

## Message #58: December 2001

Welcome to TechDirect. I hope everyone has a safe and happy holiday season. Since the November 1 message, TechDirect gained 335 new subscribers for a total of 12,178. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing to TechDirect may do so on CLU-IN at <http://clu-in.org/techdirect> . All previous TechDirect messages are archived there.

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***

December is a busy month at the CLU-IN Studio. We are offering five live seminars this month. For more information on individual seminars, see <http://clu-in.org/studio> . They include:

**Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action - December 5 - SOLD OUT**

**Remediation System Evaluation and Optimization of Pump and Treat Projects - December 10.** The objective of this presentation is to enhance current understanding of the Remediation System Evaluation (RSE) process and optimization tools available to site managers of pump and treat systems. RSEs aim to improve the efficiency of operation and maximize the remedy's effectiveness by identifying ways to reduce O&M costs, shorten closure time, verify clear goals and exit strategy, and assure equipment is adequately maintained. Pump and treat systems have been operating for two decades and this experience has led to large gains in knowledge and understanding.

**ITRC In Situ Chemical Oxidation - December 11.** The purpose of this training is to familiarize participants with the recently released ITRC In Situ Chemical Oxidation Technical and Regulatory Guidance document. It provides technical and regulatory information to help you understand, evaluate and make informed decisions on ISCO proposals. Included is a description of the various chemical oxidants, regulatory considerations, stakeholder concerns, case studies, and technical references.

**Geophysical Characterization Techniques and Data Uses - December 12.** Learn to identify and understand factors to be

considered in scoping, executing, or reviewing projects that involve geophysical instruments and techniques. The two hour seminar starts with the basic science behind geophysical technologies and how they fit into smarter approaches to cleaning up hazardous waste sites. The seminar then walks you through the use several of technologies such as resistivity profiling and ground penetrating radar. Throughout the seminar, instructors describe how the use of systematic planning, dynamic work plans, and field technologies (a.k.a. the Triad) is applied to site cleanups guided by geophysical tools.

**ITRC Advanced Techniques on Installation of Iron Based Permeable Reactive Barriers and Non-Iron Based Barrier Treatment Material - December 13.** This is the second training on Permeable Reactive Barrier Walls from the ITRC. It responds to student requests to provide additional detail and describe advancements in the science and engineering to design, install, maintain and monitor reactive barrier systems. This curriculum will train students using case studies to describe long-term performance of iron-based systems and design them according to the heterogeneities of the subsurface.

## **Documents and Web Resources**

**Development of Recommendations and Methods to Support Assessment of Soil Venting Performance and Closure (EPA 600-R-01-070).** This report was produced by the U.S. EPA Office of Research and Development. The overall purpose of the report is to improve the "state of the art" and "state of the science" of soil venting application. Results of field-based research and comprehensive and detailed literature reviews on gas flow and vapor transport are provided to form the basis and defense of recommendations to improve site characterization, design, and monitoring practices in support of venting application (September 2001, 435 pages). View or download at <http://www.epa.gov/ada/pubs/reports.html> . For hard copies, contact Kay Cooper at (580) 436-8651 or fax (580) 436-8503.

Summary of Workshop on Biodegradation of MTBE (EPA 626-R-01-001A). A workshop on biodegradation of methyl tert-butyl ether (MTBE)-contaminated soils and groundwater was held in Cincinnati, OH, on February 1-3, 2000, and was sponsored by the U.S. Environmental Protection Agency's (EPA) National Risk Management Research Laboratory (NRMRL) and the American Petroleum Institute (API). Researchers in academia, industry, and government agencies were invited to attend and present current research. The goals of the workshop were: to gain an understanding of the types of MTBE research that various organizations are

conducting and of the conclusions that this research is generating; to identify the remaining research needs on MTBE biodegradability; and to understand what research is being planned for the future and to identify potential opportunities for collaboration. This report summarizes the workshop (February 2001, 45 pages). View or download at <http://www.epa.gov/ORD/NRMRL/Pubs/625R01001/625R01001.pdf>

**Ground Water Currents** newsletter - current issue (EPA 542-N01-007). This quarterly newsletter, published by the U.S. EPA Technology Innovation Office, provides descriptions and performance data for developments in innovative ground water treatment. This issue highlights innovative technologies for remediating ground water at military sites contaminated with ordnance, MTBE, and chlorinated solvents. Currently, more than 21,000 potentially contaminated sites exist on defense-related facilities across the country. These facilities offer unique opportunities for collaborative efforts on technology innovation involving the U.S. EPA, other Federal departments and agencies, and the private sector. It is estimated that cleanup of these sites will cost about \$30 billion. 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.

**Two New Citizen Guides to Innovative Technologies.** The Citizen's Guide Series are 2-page fact sheets that provide a general description on approaches to clean up contaminated was sites. The fact sheets cover five questions about each clean up approach: What is it?, How does it work?, Is it safe?, How long will it take?, and Why use it?. View or download both Citizen Guides at <http://clu-in.org/techpubs.htm> . The two new Guides are:

A Citizen's Guide to Solvent Extraction (EPA 542-F-01-009), and A Citizen's Guide to Chemical Dehalogenation (EPA 542-F-01-010).

**The CLU-IN Technology Focus Area.** If you need information on a specific technology there is an improved tool on CLU-IN to shorten your research time. Through the Technology Focus section, CLU-IN provides a compilation of the most relevant information resources on 14 remediation technologies. These resources are presented under 5 categories for each technology such as Technology Description, Applications, Engineering/ Regulatory Guidance, Training and References, with a summary and direct link to each resource. For more information, see <http://clu-in.org/techfocus/> . The technologies featured in the Tech Focus Area include:

Air Sparging (33 resources)

Bioremediation of Chlorinated Solvents (40 resources)

Bioventing/Biosparging (27 resources)  
Fracturing (16 resources)  
Ground-Water Circulating Wells(24 resources)  
In Situ Flushing (36 resources)  
In Situ Oxidation (25 resources)  
Multi-Phase Extraction (24 resources)  
Natural Attenuation(48 resources)  
Permeable Reactive Barriers(49 resources)  
Phytoremediation (55 resources)  
Soil Vapor Extraction (46 resources)  
Thermal Desorption (25 resources)  
Thermal Enhancements(30 resources)

**State Drycleaner Remediation Web Page.** The State Coalition for the Remediation of Drycleaners is made up of states with formal drycleaner remediation programs. SCRD is now loading on the website, case studies on the characterization and remediation of contaminated soils and ground water drycleaning facilities. The case studies include information on subsurface conditions, characterization technologies, remediation efforts and results, and lessons learned. There are over 20,000 drycleaner facilities in the country that may need remediation and the Coalition hope that the experiences and lessons learned from the early efforts may facilitate more efficient future efforts. There are currently over 20 case studies available for viewing with plans to add 20 to 30 sites in the next few months. For more information, see <http://www.drycleancoalition.org> .

**Initiatives to Develop Web Sites Including Information about Brownfields Properties (EPA 542-R-01-017).** This document/website was created to assist in planning, designing, and operating web sites that include information about individual brownfields properties. The report will help parties that are designing or managing Brownfields property-listing sites. It includes suggested minimum data requirements, functionality, reporting capabilities. The "Initiatives" web site is based on a study conducted by the U. S. EPA in 2000 which included input from states and national redevelopment organizations. See <http://clu-in.org/techpubs.htm> . For hard copies, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

**Annual Report of the RTDF Phytoremediation Action Team - TPH Subgroup: Cooperative Field Trials.** The Total Petroleum Hydrocarbons (TPH) Subgroup of the RTDF Phytoremediation Action Team initiated cooperative trials to test the use of vegetation to enhance treatment of surface soils contaminated with weathered petroleum hydrocarbons. Collaborators include PERF (Petroleum Environmental Research Forum), U.S. EPA, U.S. DoD, major

petroleum and energy corporations, environmental consultants, and universities. This report summarizes the experimental procedures and initial conditions at 11 trial locations that will be monitored for three growing seasons. A primary purpose of the RTDF trials is to collect data that will help site managers and regulatory officials evaluate the potential of phytoremediation. This report also summarizes some of the regulatory issues that were raised in obtaining approvals to conduct the trials (March 2000). View or download at <http://www.rtdf.org/public/phyto/phytodoc.htm> .

## ***Conferences and Symposia***

**2002 Resource Conservation and Recovery Act (RCRA) National Meeting, January 15 - 18, Washington, DC.** The meeting is open to the public. The theme of this year's meeting is "Partnerships for Cleaner Communities." Topics will include Corrective Action, Brownfields, Permitting, Municipal Solid Waste, Non-hazardous Industrial and Special Waste, Waste Minimization, and Federal, State and Tribal Programs. In addition, exhibits of various environmental program initiatives will be on-site. There is no fee, however pre-registration is required for meeting attendance. Space is limited and registrations will be confirmed in the order in which they are received. You can pre-register for the meeting and arrange for overnight accommodations at <http://www.epa.gov/osw/meeting> . If electronic pre-registration is not possible, please contact Anita Cummings (703-308-8303, <[cummings.anita@epa.gov](mailto:cummings.anita@epa.gov)>), Gina Bowler (703-308-7279, <[bowler.gina@epa.gov](mailto:bowler.gina@epa.gov)>), or Alan Strasser (301-577-9339, <[astrasser@hazmed.com](mailto:astrasser@hazmed.com)>). All meeting attendees will be required to present **photo identification** on-site and to wear badges issued by EPA for admittance to meeting sessions.

**Call for papers!!** Midwestern States Risk Assessment Symposium, Indianapolis, July 24-26. The symposium is sponsored by the Indiana Department of Environmental Management, U.S. EPA, Indiana University, Purdue University, and Rose-Hulman Ventures. This symposium will focus on applications of environmental risk assessment science to real world environmental projects. Prospective authors should submit a 300 word abstract which includes a succinct statement of the problem being addressed and the proposed solution in a specified format. The abstract format and requested topics are found at <http://www.spea.indiana.edu/msras/Default.htm> . Abstracts are due by March 4, 2001.

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.