

## Message #109: March 2006

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Welcome to TechDirect! Since the February 1 message, TechDirect gained 318 new subscribers for a total of 24,452. This March issue of TechDirect kicks off our tenth year keeping you informed of new developments related to contaminated site clean-up. The growth in subscribers suggests that we are on target. 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.

### ***Internet Seminars***

**ITRC Site Investigation and Remediation for Munitions Response Projects - March 14.** This training provides an introduction and overview of the processes, tools, and techniques used in investigation and remediation. These concepts are illustrated using an example munitions response site. Major steps in each process are identified and key regulatory considerations discussed. This training also identifies additional sources for more detailed information on key aspects of investigation and remediation. State regulators and others who need to understand the general processes involved in these critical aspects of the munitions response process will benefit from this training. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

**ITRC Design, Installation and Monitoring of Alternative Final Landfill Covers - March 16.** 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> .

**Revegetation and Restoration of an Oil Contaminated Wetland in Northern New Jersey - March 30.** This presentation will attempt to show that a carefully supervised cleanup followed by a scientifically driven monitoring program can be effective in removing oil from a sensitive wetland habitat using the Green Pond Oil Spill Removal project as the prime example. A monitoring program for determining the success of the revegetation/restoration effort was conducted. Species composition and productivity measurements were an integral part of the parameters to measure the progress of the effort to determine comparability between the remediated site and undisturbed wetlands. The presentation will incorporate all that has been learned from the removal activity in terms of How Clean is Clean as applied to an oil contaminated fresh water wetland. This information should be useful for decision makers, responders, and consultants alike when faced with remediating disturbed or contaminated habitats. For more information and to register, see

<http://clu-in.org/studio> .

**ITRC Constructed Treatment Wetlands - April 4.** This course, developed by the Interstate Technology and Regulatory Council (ITRC), is based on Technical and Regulatory Guidance for Treating Storm Water and Wastewater Using Constructed Treatment Wetlands (WTLND-1). It describes the physical, chemical, and biological mechanisms operating in wetlands treatment systems, the contaminants to which they apply, the characteristics of sites suitable to treatment in this fashion, and relevant regulatory issues. For more information and to register, see <http://www.itrcweb.org> or

<http://clu-in.org/studio> .

**ITRC Perchlorate: Overview of Issues, Status, and Remedial Options - April 6.** 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> .

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

**Pilot Project to Optimize Ground Water Remediation Systems at RCRA Corrective Action Facilities: Summary Report and**

**Lessons Learned (EPA 542-R-06-001)** The U.S. EPA Office of Solid Waste (OSW) and the U.S. EPA Office of Superfund Remediation and Technology Innovation (OSRTI) sponsored independent optimization evaluations in 2003 and 2004 at five facilities with pump and treat (P&T) systems regulated under the Resource Conservation and Recovery Act (RCRA). The Remediation System Evaluation (RSE) process developed by the U.S. Army Corps of Engineers was used. Based on the positive results of these RSEs and the consideration that many sites would receive a similar benefit from a streamlined RSE with a lower cost, OSRTI and OSW commissioned a new pilot study to develop and pilot a streamlined RSE process (RSE-lite) that reduces the evaluation cost relative to a full-scale RSE. Four sites were selected by the EPA OSRTI and OSW to receive RSE-lites based on nominations provided by EPA project managers. Upon completion of the draft RSE-lite reports, one of the four sites was selected to receive a site visit and additional analysis to convert the RSE-lite into a full-scale RSE (December 2005, 26 pages). View or download from <http://clu-in.org/techpubs.htm> .

**Characterization, Design, Construction, and Monitoring of Bioreactor Landfills (ALT-3)**. This report was published by the Interstate Technology and Regulatory Council (ITRC). It is intended primarily for decision makers associated with the plan development, review, and implementation of bioreactor landfills. The decision makers include, at a minimum, regulators, owners/operators, and consultants. This document focuses on the decisions and facilitating the decision processes related to design, evaluation, construction, and monitoring associated with bioreactor landfills (February 2006, 111 pages). View or download at <http://www.itrcweb.org/Documents/ALT-3.pdf> .

**Report on Results of the 2004-2005 Double-Blind Laboratory Evaluation Program**. During 2004 and 2005, the Massachusetts Department of Environmental Protection (MassDEP) conducted a large double-blind laboratory evaluation study, involving 19 commercial laboratories that provide the majority of analytical support services to parties assessing and cleaning up hazardous waste sites in Massachusetts. A double-blind study is one in which a laboratory is unaware that they have been sent samples that contain known concentrations of contaminants. The study was undertaken by MassDEP as part of a multi-year/multi-component data enhancement effort, in order to obtain a direct, real world sense of data quality and reliability in its waste site cleanup program (December 2005, 30 pages). View or download at

<http://www.mass.gov/dep/cleanup/dbl-blind.pdf> .

**New Phytotechnologies Profiles.** EPA has developed this website to summarize timely information about full-, field- and large greenhouse-scale applications of phytotechnology. Projects for this website are collected using information from technical journals, conference proceedings as well as information obtained from technology vendors and site managers. The project profiles contain information about relevant site background, the types of contaminants treated, type of vegetation used, phytotechnology mechanisms, planting date, project size, location, cost, monitoring and performance results, as well as points of contact and references. This website can be used as a networking tool (each profile has a contact) to provide past solutions and lessons learned to new sites with similar contaminants and climate. See

<http://www.cluin.org/products/phyto/> .

**Technology News and Trends - February 2006 (EPA 542-N-06-001).** Technology News and Trends is a periodic newsletter focusing on advancements in remediation and characterization technologies. This issue features articles on a pilot-scale bioreactive permeable reactive barrier wall that removed metals from a groundwater plume within a year; a project where zero valent iron (ZVI) clay soil mixing treated DNAPL at 35 foot depth; electrical resistive heating removed 48 tons of PCA DNAPL in six months; and thermochemical processes converted contaminated sediment into clean construction material (February 2006, 6 pages). View or download at <http://clu-in.org/techpubs.htm> .

**Identity and Distribution of Residues of Energetic Compounds at Military Live-Fire Training Ranges (ERDC TR-05-10).** This report was published by the U.S Army Corps of Engineers Engineer Research and Development Center. A series of field sampling experiments was conducted at 27 military firing ranges in the United States and Canada to provide information on the identity and distribution of energetic munitions constituents. Different types of ranges were studied, including hand grenade, antitank rocket, artillery, bombing, and demolition ranges. Both firing points and impact areas were studied. Energetic compounds (explosives and propellants) were determined and linked to the type of munition used and the major mechanisms of deposition (November 2005, 69 pages). View or download at <http://www.crrel.usace.army.mil/library/pub06fyo.htm> .

## ***Conferences and Symposia***

**2006 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. For agenda and registration information, please visit <http://www.rdra.org/construction> .

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