Welcome to TechDirect! Since the January 1 message, TechDirect gained 271 new subscribers for a total of 35,369. 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 Solicitation. The Department of Defense (DoD) Environmental Security Technology Certification Program (ESTCP) released its annual solicitation on January 7, 2010. 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 management; (3) sustainable infrastructure; (4) weapons systems and platforms; and (5) energy. The Non-DoD Federal Call for Proposals and the BAA request pre-proposals in the following topics only: (1) protection and remediation of contaminated groundwater; (2) military munitions detection, discrimination, and remediation; (3) ecosystem service methodologies and tools for DoD installations; and (4) energy efficiency and renewable energy for DoD installations. The submission deadline for pre-proposals is March 4, 2010. View more information about the solicitation and detailed instructions at http://www.estcp.org/opportunities/.

> Upcoming Live Internet Seminars

2010 CARE RFP National Webcast - February 2, 23, 26, 2010, 1:00PM-3:00PM EST (18:00-20:00 GMT). This webcast is an opportunity for potential applicants to the 2010 CARE cooperative agreement grant program to learn more about the program and ask questions about the Request for Proposals issued in December 2009. For more information and to register, see http://clu-in.org/live.

ITRC In Situ Bioremediation of Chlorinated Ethene - DNAPL Source Zones - February 9, 2010, 2:00PM-4:15PM EST (19:00-21:15 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 Enhanced Attenuation of Chlorinated Organics: A Site Management Tool - February 11, 2010, 11:00AM-1:00PM EST (16:00-18:00 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 vise 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.

**ITRC Phytotechnologies - February 25, 2010, 11:00AM-1:15PM EST (16:00-18:15 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.

**ITRC Decontamination and Decommissioning of Radiologically-Contaminated Facilities - March 4, 2010, 11:00AM-1:15PM EST (16:00-18:15 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/live.

> **New Documents and Web Resources**

**New CLU-IN Sediments Section.** EPA's Office of Superfund Remediation and Technology Innovation has released a new CLU-IN section that compiles available information related to contaminated sediments. Sediments are defined as the organic and inorganic materials found at the bottom of a water body. Sediments may include clay, silt, sand, gravel, decaying organic matter, and shells among other things, but exclude anthropogenic debris, such as vehicle tires. The classes of contaminants that are most common in sediment contamination are pesticides, PCBs, PAHs, and to a lesser extent dissolved phase chlorinated hydrocarbons. With the right geochemical...
conditions heavy metals and metalloids can also occur in sediments or precipitate into them. The most common sediment treatment technologies are monitored natural recovery, in situ capping, dredging, and excavation. EPA will maintain this section by adding new resources as they become available. View and use at http://www.clu-in.org/sediments.

CLU-IN Vendor Directory Updated. The CLU-IN Vendor Directory, available as part of CLU-IN’s Vendor and Developer Support area, has been updated with vendor submissions received through the end of 2009. Site owners, regulators, researchers, and other environmental professionals are encouraged to use the directory to identify vendors and services to meet their remediation and characterization needs. Technology vendors are encouraged to use the CLU-IN Vendor and Developer Support area as a resource for other methods to promote their tools. The next quarterly update of the directory is scheduled to be completed in April 2010, and will include updates and additions from remediation and characterization technology vendors received through March 31, 2010. To update existing vendor information or to add new vendor information, visit http://www.clu-in.org/vendor/vendorinfo/directory.

Measuring Contaminant Resuspension Resulting from Sediment Capping August 2008 (EPA/600/S-08/013). The National Risk Management Research Laboratory (NRMRL) of the U.S. Environmental Protection Agency (U.S. EPA) is developing effective, inexpensive remediation strategies for contaminated sediments. This program theme includes the evaluation of capping to contain/stabilize contaminated sediments. Studies were conducted by NRMRL to evaluate the resuspension of surface materials contaminated with polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). This information, along with U.S. EPA’s sediment guidance document (1), is intended to: a) be used as a reference for site managers and U.S. EPA decision makers who are considering the environmental impacts of capping contaminated sediments, and b) provide a better understanding of the techniques and mechanisms that can be applied to minimize the resuspension of contaminated material during capping. View or download at http://www.epa.gov/nrmrl/pubs/600s08013/600s08013.pdf.

The Scotland & Northern Ireland Forum for Environmental Research (SNIFFER) has commissioned a Code of Practice on the use of sludge, composts, and other organic materials for restoration and land improvement. The consultation period for this document will be open from January 22 to February 5, 2010. From January 25, 2010, the consultation documents below will be posted on the SNIFFER website, in the SNIFFER ‘latest news’ section, where visitors will find the consultation documents for downloading at http://www.sniffer.org.uk.

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 15 resources, events projects and news items were added to EUGRIS 1 - 24 January, 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:


> 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](http://www.umass.edu/tei/conferences/GreenRemediation/GreenCallForAbstracts.html).

**Green Cleanup Symposium, Philadelphia, PA, February 10-11, 2010.** This symposium is a collaborative effort of the US Environmental Protection Agency, Drexel University, University of Pennsylvania, City of Philadelphia, US Army Corps of Engineers, Wildlife Habitat Council, and the States of New Jersey, New York, Pennsylvania and Delaware. Join high level decision makers and the nation’s leading thinkers on green cleanup and revitalization of waste sites to discuss: The ABC’s of Sustainable Reuse; Cleaning up Properties While Using Green Practices; Cutting-edge Analysis and Tools for Long-term Cleanups; Initiatives Promoting Renewable Energy on Cleanup Sites; and Ecological Revitalization at Contaminated Properties. For more information and to register, see [http://drexel.edu/cities/greencleanupsymposium.html](http://drexel.edu/cities/greencleanupsymposium.html).

**Preliminary Assessment and Site Inspection Training, Arlington, VA, March 2-4, 2010 and San Francisco, CA, March 9-11, 2010.** This course provides participants with an introduction to the Superfund site assessment process and covers both the preliminary assessment and the site inspection phases of this process. The course is designed for individuals with little experience in the initial evaluation of hazardous waste sites and focuses on general considerations for sample plan development, reporting requirements and data evaluation. This course is open to EPA, state, tribal and contractor personnel who support site investigation programs. For more information and to register, see [http://www.trainex.org/offeringslist.cfm?courseid=457](http://www.trainex.org/offeringslist.cfm?courseid=457).

**Vapor Intrusion Pathway: A Practical Guideline ITRC 2-day Classroom Training, Norfolk, VA, March 22-23, 2010.** The ITRC 2-day Vapor Intrusion Pathway class is planned for three locations in 2010: Norfolk, Virginia (March 22-23); Cambridge, Massachusetts (July 12-13); 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. For more information and to register, see [http://www.itrcweb.org/crt.asp](http://www.itrcweb.org/crt.asp).

**Alternative Covers For Landfills: Proposing And Evaluating Projects Toward Regulatory Acceptance, Austin, TX, March 30-April 1, 2010.** This 3-day workshop is intended to teach consultants and engineers how to design and submit quality proposals for ET 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 product is environmentally protective. Topics will include alternative cover design, construction, operation, and monitoring, including discussions of regulatory issues, soil physics, plant-soil-water relations,
hydraulic balance, saturated/unsaturated water movement, and computer modeling. Regional case studies will be emphasized. Results and lessons learned from the USEPA Alternative Covers Assessment Program (ACAP) will be highlighted. For more information and to register, see [http://reg.phytosociety.org](http://reg.phytosociety.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 127 conferences and courses featured. We invite sponsors to input information on their events at [http://clu-in.org/courses](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](mailto:heimerman.jeff@epa.gov). Remember, you may subscribe, unsubscribe or change your subscription address at [http://clu-in.org/techdirect](http://clu-in.org/techdirect) at any time night or day.