

## Message #96: February 2005

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Welcome to TechDirect! Since the December 1 message, TechDirect gained 333 new subscribers for a total of 21,055. 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 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.

**EPA SITE Program extends solicitation for sites to host technology evaluations.** EPA Superfund Innovate Technology Evaluation (SITE) Program seeks cooperative projects with hazardous waste sites that are in need of full-scale demonstrations of innovative treatment technologies. SITE offers a mechanism for independent third party evaluation of innovative technology performance and cost. The site program is financially responsible for preliminary treatability studies, test plan preparation, sampling, sample and data analysis and report writing of the demonstration results. This solicitation is directed toward owners/managers of private sites or state and federal government agencies that have the financial or regulatory responsibility for on site hazardous waste remediation. Copies of the solicitation and application may be downloaded at <http://www.epa.gov/ORD/SITE> . The deadline for responses to this solicitation has been extended to March 30, 2005. For more information contact Randy A. Parker [parker.randy@epa.gov](mailto:parker.randy@epa.gov) (513) 569-7271.

### ***Upcoming Internet Seminars***

**ITRC Guidance for Characterization, Design Construction and Monitoring of Mitigation Wetlands - February 3.** 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). There is no single comprehensive guidance for regulators, environmental professionals, or owners to use to appropriately characterize, design, construct, and monitor mitigation wetlands. To register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

**EPA Region 9 Office of Research and Development Product Expo - February 8.** The U.S. EPA ORD Product Expo Series is an effort to showcase specific "ready to use" and "nearly ready to use" science products, and how EPA Regions and States might use them to address environmental issues. Region IX will host the second Regional Product Expo at their San Francisco office both in person and through the [clu-in.org](http://clu-in.org) website. This Product Expo features the following three recent ORD products: Small drinking water treatment technologies; Using Quantitative Polymerase Chain Reaction (QPCR) as a rapid beach closings tool; and, Rapid, simple, and inexpensive mercury measurements for solids. If you are unable to make it to San Francisco, consider participating via live webcast. You must register in advance to participate via the internet. To register, see <http://www.clu-in.org/studio/r9productexpo/> .

**ITRC The Triad Approach: A New Paradigm for Environmental Project Management - February 10.** This seminar introduces the Triad concept and highlights how this process can increase the effectiveness and quality of environmental investigations. Key terms are defined and the advantages and disadvantages are discussed. The Triad approach relies on technological, scientific, and process advances that offer the potential for improvements in both quality and cost savings. This training explains the relationship of the Triad to previous regulatory guidance, and offers a discussion of issues that may affect stakeholders. An example is given of a state's efforts to formally adopt the Triad approach into their existing regulatory program. The ITRC guidance document, "Technical and Regulatory Guidance for the Triad Approach: A New Paradigm for Environmental Project Management," (SCM-1, 2003) developed by the ITRC Sampling, Monitoring and Characterization Team serves as the basis for this training course. To register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

**Design, Installation and Monitoring of Alternative Final Landfill Covers - February 15.** This training focuses on evapotranspiration (ET) covers and the decisions associated with their successful design, construction, and long-term care. For more information and to register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

**Environmental Management Planning on Active Small Arms**

**Firing Ranges - February 17.** The training uses a logic diagram to describe the appropriate steps an environmental professional or range manager should use to establish an operational understanding of a range and the impact it can have on the environment if left unattended. It assists the user to define the environmental characteristics at a range that, left unattended, could potentially impact the environment. It lists the appropriate questions range operators should ask when evaluating the potential for environmental impact. As any potential for impact becomes apparent, the training briefly describes a variety of new and conventional technologies and techniques (i.e., 'best management practices') available to prevent environmental impact on the range. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio>

## ***New Documents and Databases***

### **Evaluation of Phytoremediation for Management of Chlorinated Solvents in Soil and Groundwater (EPA 542-R-05-001).**

This document was produced by Remedial Technologies Development Forum (RTDF) Phytoremediation of Organics Team. The RTDF is a forum for government, industry, and academia to collaborate on the development of cost-effective hazardous waste characterization and treatment technologies. The document is intended to aid regulators, site owners, consultants, neighbors, and other stakeholders in understanding the proper application of planted systems to remediate groundwater contaminated with halogenated solvents.

View or download at <http://www.cluin.org/techpubs.htm> or <http://www.rtdf.org> .

**Remediation Technology Demonstration Project Profiles.** This profile database provides information about remediation technology demonstration projects. New technologies or new applications of existing technologies that are under development are often tested at demonstration or field-scale, prior to use in full-scale cleanups. EPA has developed this tool to summarize timely information about selected field-scale demonstration projects. Projects address soil and groundwater cleanup technologies, completed and on going, which have been performed in the U.S. or Canada. Currently the database includes technical information on 100 projects completed or ongoing in 2003 and 2004. Additional projects will be added to the database during FY 2005. See <http://www.clu-in.org/products/demos/>

**Consolidated CLU-IN Project Profile Search.** To encourage and facilitate a sharing of experiences and knowledge across programs, CLU-IN offers information on thousands of projects where innovative approaches have been used to deal with contamination problems.

CLU-IN now allows you to simultaneously search for and view project profiles from several collections containing over 1,200 of these profiles. The topics addressed by these profiles include the remediation of fractured bedrock sites, treatment of MtBE, and innovative field-scale demonstrations. Additional project profile collections and search criteria will be added in the future. See

<http://clu-in.org/databases/search> .

**ITRC Technical and Regulatory Guidance for In Situ Chemical Oxidation of Contaminated Soil and Groundwater (Second Edition, ISCO-2).** This document was developed by the Interstate Technology and Regulatory Council (ITRC) to outline the technical and regulatory requirements of in situ chemical oxidation (ISCO), a group of technologies involving various combinations of oxidants and delivery techniques. The primary oxidants addressed in this document are hydrogen peroxide, potassium and sodium permanganate, sodium persulfate, and ozone. It is divided into sections consisting of technology overview and applicability, remedial investigations, safety concerns, regulatory concerns, injection design, monitoring, stakeholder concerns, and case studies. From a regulatory perspective, the most important sections of the document are identification of injection restrictions, implementation, and post-closure monitoring (January 2005, 171 pages). View or download at <http://www.itrcweb.org/ISCO-2.pdf> .

**Representative Sampling for Energetic Compounds at an Antitank Firing Range (ERDC/CRREL TR-04-07).** This report was published by the U.S. Army Corps of Engineers. Field sampling experiments were conducted at an antitank rocket range to investigate various sampling schemes that would yield representative soil samples at firing points and impact areas of antitank ranges. Recommendations are made for appropriate sampling strategies to collect representative surface soil samples for antitank rocket ranges (April 2004, 66 pages). View or download at [http://www.crrel.usace.army.mil/techpub/CRREL\\_Reports/reports/TR04-7.pdf](http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR04-7.pdf) .

**API Interactive LNAPL Guide.** This tool, developed by the American Petroleum Institute, is a comprehensive and easy-to-use electronic information system and screening utility. The Guide is designed to provide an overall approach for evaluating light non-aqueous phase liquid (e.g., petroleum hydrocarbon) at a site, assessing its potential risk, quantitatively defining mobility and recoverability, developing remedial strategies, and examining methods to enhance site closure opportunities. The Guide includes: primers covering all aspects of LNAPL, assessment tools, including API-LNAST Version 2.0, the "Charbeneau" spreadsheets for LNAPL

recovery (August 2003), the API LNAPL Parameter Database, LNAPL decision-making frameworks, videos, animated figures and an extensive reference list (Version 2.0, August 2004). Download at <http://groundwater.api.org/lnaplguide> or request a CD from [kiharam@api.org](mailto:kiharam@api.org) .

## ***Conferences and Symposia***

**Reminder!! Long-Term (Groundwater) Monitoring Optimization Seminar, Sacramento, March 30-31.** This important new seminar will provide state and federal regulators with information about new quantitative methods of LTMO for groundwater. The U.S. Air Force and other responsible parties have used LTMO techniques at an estimated 50 sites nationwide and are likely to use them at more sites in the future. As a result, it is important for regulators to be familiar with LTMO techniques such that appropriate decisions can be made regarding the optimal location and frequency of groundwater monitoring and approval of changes to groundwater monitoring networks. The seminar will include training on some recently developed LTMO methods, such as the Monitoring and Remediation Optimization System (MAROS), the Geostatistical Temporal-Spatial algorithm or GTS, and the three-tiered monitoring network optimization (MNO) approach. While the seminar is designed primarily for state and federal regulators, federal facilities cleanup managers, potentially responsible parties (PRPs), and contractors are welcome to participate. Capacity for the hands-on training on Day 2 of the seminar is limited. Participation will be accepted on a first-come, first-served basis and preference will be given to state and federal regulators. SO REGISTER EARLY. For more information and to register, visit <http://www.trainex.org> .

**Reminder!! International Phytotechnologies Conference, Atlanta, April 20-22.** Phytotechnologies, using plants for remediation, have been successfully applied in many places. This conference answers the persistent questions of what contaminants can plants clean, how long will it take, and how much money can be saved over conventional technologies. Organized by EPA's ORD and OSRTI, the conference is expected to have over 100 presentations from North and South America, Europe, Australia, and Asia. Topics include: Case Studies of Successful Applications, Measurement Technologies; Decreasing Costs for Existing Sites; Phytotechnologies for Developing Economies; Eco-restoration & Remediation; and Eco-risk. For registration information please see <http://www.cluin.org/phytoconf> .

**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 195 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.