

TechDirect, November 1, 2008

Welcome to TechDirect! Since the October 1 message, TechDirect gained 170 new subscribers for a total of 31,951. 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>. 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

ITRC Enhanced Attenuation of Chlorinated Organics: A Site Management Tool - November 6, 11:00AM-1:15PM EST (16:00-18:15 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/studio>.

A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems - November 13, 2:00PM-4:00PM EST (19:00-21:00 GMT). This seminar presents a systematic approach for the evaluation of capture zones at pump and treat systems, and provides an overview of a recently published USEPA document on the topic (EPA 600/R-08/003, January 2008). The target audience is project managers who review those analyses and/or make decisions based on these types of analyses. This course will highlight: the importance of capture zone analysis during ground water remediation, particularly for sites requiring containment; key concepts of capture, such as "target capture zones" and "converging lines of evidence;" and typical errors made in capture zone analysis. Examples will be used to demonstrate key aspects of capture zone analysis. For more information and to register, see <http://clu-in.org/studio>.

ITRC In Situ Bioremediation of Chlorinated Ethene - DNAPL Source Zones - November 13, 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/studio>.

ITRC Decontamination and Decommissioning of Radiologically-Contaminated Facilities - November 18, 2:00PM-4:15PM EST (19:00-21:15 GMT). This training introduces ITRC's Technical/Regulatory Guidance, Decontamination and Decommissioning of Radiologically-Contaminated Facilities (RAD-5, 2008), created by ITRC's Radionuclides Team. The curriculum is composed of four modules: Introduction and Regulatory Basis for Decontamination and Decommissioning (D&D), Factors for Implementing D&D, Preliminary Remediation Goal (PRG) Calculators, and Case Studies and Lessons Learned. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio>.

ITRC Planning and Promoting of Ecological Land Reuse of Remediated Sites - November 20, 11:00AM-1:15PM EST (16:00-18:15 GMT). This training is based on the ITRC Technical and Regulatory Guideline: Planning and Promoting Ecological Land Reuse of Remediated Sites (ECO-2, 2006). The document presents a process to promote ecological land reuse activities considering natural or green technologies instead of more traditional remedies. The guidance demonstrates that natural or ecological end-uses are valuable alternatives to conventional property development or redevelopment. Ecological benefits and a process for calculating their value are included in the guidance and reviewed in this training. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio>.

Green Remediation: Opening the Door to Field Use Session A (Introduction and Carbon Calculus: A RCRA Case Study) - November 24 1:00PM-3:00PM EST (18:00-20:00 GMT). In July, EPA held its annual National Association of Remedial Project Managers meeting in Portland, OR and one of our most attended sessions was on Green Remediation (GR). Because of its success, members of EPA's Technical Support Project, led by the Engineering Forum, have taken this full-day session and are bringing back a number of the same talks as online seminars this fall and winter. There will be three sessions, each 1.5 hours long. 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. Some practices are quite "mature," such as construction site best management practices including stormwater runoff management and construction and demolition (C&D) debris recycling. Others are still emerging, including the use of renewable energy sources such as wind and solar to power remedial systems. Over the three sessions, the online training will introduce you to the key technical, policy, and application aspects of GR. For more information and to register, see <http://clu-in.org/studio>.

ITRC Performance-based Environmental Management - December 2, 2:00PM-4:15PM EST (19:00-21:15 GMT). Performance-based environmental management (PBEM) is a strategic, goal-oriented methodology that is implemented through effective planning and decision logic to reach a desired end state of site cleanup. The goal of PBEM is to be protective of human health and the environment while efficiently implementing appropriate streamlined cleanup processes. This ITRC training presents an overview of what PBEM is, explains how and when to implement it, and describes the issues that regulators are concerned about throughout PBEM's implementation. Case studies will be presented to illustrate successful PBEM projects. The course is valuable not only because PBEM is being proposed and implemented at

many federal and private sites throughout the country, but also because PBEM provides an opportunity to enhance all site remediation. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

Green Remediation: Opening the Door to Field Use Session B (Green Remediation Tools and Examples) - December 16, 1:00PM-3:00PM EST (18:00-20:00 GMT).

In July, EPA held its annual National Association of Remedial Project Managers meeting in Portland, OR and one of our most attended sessions was on Green Remediation (GR). Because of its success, members of EPA's Technical Support Project, led by the Engineering Forum, have taken this full-day session and are bringing back a number of the same talks as online seminars this fall and winter. There will be three sessions, each 1.5 hours long. 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. Some practices are quite "mature," such as construction site best management practices including stormwater runoff management and construction and demolition (C&D) debris recycling. Others are still emerging, including the use of renewable energy sources such as wind and solar to power remedial systems. Over the three sessions, the online training will introduce you to the key technical, policy, and application aspects of GR. For more information and to register, see <http://clu-in.org/studio> .

> New Documents and Web Resources

Nanotechnology for Site Remediation: Fact Sheet (EPA 542-F-08-009). This fact sheet presents a snapshot of nanotechnology and its current uses in remediation. Nanotechnology is the understanding and control of matter at dimensions between approximately 1 and 100 nanometers, where unique phenomena enable novel applications. As a remediation tool, nanotechnology holds promise in remediating sites cost effectively and addressing challenging site conditions. The information presented in this fact sheet should prove useful to site project managers seeking to understand the potential applications of this group of technologies at their sites. The fact sheet includes information on sites where nanoparticles have been tested for site remediation and identifies contacts, such as vendors or project managers with field experience, to facilitate networking (October 2008, 17 pages). View or download at <http://clu-in.org/techpubs.htm> .

State Coalition for Remediation of Drycleaners (SCRD) 10-Year Accomplishments Report (EPA 542-R-08-004). This report documents SCR D's work since 1998 in fostering collaboration among the states to improve and ensure the effectiveness of the cleanup of environmental contamination from drycleaner sites with support from EPA's Technology Innovation and Field Services Division and the National Ground Water Association. SCR D is composed of 13 states-Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin-that have enacted formal drycleaner remediation programs and other states that are active in the remediation of drycleaner sites under other authorities, including state voluntary cleanup and brownfields programs (October 2008, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

Technology News and Trends (EPA 542-N-08-005). This issue highlights innovative approaches for addressing contaminated sediment sites. Elements of these approaches include sediment dewatering through use of geotextile containers, designed armor stone layers in caps to withstand harsh surface and subsurface conditions, new models to predict navigational vessel impacts on cap performance, and placement of caps in

very thin lifts over soft sediments (October 2008, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

Petroleum Brownfields Action Plan: Promoting Revitalization And Sustainability.

This document includes background on EPA's petroleum brownfields efforts and details the Agency's new action plan for enhancing its approach to petroleum-contaminated sites. The plan draws on the perspectives of many stakeholders, including local governments, the private sector, states, non-profit organizations, and EPA staff from headquarters and Regional offices. The plan reflects EPA's commitment to take actions that are within its existing statutory authorities to support petroleum brownfields cleanup and revitalization. As a key first step in building on EPA's existing petroleum brownfields successes and the lessons learned to date, this action plan provides a framework for a series of specific actions, new tools, and expanded partnership efforts that will be launched and take shape over the next three years (October 2008, 11 pages). View or download at <http://www.epa.gov/oust/rags/petrobfactionplan.pdf> .

Framework for Investigating Asbestos-Contaminated Superfund Sites (OSWER Directive 9200.0-68).

This Framework recommends a risk-based, site-specific approach for site evaluation based on current asbestos science. This guidance provides a recommended flexible framework for investigating and evaluating asbestos contamination at Superfund removal and remedial sites. This document also provides remedial/removal managers, remedial project managers, on-scene coordinators, site assessors, and other decision makers with information that should assist in the evaluation of asbestos risks at Superfund sites, along with information to facilitate sites decisions under conditions of incomplete characterization and to accommodate the varied nature of environmental asbestos contamination (September 2008, 71 pages). View or download at <http://www.epa.gov/superfund/health/contaminants/asbestos/#policy> .

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 26 resources, events projects and news items were added to EUGRIS 1 - 24 October, 2008. 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 reports were featured on EUGRIS:

Environment Agency (England and Wales) United Kingdom Ecological Risk Assessment for Contaminants in Soils (2008). The ERA framework provides a structured approach for assessing the risks to ecology from chemical contamination in soils (a requirement under Part 2A (Contaminated Land) of the Environmental Protection Act 1990). The framework consists of a three-tiered risk assessment process: Tier 1 of the risk assessment is a screening step based on a comparison of chemical analyses of site soils with a soil screening value (SSV) for the contaminants of potential concern; Tier 2 uses a choice of tools (ecological surveys and biological testing) to gather evidence for any harm to ecological receptors (plant and animal species) present at the site; Tier 3 seeks to attribute the harm to the chemical contamination. View or download at

<http://www.environment-agency.gov.uk/subjects/landquality/113813/2143247/?version=1> .

Environment Agency (England and Wales) United Kingdom Guidance on the Use of Bioassays in Ecological Risk Assessment (2008). This document provides a summary of the biological tests currently recommended at

Tier 2 of the Ecological Risk Assessment (ERA) Framework, when they are applicable and how to apply them. It gives the risk assessor an overview of the strengths and weaknesses of the various tests, provides guidance on their selection, sets out the criteria for the adoption of new or additional tests and highlights factors that the risk assessor should be aware of when commissioning laboratories to undertake tests. View or download at <http://publications.environment-agency.gov.uk/pdf/SCHO1008BORU-e-e.pdf> .

> Conferences and Symposia

Alternative Covers for Landfills: Theory, Design, and Practice. These 2 1/2 day workshops are intended to teach consultants and engineers how to design and submit quality proposals for alternative covers, and to teach regulators how to evaluate those proposals. Participants will learn the hydraulic properties of these covers, how to optimize designs with models, and how to ensure that the final installation is environmentally protective. The most current research on field performance, monitoring, economics and construction techniques will be presented. The remaining workshop dates and locations are November 18-20 in Kansas City, KS and December 1-3 in Raleigh, NC. For more information and to register, see <http://www.phytosociety.org> .

Emerging Contaminants 2008 Symposium, San Jose, CA, November 19-20, 2008.

Emerging chemical contaminants present numerous technical and institutional challenges to society and to environmental and public health professionals. Increasingly sensitive analytical techniques have detected the presence of previously unregulated chemicals in actual or potential sources of drinking water. In some cases, the impacts of these chemicals to human health and the environment are uncertain. Many of the emerging chemicals remain unregulated, but the number of regulated contaminants will continue to grow slowly over the next several decades. This one and a half day event will profile the latest developments in detection, risk assessment, remediation and regulation of emerging contaminants in groundwater. Experts from academia, regulatory agencies, consulting, industry, and the legal arena will participate in moderated speaker sessions, poster sessions, and round-table panel discussions. For more information and to register, see <http://www.grac.org/contaminants.asp> .

Partners in Environmental Technology Technical Symposium & Workshop, Washington, DC, December 2-4, 2008. This event is sponsored by the Strategic Environmental Research & Development Program (SERDP), DoD's environmental science and technology program, and the Environmental Security Technology Certification Program (ESTCP), DoD's environmental technology demonstration and validation program. This year's Symposium & Workshop has been expanded to a full three-day format that will offer a more comprehensive technical program featuring 13 technical sessions and five short courses. Technical sessions will highlight research and innovative technologies that assist the Department of Defense (DoD) in addressing increasingly complex environmental and mission sustainability challenges. Over the course of the three days, short courses on select technologies in the environmental restoration and munitions management areas will offer unique training opportunities on recent advancements in science and technology. For more information and to register, see <http://www.serdp-estcp.org/symposium2008/> .

Call for Abstracts!! Intersol 2009, Paris, France, March 24-26, 2009. Intersol 2009 is one of the premier technical conferences and trade shows dedicated solely to contaminated soil, site and groundwater remediation in Europe. Attendees from 30 countries are expected to attend this highly focused event. The conference is being organized in collaboration with the French Ministries of Environment, Ministry of Industry, the French Soil Remediation Association, UPDS, the French Environmental Engineering and Consultant Professional Association, L'UCIE, the European Commission, the United Nations and the U.S. Embassy Paris, France. Topics covered and sectors represented will include contaminated soils and groundwater remediation, green remediation, land use planning, protection of water resources and management of contaminated sites and human and environmental risks evaluation. Abstracts are due by November 28, 2008. Abstract guidelines are available at <http://www.intersol.fr/> .

Call for Abstracts!! 2009 Conference on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April 13-15, 2009. The conference, hosted by the EPA and the US 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, lessons learned, and application of technologies. Abstracts are due by November 14, 2008. Abstract guidelines are available at <https://superfund.usace.army.mil/2009DCHWS> .

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 180 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/techdrct> at any time night or day.

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