

TechDirect, April 1, 2008

Welcome to TechDirect! Since the March 1 message, TechDirect gained 207 new subscribers for a total of 30,454. 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 and 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 Notice

EPA Small Business Innovation Research (SBIR) Solicitation Open! EPA invites small business firms to submit research proposals under this Small Business Innovation Research (SBIR) Solicitation. EPA is interested in advanced technologies that address the following EPA topics: Innovation in Manufacturing, Nanotechnology, Green Buildings, Drinking Water and Water Monitoring, Water Infrastructure Rehabilitation, Monitoring and Control of Air Pollution, Biofuels and Vehicle Emissions Reduction, Waste Management and Monitoring and Homeland Security. The objective of Phase I is to determine the technical feasibility and the preliminary commercialization potential of the proposed effort. The maximum dollar amount of awards under this Phase I solicitation is \$70,000 and the term of performance should not exceed six months. The solicitation opened March 20 and closes May 21. See http://es.epa.gov/ncer/rfa/2008/2008_sbir_phase1.html for full details.

> Upcoming Live Internet Seminars

ITRC Decontamination and Decommissioning of Radiologically-Contaminated Facilities - April 3. 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 Characterization, Design, Construction and Monitoring of Bioreactor Landfills - April 10. Bioreactors are landfills where controlled addition of non-hazardous liquid wastes, sludges, or water accelerates the decomposition of waste and landfill gas generation. This training, based on the ITRC's Characterization, Design, Construction, and Monitoring of Bioreactor Landfills (ALT-3, 2006), teaches the

principles used to make critical decisions during permitting, operating, and monitoring a bioreactor landfill. This training also provides a general understanding of the biological degradation of solid wastes under aerobic and anaerobic waste conditions and the degradation products associated with each process. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

ITRC Risk Assessment and Risk Management: Determination and Application of Risk-Based Values - April 17. 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/studio> .

Earth Day Green Remediation Panel Session - April 22. As part of the U.S. EPA's goal of improved environmental stewardship across its programs, the Agency has begun examining opportunities to integrate sustainable practices into the decision-making processes and implementation strategies used to remediate and manage contaminated lands. Three major efforts under this umbrella will be discussed in this seminar; 1) Green remediation, 2) soil amendments for impaired lands, and 3) renewable energy on contaminated lands. For more information and to register, see <http://clu-in.org/studio> .

ITRC Protocol for Use of Five Passive Samplers - April 24. This training supports the understanding and use of the ITRC Protocol for Use of Five Passive Samplers to Sample for a Variety of Contaminants in Groundwater (DSP-5, 2007). The five technologies included in this document include diffusion samplers, equilibrated grab samplers; and an accumulation sampler. The training starts with information common to all five samples then focuses on each sampler as instructors describe the sampler and explain how it works; discuss deployment and retrieval of the sampler; highlight advantages and limitations; and present results of data comparison studies. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

ITRC Vapor Intrusion Pathway: A Practical Guideline - April 29. The ITRC Vapor Intrusion Team developed the ITRC Technical and Regulatory Guidance document Vapor Intrusion Pathway: A Practical Guideline (VI-1, 2007), companion document Vapor Intrusion Pathway: Investigative Approaches for Typical Scenarios (VI-1A, 2007), and this Internet-based training course to be used by regulatory agencies and practitioners alike. This training course provides an overview of the vapor intrusion pathway and information on the framework (evaluation process), investigative tools, and mitigation approaches. The training course uses typical scenarios to illustrate the process. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

> New Documents and Web Resources

DNAPL Website. EPA's Office of Superfund Remediation and Technology Innovation has released a website that compiles available information related to the cleanup of dense nonaqueous-phase liquids (DNAPLs) at hazardous waste sites. This initial phase addresses the most common DNAPL contaminants: chlorinated ethenes (e.g., tetrachloroethene and trichloroethene) and multi-component wastes (creosotes, coal

tars, and heavy oils). Future expansion may include ethers, halogenated alkanes, polychlorinated biphenyls, and other chemicals that form DNAPLs. With the primary focus on source zone cleanup, information is provided for available remediation technologies, such as bioremediation, in situ flushing and oxidation, and thermal processes. EPA will maintain the website by adding new resources as they become available. The website was developed in response to a recommendation of the EPA Ground Water Task Force (www.gwtf.clu-in.org), which identified a need for the creation of a comprehensive compilation of DNAPL resources. View and use at <http://www.cluin.org/DNAPL>.

Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment (EPA 542-R-08-001). This primer is designed for land revitalization stakeholders concerned about vapor intrusion, including property owners, municipalities, and real estate developers. It provides an overview of the vapor intrusion issue and how it can affect redevelopment. It also summarizes techniques for quickly and cost effectively assessing the potential for vapor intrusion, as well as techniques for mitigating it. The topics covered will familiarize stakeholders with options for addressing vapor intrusion to help them communicate with their project contractors and consultants (March 2008, 48 pages). View or download at <http://brownfieldstsc.org/vaporintrusion>.

EPA Office of Research and Development Land Research Program. This site provides information on the innovative science solutions being developed by the program to preserve the nation's land, restore contaminated properties, and protect public health from exposure to environmental contaminants. The site includes a description of the program, fact sheets, science topic experts, links to ORD technical support centers, research publications, research accomplishments, and links to tools, models, and information. View and use at <http://www.epa.gov/ord/lrp/>.

Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Compendium of Tier 2 Values for Nonionic Organics (EPA 600-R-02-016). This equilibrium partitioning sediment benchmark (ESB) document describes procedures to derive concentrations for 32 nonionic organic chemicals in sediment which are protective of the presence of freshwater and marine benthic organisms. The equilibrium partitioning (EqP) approach was chosen because it accounts for the varying biological availability of chemicals in different sediments and allows for the incorporation of the appropriate biological effects concentration. This provides for the derivation of benchmarks that are causally linked to the specific chemical, applicable across sediments, and appropriately protective of benthic organisms (March 2008, 75 pages). View or download at http://www.epa.gov/nheerl/publications/files/ESB_Compendium_v14_final.pdf.

Enhanced Attenuation: Chlorinated Organics (EACO-1). This report was produced by the Interstate Technology and Regulatory Council (ITRC). Many sites with chlorinated organic contamination in groundwater have gone through extensive remedial evaluations and actions. The remedial alternatives for many of these sites include high-energy treatments such as pump-and-treat systems. After years of operation, the effectiveness of these high-energy processes has begun to diminish without remedial objectives being met. Other more effective remedial alternatives need to be implemented; however, there is a lack of guidance available to regulators and the environmental community regarding how and when to transition these sites to lower-energy remedial alternatives and eventually to monitored natural attenuation (MNA). To answer this need, the ITRC Enhanced Attenuation: Chlorinated Organics (EACO) Team developed this guidance, which includes a protocol to assist in a smooth transition (or a bridge) between aggressive remedial actions and MNA (April 2008, 109 pages). View or download at <http://www.itrcweb.org/Documents/EACO-1.pdf>.

EUGRIS Corner. New Documents on EUGRIS, the platform for European

contaminated soil and water information. More than 36 resources, events projects and news items were added to EUGRIS 1 - 24 March, 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:

EU Shared Environmental Information System (SEIS). The European Commission adopted a Communication on establishing a Shared Environmental Information System for Europe to improve and streamline the European system for collecting, analyzing and reporting environmental information. View more information on this initiative online at <http://ec.europa.eu/environment/seis/index.htm> .

European Commission - DG Joint Research Centre Institute for Environment and Sustainability , 2008: Google Earth Files for the European Soil Database.

The public user can download all the 73 Google Earth files related to the European Soil Database and use them for his own purposes. KML files are very often distributed as KMZ files, which are zipped KML files with a .kmz extension. When a KMZ file is unzipped, a single 'doc.kml' is found along with any overlay and icon images referenced in the KML. The KMZ files are between 5-20 MB (it may take some time to download the file and to open with Google Earth) and cover the European Union (27 Countries) extension. View and use at <http://eussoils.irc.ec.europa.eu/> .

> Conferences and Symposia

Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP): New Practical Training on MARLAP Part I, Boston, MA, April 8-10. MARLAP Part I is intended for planners and managers of radioanalytical projects and laboratory personnel who support them. Part I provides the basic framework of the directed planning process, including project planning, key issues to be considered during the development of analytical protocol specifications, developing measurement quality objectives, understanding the qualitative and quantitative components of method uncertainty, project planning documents and their significance, obtaining laboratory services, selecting and applying analytical methods, evaluating methods and laboratories, verifying and validating radiochemical data, and assessing data quality.

More information and registration is available at <http://www.trainex.org/marlap> .

Deadline is May 1 for Submission of Papers for the International Environmental Nanotechnology Conference: Applications and Implications, Chicago, IL, October 7-9. The conference will bring together researchers and practitioners from around the world to discuss the nanotechnology applications for remediation of environmental contaminants; the implications of releasing manufactured nanoparticles into the environment, and pollution control and nano-enabled sensing. Abstracts are being sought in the areas of Water Remediation, Soil and Sediment Remediation, Water Pollution Control, Air Pollution Control, Nano-enabled Sensing, Environmental Fate & Transport, Biological Exposure, and Toxicity. The U.S. Environmental Protection Agency (EPA) is partnering with a variety of agencies and organizations to host this conference. To view the Call for Papers or submit an abstract, visit

<http://www.emsus.com/nanotechconf/call.htm> .

Brownfields 2008, Detroit, MI, May 5-7. The U.S. EPA and International City/County Management Association (ICMA) co-sponsored National Brownfields Conference 2008 expects nearly 6,000 attendees, over 150 educational sessions, more than 200 exhibitors, and networking events. For more information and to register, see

<http://www.brownfields2008.org> .

2008 EPA Science Forum, Washington, DC, May 20-22. This seventh annual event is designed to showcase EPA's commitment to quality science; highlight high-priority topics and accomplishments; facilitate dialogue among EPA scientists and their collaborators, clients, customers, stakeholders, and colleagues from across government, the private sector, academia, and the scientific community. This year's Forum will emphasize the theme of innovative technologies and their application to a healthy and prosperous environment. To register and learn more about the EPA Science Forum, please visit <http://www.epa.gov/scienceforum> .

Triad Investigations: New Approaches and Innovative Strategies, Amherst, MA, June 10-13. The June 2008 National Conference Triad Investigations: New Approaches and Innovative Strategies will feature three full days of conference presentations, Triad training sessions, specialized workshops, an interactive tool room, field equipment demonstrations, exhibitor hall, poster sessions, and an array of networking opportunities. The Conference will include training sessions, platform sessions, and specialized workshops focused on implementation of new tools, approaches, and strategies for hazardous waste site characterization, site remediation, and site redevelopment. The conference also will feature new tools and techniques for sampling and monitoring related to real-time information, continuous monitoring, and long-term monitoring for site closure and stewardship. Best practices and lessons learned will be emphasized throughout the training sessions, platform sessions, and workshops. For more information and to register, see <http://www.umass.edu/tei/conferences/triad.html> .

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 185 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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