

## Message #89: July 2004

Welcome to TechDirect. Since the June 1 message, TechDirect gained 300 new subscribers for a total of 19,504. 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.

### ***Did you know??***

CLU-IN contains summaries of procurement and contract award notices issued by the federal government that pertain to hazardous waste, solid waste, underground storage tank remediation, and other environmental topics. These Federal Business Opportunities (FedzBizOpps) notices are updated on a weekly basis - see <http://clu-in.org/cbdcmt.cfm>.

The CLU-IN Studio has more than fifty Internet Seminars archived. These come complete with slides and audio from previous live broadcasts. They can be accessed anytime day or night. See <http://clu-in.org/studio> .

### ***Funding Opportunity***

**Benchmarking the Integration of Sustainability into Engineering Curricula at U.S. Institutions of Higher Education.** The EPA Office of Research and Development (ORD) announced a competition for benchmarking the integration of sustainability concepts into engineering curriculum at institutions of higher education in the United States. Providing fundamental engineering education with an awareness of the relationship of engineering to the cornerstones of sustainability, economy, society, and the environment, will build capacity for a future workforce that is prepared to address the technical challenges to simultaneously

promote prosperity, benefit people, and protect the planet. Institutions of higher education and not-for-profit institutions located in the U.S., and Tribal, state and local governments, are eligible to apply. Deadline is August 3, 2004. For more information, see

<http://es.epa.gov/ncer/rfa/#2004epa> .

## ***Upcoming Internet Seminars***

**ASTSWMO/EPA Land Disposal Restrictions - July 12.** This seminar will be broadcast live from the Association for State and Territorial Solid Waste Management Officials' State Hazardous Waste Conference. It consists of two one-hour sessions with a 15 minute break in the middle. For more information and to register, see <http://clu-in.org/studio/seminar.cfm>

**ITRC Design, Installation and Monitoring of Alternative Final Landfill Covers - July 13.** 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> .

**ITRC In Situ Chemical Oxidation - July 22.** This seminar provides technical and regulatory information to help practitioners understand, evaluate and make informed decisions on In Situ Chemical Oxidation proposals. Included is a description of the various chemical oxidants, regulatory considerations, stakeholder concerns, case studies, and technical references. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

## ***New Documents***

**Survey of Technologies for Monitoring Containment Liners and Covers (EPA 542-R-04-013).** This report, published by the EPA Office Superfund Remediation and Technology Innovation, provides information on innovative long-term monitoring technologies to detect contaminant releases beneath a liner containment system and identify potential problems with the integrity of final containment covers. The report summarizes available information on these technologies and provides examples of where the technology has been used (June 2004, 64 pages). View or download at <http://clu-in.org/techpubs.htm> Or <http://www.epa.gov/tio> .

**Fingerprint Analysis of Contaminant Data: A Forensic Tool for Evaluating Environmental Contamination (EPA 600-5-04-054).** This issue paper was produced through EPA's Technical Support Center. It describes a tool to identify detection monitoring parameters for specific industries. The Fingerprint Analysis of Leachate

Contaminants (FALCON), was developed in response to the need for identifying the source of contaminant plumes. The objective of this paper is to demonstrate that FALCON is a quantitative, defensible fingerprinting process (May 2004, 27 pages). View or download at <http://www.epa.gov/tio/tsp/issue.htm> .

**Introduction to Energy Conservation and Production at Waste Cleanup Sites (EPA 542-S-04-001)**. This issue paper, prepared by EPA's Engineering Forum under the Technical Support Project, provides an overview on the considerations for energy conservation and production during the design and operation and maintenance (O&M) phases of waste cleanup projects. The paper presents four case studies highlighting energy conservation or production, including a site using landfill generated methane gas directed to operate microturbines. The issue paper also introduces an energy checklist as a suggested tool to help project managers consider energy conservation or production at their sites (May 2004, 36 pages). View or download at <http://www.epa.gov/tio/tsp/issue.htm> .

**Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action - April 2004 - Updated Version (EPA530-R-04-030)**. This document was produced by the EPA Office of Solid Waste. It contains the Environmental Protection Agency's (EPA's) latest interpretation of policies on such topics as cleanup goals, the role of groundwater use, point of compliance, source control, and monitored natural attenuation. This Handbook ties 15 different topics together with an overall Groundwater Protection and Cleanup Strategy that emphasizes a phased, results-based approach to cleaning up contaminated groundwater (April 2004, 102 pages). View or download at <http://www.epa.gov/epaoswer/hazwaste/ca/resource/guidance/gw/gwhandbk/qwhb041404.pdf> .

**Phytoremediation of Groundwater at Air Force Plant 4: Carswell, Texas (EPA 540-R-30-506)**. This report was produced by the U.S. EPA Superfund Innovative Technology Evaluation (SITE) program. This Innovative Technology Evaluation Report (ITER) describes demonstration results from an investigation of the ability of planted eastern cottonwoods to remediate shallow TCE groundwater in a subhumid climate. The study was undertaken to determine the potential for a planted system to hydraulically control the migration of contamination as well as to biologically enhance the subsurface to promote in situ reductive dechlorination (September 2003, 89 pages). View or download at <http://www.epa.gov/ORD/SITE/reports/540R03506/540R03506.pdf> .

**Cyclodextrin-Enhanced In Situ Removal of Organic Contaminants from Groundwater at Department of Defense Sites (CU-0113)**. This cost and performance report was produced under the DoD Environmental Security Technology Certification

Program (ESTCP). This technology demonstration was intended to show the potential of cyclodextrin enhanced flushing (CDEF) under near full-scale operational conditions. The particular objectives of this demonstration were (1) evaluation of the cost and performance of cyclodextrin-enhanced removal of dense nonaqueous phase liquids (DNAPL) from polluted groundwater, (2) test unrefined liquid cyclodextrin (CD) as a substitute for CD powder, (3) evaluate membrane technology for recovering and reusing CD, (4) identify the most appropriate wastewater treatment technologies, and (5) conduct partition tracer test (PTT) for mass balancing (May 2004, 101 pages). View or download at <http://www.estcp.org/documents/techdocs/cu-0113.pdf> .

**Heat as a Tool for Studying the Movement of Ground Water Near Streams (USGS Circular 1260).** This U.S. Geological Survey report describes the general principals and procedures by which the natural transport of heat can be utilized to infer the movement of subsurface water near streams. This information sets the foundation for understanding the advanced applications in chapters 2 through 8. Each of these chapters provides a case study, using heat tracing as a tool, of interactions between surface water and ground water for a different location in the western United States. Technical details of the use of heat as an environmental tracer appear in appendices (Spring 2004, 105 Pages). View or download at

<http://water.usgs.gov/pubs/circ/2003/circ1260/> .

## ***Conferences and Symposia***

**Reminder! National Environmental Monitoring Conference, Washington, DC, July 19-22.** NEMC provides the principal forum for addressing policy and technical issues affecting monitoring in all environmental media and across all environmental programs. Organized by U.S. EPA and ACIL's Independent Laboratories Institute, jointly with Instant Reference Sources, Inc., the focus of this year's conference includes new approaches for analyzing for conventional and emerging pollutants in water, soil, and air as well as homeland security issues as they apply to environmental monitoring for terrorism agents. For agenda and registration information, see <http://www.nemc.us> .

**Reminder! Midwestern States Risk Assessment Symposium, Indianapolis, August 25-27.** The symposium, sponsored by Indiana Department of Environmental Management and others, will feature the leading experts in the United States as speakers on urban metals, urban PAHs, methods for evaluating vapor intrusion, and characterizing Brownfields Sites. They have expanded the Indoor Air Background session and added a panel discussion on

Trichloroethylene Toxicity. The symposium will also feature vendor exhibits and provide many opportunities for networking with colleagues from industry, government, academia, and consulting firms. The Interstate Technical and Regulatory Council will host three training opportunities at the symposium (slots still available). Four states (Illinois, Indiana, Michigan, and Ohio) are co-chairing sessions this year. For registration and agenda information, see

<http://www.spea.indiana.edu/msras/> .

**2004 Fractured Rock Conference: State of the Science and Measuring Success in Remediation, Portland ME, September 2004.** This conference is sponsored by the U.S. EPA and National Ground Water Association. The purpose of the conference is to identify the current state of remediating contaminated ground water in fractured rock settings and make future remediation efforts more effective. Invited plenary lectures will serve as reviews of our existing understanding as well as looking at directions for the future. More than 100 papers will be presented from scientists and engineers from 10 nations. For agenda and registration information, see

<http://www.ngwa.org/e/conf/0409135017.shtml> .

**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. 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.