

## Message #104: October 2005

Welcome to TechDirect! Since the September 1 message, TechDirect gained 278 new subscribers for a total of 23,151. 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.

The purpose of TechDirect 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 Announcements***

**Superfund En Espanol.** A mediados de septiembre, la Agencia de Proteccion Ambiental de los Estados Unidos lanzo una nueva pagina Web en espanol, Superfund en Espanol, que le ofrece a la comunidad hispana una amplia variedad de informacion relacionada al Programa de Superfund. La nueva pagina Web describe diferentes tecnologias usadas frecuentemente en los sitios de Superfund, tales como sistemas de bombeo y tratamiento, extraccion de vapores del suelo, cobertura de vertederos, y otros. La pagina contiene documentos en espanol que describen el proceso de restauracion y los metodos de la limpieza, un glosario bilingue de terminos comunes usados en el programa de Superfund de la EPA, y en la pagina de Preguntas Frecuentes presenta mas de cien preguntas y respuestas con amplia informacion relacionada a las distintas areas del programa. Ademias contiene documentos en espanol relacionados al programa de Relaciones y Ayuda a la Comunidad, incluyendo el Programa de Donaciones de Asistencia Tecnica. A traves de esta pagina Web, la EPA espera proveer a la comunidad hispana la informacion y herramientas necesarias que les permitiran participar significativamente en el proceso de limpieza del programa de Superfund. Para mas informacion visite Superfund en Espanol en el siguiente enlace: <http://www.epa.gov/superfund/spanish/index.htm> .

### ***Internet Seminars***

**Seminar News** - Many of you know that we routinely place seminars in the CLU-IN Studio archive after they have aired. This provides access to the slides and the audio file for each presentation. Some of you requested that we make these audio files more portable. Now we have done that. For more recent seminars, you now have the option to download them in MP3 format which will allow you to listen via portable music players. You may also subscribe to our podcast feed, which will alert you when new seminar archives are available. For more information, see <http://clu-in.org/live/archive.cfm> .

**Webcast: 25 Years of Contaminated Land Management - Achievements and Work Still to Be Done. Live from ConSoil in Bordeaux, France, October 4, 2005.** This webcast includes two panels with four speakers each. Panel 1 is titled Shifts in Contaminated Site Management in the EU and US and offers insight to changes in the US and Europe to contaminated site management over the past 25 years, and insight into future directions. Panel 2 is titled, From Site Screening to Redevelopment, Progress in Every Step. Presentations in this panel review major breakthroughs and their value going forward. Registration is required for each panel at <http://www.cluin.org/studio/consoil> .

**ITRC Permeable Reactive Barriers: Lessons Learned and New Directions - October 6.** This training presents updated information regarding new developments, innovative approaches, and lessons learned in the application of PRBs to treat a variety of groundwater contaminants. The information will be presented by reviewing the approaches and results at several sites where PRBs have been deployed. The training is based on the ITRC guidance document titled Permeable Reactive Barriers: Lessons Learned / New Directions (PRB-4, 2005). For more information and to register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

**ITRC Guidance for Characterization, Design Construction and Monitoring of Mitigation Wetlands - October 11.** This seminar is the second in a series of wetland trainings beginning with the ITRC Technical and Regulatory Guidance Document for Constructed Treatment Wetlands (December 2003, WTLND-1). To improve the success of wetland mitigation projects, this training presents comprehensive guidance for regulators, environmental professionals, or owners to use to understand, characterize, design, construct, and monitor mitigation wetlands. To register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

**ITRC Strategies for Monitoring the Performance of DNAPL Source Zone Remedies - October 20.** This training discusses

issues surrounding the assessment of remediation performance at DNAPL sites where the source zone is being targeted for treatment. It is based on the ITRC document titled, Strategies for Monitoring the Performance of DNAPL Source Zone Remedies. Specific issues dealing with monitoring the performance of various DNAPL source zone remediation technologies are discussed. Elements of a robust performance monitoring program are described including the need to establish appropriate performance goals and metrics well in advance. To register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**Enhanced Remediation of DNAPL-Contaminated Subsurface Systems - October 26.** This the third in a series of events sponsored by the NIEHS Superfund Basic Research Program on dense nonaqueous phase liquids (DNAPLs). Dr. Casey Miller, of the University of North Carolina-Chapel Hill, will present the work of his research group. Remediation of subsurface systems contaminated with DNAPLs remains as one of the most difficult open issues facing Superfund. Dr. Miller will examine the physicochemical reasons why this is so and summarize the challenges facing conventional remediation approaches. He will discuss an evolving class of remediation methods based upon the use of dense brine solutions to control the movement of DNAPLs. Results from one-, two-, and three-dimensional laboratory studies in heterogeneous porous medium systems will be presented. Dr. Miller will describe results from a three-stage remediation approach that illustrate a high fraction of DNAPL removal from complex, heterogeneous, three-dimensional systems. Finally, he discuss some open issues and field-scale experimentation that are in progress. To register, see <http://clu-in.org/studio> .

## ***Documents and Web Resources***

**Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Fourth Edition (EPA 542-B-05-001)** This includes new and updated resources to assist in identification and selection of innovative site characterization and cleanup technologies for brownfields redevelopment. The Road Map provides a general outline of the steps in the investigation and cleanup of a site slated for redevelopment and introduces brownfields stakeholders to the range of innovative technology options and resources available to them. The Road Map provides valuable information for a wide range of stakeholders involved in or affected by redevelopment of brownfields sites, whether through public projects, private developments, or public-private partnerships. The Fourth Edition has been expanded significantly to include new

and updated resources and supplemental information with 71 new resources and one-page descriptions of technologies, processes, and initiatives that affect the consideration and use of innovative technologies (September 2005, 170 pages). View or download at <http://clu-in.org/techpubs.htm> . For hard copies, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

**Field Tests of Nylon-Screen Diffusion Samplers and Pushpoint Samplers for Detection of Metals in Sediment Pore Water, Ashland and Clinton, Massachusetts, 2003 (USGS SIR 2005-5155).** In cooperation with the EPA's 21M2 Initiative, the USGS has completed a study on the use of nylon-screen diffusion and pushpoint samplers for obtaining samples for metals analysis in sediment pore water. The study concluded that both samplers were effective in collecting pore water samples and yielded similar results. The study also indicated wide variability in metals concentrations over short distances within the sediments (September 2005, 56 pages). View or download at <http://clu-in.org/21m2> .

**Evaluation of Fugitive Emissions at a Former Landfill Site in Colorado Springs, Colorado Using Ground-Based Optical Remote Sensing Technology (EPA 600-R-05-041).** With support from the 21M2 Initiative, the EPA Office of Research and Development used scanning open path Fourier transform infrared, tunable diode laser absorption, and ultra-violet differential optical absorption spectroscopy to determine if hazardous gases were passing through the cover of a closed landfill. The investigation, which was a first step in evaluating redevelopment options, found two methane hotspots that were major contributors to a 4.9 g/s methane flux emanating from the site (April 2005, 49 pages). View or download at <http://clu-in.org/21m2> .

**Evaluation of a Former Landfill Site in Fort Collins, Colorado Using Ground-Based Optical Remote Sensing Technology (EPA 600-R-05-042).** With support from the 21M2 Initiative, the Office of Research and Development used scanning open path Fourier transform infrared, tunable diode laser absorption, and ultra-violet differential optical absorption spectroscopy to determine if hazardous gases were passing through the cover of a closed landfill. The investigation, which was a first step in evaluating redevelopment options, did not find significant gas movement through the cover, but did detect a gasoline hotspot by a nearby building (April 2005, 54 pages). View or download at <http://clu-in.org/21m2> .

**Sensor Technologies Used During Site Remediation Activities - Selected Experiences (EPA 542-R-05-007).** EPA prepared this report to provide an overview of several types of sensor technologies

and a summary of selected experiences with using the technologies during site remediation activities. The report highlights the applications, implementation, strengths and limitations, and lessons learned from actual projects that have used one or more sensor technologies as part of an overall site remediation strategy. Appendices one through seven provide case studies for specific sites that have used sensor technologies during site remediation activities (September 2005, 110 pages). View or download at

<http://clu-in.org/techpubs.htm> .

**Technology News and Trends - current issue (EPA 542-N-05-005)**. This periodic EPA newsletter features a combination of articles on innovative, in-situ technologies for the characterization and treatment of soil, sediment, and ground water. This issue focuses on emerging nanotechnologies applicable to hazardous waste characterization and remediation (September 2005, 6 pages). View or download at <http://clu-in.org/techpubs.htm> . For hard copies, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

## ***Conferences and Symposia***

### **Call for Abstracts! Design and Construction Issues at Hazardous Waste Sites Conference, Philadelphia, April 19-20.**

This EPA conference will provide a forum for discussion between the private sector and the federal and state government regarding design and construction issues at hazardous waste sites including effective methods, lessons learned, and application of technologies. EPA anticipates up to eight panel sessions across the topical areas of groundwater, post-construction, and project management. The deadline for submitting abstracts in November 10, 2005. For more information, see <http://www.rdra.org> .

### **MTBE & Other Fuel Oxygenates: Field Methods for Comprehensive Site Assessment , Long Island, October 13-14.**

This course, cosponsored by EPA, is a one and one half day program designed to enhance professional awareness of advances in cutting edge field methods available to assess environmental impacts resulting from petroleum-based MTBE and other fuel oxygenate releases. For more information, see <http://www.liqri.org> .

**US EPA Workshop on Nanotechnology for Site Remediation, Washington DC, October 20-21** . The purpose of the workshop is to present the latest results from federally sponsored research grants and current practices to raise the level of understanding and explore the use of nanotechnology for hazardous waste site remediation. Plenary talks will be followed by break-out sessions. It will serve as a

stimulus for increased collaborations among the various researchers and government scientists, and as a forum for discussing research needs, barriers and incentives for using new nanotechnologies to reduce environmental pollutants. The workshop is supported by the Federal Remediation Technologies Roundtable (FRTR), the U.S. Environmental Protection Agency, and the U.S. Department of Commerce. Representatives from DoD, DOE, NSF, NIEHS, NASA, and the National Council for Science and the Environment are also helping to organize the workshop. For more information and to register, please visit <http://www.scqcorp.com/nanositeremed/index.asp>

**Brownfields 2005: Reaching New Heights in Redevelopment, November 2-4, Denver.** This event is sponsored by the U.S. EPA, the City of Denver and numerous cosponsors. This is the conference for everyone interested in brownfields [real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of contamination]. The program will include many different panel sessions, mobile workshops, Marketplace of Ideas roundtable discussions and individual poster presentations, the prestigious Phoenix Awards, and an extensive Exhibit Hall. A 1.5 day delivery of the Triad training course is scheduled immediately preceding the conference (October 31-Nov 1). For more information and to register, see <http://www.brownfields2005.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 109 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](mailto: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.