



TechDirect, May 1, 2010

Welcome to TechDirect! Since the April 1 message, TechDirect gained 211 new subscribers for a total of 35,436. 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.

> NICOLE Technology Award

Call for 2010 Entries on Innovative Site Characterization. Over the last 10 years, NICOLE has carried out multiple projects and organized a series of workshops, providing a discussion platform and a sound technical basis for risk based management of contaminated land. Reoccurring themes in the discussions on risk-based land management are sustainability and cost-efficiency. This year, the NICOLE Steering Group decided to launch a yearly technology award. This award intends to stimulate people to bring forward technical innovations that can contribute to an improved practice for contaminated land management in line with the NICOLE ambition. For 2010, entries are invited that focus on "Innovative site characterization tools". The award is open to individuals or groups of people. Entries from junior academics in universities or consultancy are especially welcome. Entries will be judged on innovation, potential contribution to cost savings, technical applicability and plans for communication and market availability. The Year 2010 deadline is October 31st. For more information, please visit <http://nicole.org/news/DisplayNewsItem.asp?NewsID=723&h=t>.

> Upcoming Live Internet Seminars

ITRC LNAPL Training Parts 1, 2, and 3 - May 6, 13, and 20, 2010. Light non-aqueous phase liquids (LNAPLs) are organic liquids such as gasoline, diesel, and other petroleum hydrocarbon products that are immiscible with water and less dense than water. LNAPLs are important because they are present in the subsurface at thousands of remediation sites across the country, and are frequently the focus of assessment and remediation efforts. Part 1 of this training course explains how LNAPLs behave in the

subsurface and examines what controls their behavior. Part 1 also explains what LNAPL data can tell you about the LNAPL and site conditions. Relevant and practical examples are used to illustrate key concepts. Part 2 addresses LNAPL characterization and site conceptual model development as well as LNAPL recovery evaluation and remedial considerations. Specifically, Part 2 discusses key LNAPL and site data, when and why those data may be important, and how to get those data. Part 2 also discusses how to evaluate LNAPL recoverability. Part 3 uses the LNAPL conceptual site model (LCSM) approach to identify the LNAPL concerns or risks and set proper LNAPL remedial objectives and technology-specific remediation goals and performance metrics. Part 3 also provides an overview of the LNAPL remedial technology selection framework. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Energy for the Future: Exploring Methane Gas-to-Energy Projects at Superfund Sites - May 6, 2010, 2:00 PM-4:00 PM, EDT (18:00-20:00 GMT). An increasing number of landfills across the country are being put to use as alternative energy power sources. Currently, EPA tracks over 15 National Priorities List (NPL) Superfund sites supporting methane gas-to-energy projects. Methane energy released from these landfills is captured to produce power for local utilities and nearby facilities. The Superfund Redevelopment Initiative's May webinar will explore reusing Superfund sites for this innovative purpose by inviting stakeholders involved in a variety of methane gas-to-energy projects to share their perspectives. Representatives from Waste Management's renewable energy group will present on their Superfund landfill projects, and EPA staff will discuss the Office of Superfund Remediation and Technology Innovation's (OSRTI) project to implement cost-effective gas-to-energy projects at approximately 8 NPL landfills. Site stakeholders from Superfund projects currently underway will also share key lessons, challenges and impacts from projects at their sites. For more information and to register, see <http://clu-in.org/live>.

ITRC Protocol for Use of Five Passive Samplers - May 18, 2010, 2:00PM-4:15PM EDT (18:00-20:15 GMT). 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/live>.

ECOS and USEPA Using the Toxics Release Inventory (TRI) to Support Environmental Justice - May 25, 2010, 1:00PM-3:00PM EDT (17:00-19:15 GMT). The Environmental Council of the States (ECOS) and United States Environmental Protection Agency (U.S. EPA) invite you to attend the 2010 TRI Webinar: Using TRI to Support Environmental Justice. The purpose of the Webinar is to share experiences and lessons learned using TRI to address environmental justice concerns and expand TRI use among current and potential users who work on environmental justice issues. Speakers will include representatives from U.S. EPA headquarters and regions, non-profit organizations, and academia. All are welcome to participate! For more information and to register, see <http://www.chemicalright2know.org/content/webinar/spring2010>.

> New Documents and Web Resources

Green Remediation Best Management Practices: Bioremediation (EPA

542-F-10-006). The EPA Principles for Greener Cleanups outlines the Agency's policy for evaluating and minimizing the environmental "footprint" of activities undertaken when cleaning up a contaminated site. Use of the best management practices (BMPs) recommended in EPA's series of green remediation fact sheets can help project managers and other stakeholders apply the principles on a routine basis, while maintaining the cleanup objectives, ensuring protectiveness of a remedy, and improving its environmental outcome. Bioremediation actively enhances the effects of naturally occurring biological processes that degrade contaminants in soil, sediment, and groundwater. In situ processes involve placement of amendments directly into contaminated media while ex situ processes transfer the media for treatment at or near ground surface (March 2010, 4 pages). View or download at <http://clu-in.org/techpubs.htm> .

Green Remediation Best Management Practices: Soil Vapor Extraction & Air Sparging (EPA 542-F-10-007). The EPA Principles for Greener Cleanups outlines the Agency's policy for evaluating and minimizing the environmental "footprint" of activities undertaken when cleaning up a contaminated site. Use of the BMPs recommended in EPA's series of green remediation fact sheets can help project managers and other stakeholders apply the principles on a routine basis, while maintaining the cleanup objectives, ensuring protectiveness of a remedy, and improving its environmental outcome. Historically, approximately one-quarter of Superfund source control projects have involved soil vapor extraction (SVE) to remove volatile organic compounds (VOCs) sorbed to soil in the unsaturated (vadose) zone. Air is extracted from, and sometimes injected into, the vadose zone to strip VOCs from the soil and transport the vapors to ex situ treatment systems for VOC destruction or recovery. Air sparging (AS) involves injection of air into contaminated groundwater to drive volatile and semivolatile contaminants into the overlying vadose zone through volatilization. SVE is commonly implemented in conjunction with air sparging to remove the generated vapor-phase contamination from the vadose zone (March 2010, 4 pages). View or download at <http://clu-in.org/techpubs.htm> .

EPA Opens Access to Chemical Information through ToxRefDB. EPA is releasing a database, called ToxRefDB, which allows scientists and the interested public to search and download thousands of toxicity testing results on hundreds of chemicals. ToxRefDB captures 30 years and \$2 billion of testing results. ToxRefDB provides detailed chemical toxicity data in an accessible format. It is a part of ACToR (Aggregated Computational Toxicology Resource), an online data warehouse that collects data from about 500 public sources on tens of thousands of environmentally relevant chemicals, including several hundred in ToxRefDB. Those interested in chemical toxicity can query a specific chemical and find all available public hazard, exposure, and risk-assessment data, as well as previously unpublished studies related to cancer, reproductive, and developmental toxicity. ToxRefDB contains toxicity information that forms the basis for pesticide risk assessments when combined with other sources of information, such as those on exposure and metabolism. View and use at <http://actor.epa.gov/toxrefdb> .

Technology News and Trends (EPA 542-N-10-002). This issue highlights site remediation projects using onsite renewable energy resources to power treatment systems or to offset the air emissions and costs associated with consuming electricity generated by conventional power plants. Highlighted projects include both large- and small-scale systems producing power from wind, landfill gas, and solar resources (April 2010, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

Remediation of Organochlorine Pesticides in Soil. The California Department of Toxic Substances Control has issued the third document in its proven technologies and remedies (PT&R) guidance series. The PT&R approach for organochlorine pesticides streamlines the cleanup process by limiting the number of evaluated technologies to excavation/disposal and containment/capping. The guidance provides resources to

facilitate remedy design and implementation (February 2010, 110 pages). View or download at <http://www.dtsc.ca.gov/SiteCleanup/PTandR.cfm> .

Remediation of Chlorinated VOCs in Vadose Zone Soil. The California Department of Toxic Substances Control has issued the fourth document in its proven technologies and remedies (PT&R) guidance series. The PT&R approach for chlorinated VOCs streamlines the cleanup process by limiting the number of evaluated technologies to excavation/disposal and soil vapor extraction. The guidance provides resources to facilitate the design and implementation of both remedies. The document also outlines considerations for operation and maintenance of soil vapor extraction systems, including zone of capture assessment, operational assessment, and shutdown and cleanup confirmation (April 2010, 154 pages). View or download at <http://www.dtsc.ca.gov/SiteCleanup/PTandR.cfm> .

EUGRIS Corner. EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 22 resources, events, projects and news items were added to EUGRIS in April 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

Contaminated Land Management Discussion List (2010). The list provide an open forum for posing and answering questions by members of the academic and practitioner community involved in the implementation of Part IIA of the Environmental Protection Act 1990 - the 'Contaminated Land Regime'. View or access at <https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=CONTAMINATED-LAND-STRATEGIES> .

Profile on Gasholders and their Tanks (2010). This profile aims to give a simple insight into the construction and operation of gasholders and their tanks, for those who investigate former gasworks sites. This profile is limited to a brief description of the various types of gasholders, their operation and importantly their tanks. View or download at <http://eugris.info/DisplayNewsItem2.asp?NewsID=685> .

> 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> .

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) and Connecticut Licensed Environmental Professionals (LEPs). 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 58 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.

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