model (EPA 542-F-08-007) . This technology bulletin explains how hazardous-waste site professionals can use geophysical tools to provide information about subsurface conditions to create a more representative conceptual site model (CSM). The CSM is a tool for gaining a synergistic understanding of the site, improve cost effectiveness, and improve decision-making within the Triad approach. Geophysical tools can be applied to create more robust CSMs with more complete data sets that result in a more representative and accurate depiction of the site characteristics at Brownfields and other hazardous waste sites (December 2008, 15 pages) . View or download at http://www.brownfieldstsc.org/pdfs/Geophysics%20Issue%20Paper%20FINAL_Dec%203%202008.pdf .

New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 25 resources, events projects and news items were added to EUGRIS 1 - 24 April, 2009. 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:

Framework for the use of rapid measurement techniques (RMT) in the risk management of land contamination (Environment Agency SCHO0209BPIA-E-P). This guidance seeks to provide a discussion and a framework for the use of rapid measurement techniques (RMTs) in the context of the Model Procedures for the Management of Land Contamination (CLR11). In this guidance, RMTs are tools and techniques that can provide information on characteristics of a site within a timescale that allows real-time decisions to be made (March 2009, 96 pages) . View or download at http://publications.environment-agency.gov.uk/pdf/SCHO0209BPIA-e-e.pdf .

Remediating and Monitoring White Phosphorus Contamination at Eagle River Flats (Operable Unit C), Fort Richardson, Alaska (ERDC/CRREL LR-08-04). This is the eighteenth annual contract report prepared by researchers from CRREL and other Federal agencies for the U.S. Army Garrison Alaska, Public Works, describing results of research, remediation, and monitoring efforts addressing white phosphorus (WP) contamination in Eagle River Flats, an 865-ha estuarine salt marsh on Fort Richardson, Alaska. Over the five-year period from 1999-2003, full-scale remediation was performed at Eagle River Flats using six remote-controlled pumps to temporarily drain contaminated ponds, allowing the sediments to dry and the WP to oxidize. This effort successfully remediated about 90% of the ponds. More recently, limited remediation using one or two pumps has been conducted to address the remaining few white-phosphorus-contaminated areas (May 2008, 136 pages). View or download at http://www.crrel.usace.army.mil/erf/remediationdata/ERF-RemediationReport-FY2007.pdf .

> Conferences and Symposia

Vapor Intrusion Pathway: A Practical Guideline: ITRC 2-day Classroom Training, Sacramento, CA on June 22-23 and Long Beach, CA on June 25-26. 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 .

Registration Now Open!! Environmental Implications and Applications of Nanotechnology: Amherst, MA, June 9-11, 2009. The Conference on the Environmental Implications and Applications of Nanotechnology will convene leading nano researchers, nano policy and regulatory experts, practitioners, manufacturers and users to better understand the environmental aspects of nanotechnology - from characterization, fate and transport, and environmental health and safety, to green nanotechnology and new nanotechnology applications for pollution control and remediation. Sessions will address both new research findings and policy and regulatory issues in three concurrent tracks over the course of three days. The conference will feature keynote presentations from leading nano researchers and regulatory experts, 78 platforms presentations, plenary sessions, poster sessions, and special events. The Conference will conclude with a special plenary panel of experts representing academia, industry, NGO, and government who will draw upon the conference sessions and their various perspectives to discuss effective science-based decision making for the safe use of nanotechnology. For more information and to register, see http://www.umass.edu/tei/conferences/nanoconference/ .

Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Training, Las Vegas, NV, June 9-11, 2009. MARSSIM provides detailed guidance for planning, implementing, and evaluating environmental and facility radiological surveys conducted to demonstrate compliance with a dose- or risk-based regulation. The MARSSIM guidance focuses on the demonstration of compliance during the final status survey following scoping, characterization, and any necessary remedial actions. This training class will provide detailed information on using the MARSSIM guidance, delivered by three instructors with first-hand knowledge on implementing MARSSIM in realistic situations. For more information and to register, see http://www.trainex.org/classdetails.cfm?classid=4205&courseid=292 .

Environmental Measurement Symposium, San Antonio, TX, August 10-14, 2009. The Environmental Measurement Symposium, for the third year, is the combined meetings of the National Environmental Monitoring Conference (NEMC) and the Forum on Laboratory Accreditation (the Forum). The NEMC brings together scientists and managers from federal and state agencies, the regulated community, and laboratory and engineering support communities. It includes technical sessions, training courses, exhibits, and networking opportunities. The Forum consists of meetings of a number of committees of The NELAC Institute (TNI) and mentor sessions targeted to folks wanting to know more about accreditation. The 2009 Symposium will include keynote speakers on the San Antonio River Authority, Developmental Lifecycle of Commercial Laboratory Instrumentation, Pharmaceuticals in Water, and Health Effects of Exposure to Metallic

Species. There will be technical breakout sessions that cover such topics as innovative approaches for analyzing conventional and emerging pollutants; air methods; contaminated sediments; data usability; inorganic and organic methods; international issues in monitoring; and others. There will be two featured plenary sessions on Wednesday that cover a global perspective on the environmental landscape and nanotechnology. For more information, please visit http://www.nemc.us or http://www.nelac-institute.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. Currently there are 128 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.