

## TechDirect, January 1, 2008

Happy Holidays and may you have a prosperous new year! Welcome to TechDirect. Since the December 1 message, TechDirect gained 167 new subscribers for a total of 29,714. 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 Perchlorate: Overview of Issues, Status, and Remedial Options - January 15.**

Improved analytical methodology has increased the known extent of perchlorate contamination in the U.S. A variety of remediation technologies are currently commercially available and being used for perchlorate remediation. This training, based on ITRC's Perchlorate: Overview of Issues, Status, and Remedial Options (PERC-1), explains why perchlorate is a hot topic in the environmental community including up-to-date information on sources, occurrences, toxicity and exposure, regulatory status and remediation alternatives. For more information and to register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio>.

**ESTCP Solicitation - January 17.** This seminar will provide a summary of the Environmental Security Technology Certification Program (ESTCP) funding opportunities for interested investigators to conduct innovative technology demonstrations/validations. This "how to play" briefing will offer essential information for those who wish to understand new funding opportunities within ESTCP. The FY09 ESTCP solicitation will be released in early January and attendees may use this time to ask general questions about the solicitation. For more information and to register, see <http://clu-in.org/studio>.

**Community Action for a Renewed Environment (CARE) National Webcast for the 2008 Request for Proposal - January 18, February 11 and 27.** This webcast is an opportunity for potential applicants to the CARE cooperative agreement program to learn more about and ask questions about the Request for Initial Proposals that was issued in December 2007. Visit [www.epa.gov/CARE](http://www.epa.gov/CARE) for more information on the CARE program. To register, see <http://clu-in.org/studio>.

#### **Characterizing Mass Transfer and Mass Flux for DNAPL Source Zones - January 22.**

To accurately assess the human health risks associated with DNAPLs in the subsurface, and to design effective remediation systems for such contamination, it is essential to understand contaminant mass-transfer and mass flux behavior associated with DNAPL source zones. The contaminant mass flux or mass discharge emanating

from a source zone, also referred to as the source strength or source function, is a primary determinant of the risk associated with a contaminated site. Concomitantly, the reduction in mass flux achieved with a specific level of source-zone mass removal (or mass depletion) is a key metric for evaluating the effectiveness of a source-zone remediation effort. Thus, there is great interest in characterizing, estimating, and predicting relationships between mass flux reduction and mass removal. The nature of the relationship between mass flux reduction and mass removal will be mediated by the properties and distribution of the porous medium and of the DNAPL (source-zone architecture), and their resultant impacts on the pore-water velocity field and mass-transfer dynamics. In addition, the relationship between mass flux reduction and mass removal may change with time due to temporal changes in source-zone architecture and mass-transfer dynamics (i.e., source-zone aging). Furthermore, the mass-flux-reduction/mass removal relationship may be affected by source-zone remediation efforts. These issues will be illustrated using the results of studies spanning a range of spatial and temporal scales. For more information and to register, see <http://clu-in.org/studio>.

#### **ITRC Remediation Process Optimization Advanced Training - January 24.**

Remediation Process Optimization (RPO) is the systematic evaluation and enhancement of site remediation to ensure that human health and the environment are being protected over the long term at minimum risk and cost. The purpose of this ITRC training is to present an overview of the material covered in five technical fact sheets that ITRC's RPO Team produced to enhance site remediation optimization and decision-making. The training modules provide additional information and techniques to improve project schedules, effectively manage resources, emphasize risk, and discuss tools to efficiently cleanup contaminated sites. 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 - January 29.** 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>.

### **> New Documents and Web Resources**

**CLU-IN Site Tour.** CLU-IN houses the latest detailed information on innovative site characterization, monitoring, and remediation approaches. In fact, CLU-IN has so many resources and services available that it can be hard for new visitors to quickly see all that it has to offer. The CLU-IN Site Tour briefly describes some of the CLU-IN resources that can make your job easier. Take the tour at <http://clu-in.org/tour/>.

**The Use of Soil Amendments for Remediation, Revitalization, and Reuse (EPA 542-R-07-013).** In August 2006, the U.S. EPA Office of Superfund Remediation and Technology Innovation brought together 18 federal and local government, academic, and private sector experts to answer questions about using soil amendments in remediating, revitalizing, and reusing contaminated lands. A new tool to encourage and assist site cleanup managers to use soil amendments for remediation, revitalization,

and reuse of their sites resulted from this collaboration. The Use of Soil Amendments for Remediation, Revitalization, and Reuse is a white paper that describes soil amendments, the advantages of using them, the types of environmental problems and contaminants they can address, the types of sites where they can be used, and regulatory and other issues related to using them. It focuses on the use of amendments on sites dominated by inorganic contaminants, although they also can be used to address volatile and semivolatile contaminants that have left sites barren of vegetation (December 2007, 59 pages). View or download at <http://clu-in.org/techpubs.htm> .

**REMChlor Model Now Available.** The EPA Center for Subsurface Modeling Support (CSMoS) provides public domain ground-water and vadose zone modeling software and services to public agencies and private companies throughout the nation. The primary aims of CSMoS are to provide direct technical support to EPA and State decision makers in subsurface model applications and to manage and support the ground-water models and databases resulting from the research at National Risk Management Research Laboratory (NRMRL). This research encompasses the transport and fate of contaminants in the subsurface, the development of methodologies for protection and restoration of ground-water quality, and the evaluation of subsurface remedial technologies. As a result, a major focus of CSMoS entails coordinating the use of models for risk assessment, site characterization, remedial activities, wellhead protection, and Geographic Information Systems (GIS) application. The Remediation Evaluation Model for Chlorinated Solvents (REMChlor) Version 1.0 is now available for download. See <http://www.epa.gov/ada/csamos.html> .

**Technical Support Project Highlights.** EPA's Technical Support Project met in November at the National Exposure Research Laboratory (NERL) to discuss a range of technical topics, including fractured rock, mass flux, technical impracticability waivers, and remediation case studies. NERL also presented updates on their research into geophysical methods to monitor remediation, a new analytical method for VOCs in difficult matrices, and remote sensors. The Highlights newsletter summarizes these discussions and provides links to the technical presentations for further information (December 2007, 7 pages). View or download at [http://www.epa.gov/tio/tsp/download/2007\\_fall\\_meeting/fall\\_2007\\_highlights.pdf](http://www.epa.gov/tio/tsp/download/2007_fall_meeting/fall_2007_highlights.pdf) .

**Technology News and Trends (EPA 542-N-06-012).** This issue contains articles on a mulch dual-wall PRB that promotes anaerobic degradation of chlorinated ethenes, subsurface injections of emulsified soybean oil to accelerate PCE biodegradation, and a Strategic Environmental Research and Development Program (SERDP) study that identifies subsurface sampling methods for enhanced decision-making (November 2007, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

**Underground Storage Tank State Delivery Prohibition Programs.** EPA designed a page to help petroleum and hazardous substance delivery companies determine whether an underground storage tank (UST) is eligible for product delivery. This page provides links to state and territory laws, regulations, and policies in order to help users determine the applicable requirements in each state and territory. EPA updates this information as states implement new delivery prohibition programs. View at <http://www.epa.gov/oust/dp/> .

**Regulatory/Compliance Issues at Perchloroethylene Drycleaners.** This presentation discusses the drycleaning process, waste streams, historical operation and waste management practices and targeted site assessment areas. View at <http://drycleancoalition.org/regtour/> .

**EUGRIS Corner.** New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 25 resources, events, projects and news items were added to EUGRIS in December, 2007. These can be viewed at

<http://www.eugris.info/whatsnew.asp>. Select the appropriate month and year for the updates in which you are interested. The following reports were featured on EUGRIS:

**Environmental Technologies Verification Systems (EUR 22933 EN).** This report stems from a request from the Environment Directorate General of the European Commission to carry out a research study providing the necessary background for the eventual creation of a European Environmental Technology Verification (ETV) system. The report is based on the results of two consecutive research projects carried out by JITEX on behalf of the Joint Research Centre's Institute for Prospective Technological Studies. The first project focused on the identification and study of existing ETV systems inside and outside Europe. The second project conducted a market survey on users of ETV systems and examined financial and organizational aspects of ETV (2007, 112 pages). View or download at <http://ftp.irc.es/eur22933en.pdf>.

## > Conferences and Symposia

**EPA Workshop for Federal USTs, Washington, DC, January 9-10.** The U.S. Environmental Protection Agency is hosting a free, day and a half workshop for the federal facility community. The Energy Policy Act of 2005 included substantial revisions to the Underground Storage Tank (UST) requirements found in Subtitle I of RCRA. One of the major changes to the UST program resulting from the Energy Policy Act involved periodic regulatory inspections, which are now to be conducted on a three year cycle. Recent inspections of federal facilities by EPA have found compliance problems not only with USTs, but also with above ground storage tanks (ASTs). Therefore, EPA's Federal Facilities Program is hosting this workshop as a refresher on federal tank requirements. For more information and to register, see <http://www.fedcenter.gov/training/ust/>.

**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 128 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.

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