

## Message #30: August, 1999

Since July 1, TechDirect gained 257 new subscribers for a total of 6880. Welcome to all the new subscribers! We hope this service continues to meet your needs.

Need to change your TechDirect subscription address? Remember, you can change your subscription address any time at <http://clu-in.org/techdrct>. Also, I have heard from a few long time subscribers that mysteriously they no longer receive the monthly updates. The EPA mail server in North Carolina has an automatic delete function that removes addresses that it thinks are no longer valid from listservers. It is supposed to delete addresses that come up as undeliverable four consecutive deliveries. I am investigating how it works exactly and whether or not that function can be modified. If, in the future you realize that you are no longer receiving TechDirect and still want to, you will need to [resubscribe](#). I apologize for this inconvenience.

### ***Remediation Documents***

**Envirometal Technologies, Inc. Metal Enhanced Dechlorination of Volatile Organic Compounds Using an In Situ Reactive Iron Wall (EPA 540-R-98 501)**. This report was published by EPA under its Superfund Innovative Technology Evaluation (SITE) program. It documents the results of a demonstration at an undisclosed site in central New York. The results of the sample analyses indicated that the technology significantly reduced concentrations of contaminants passing through the wall (September 1998, 104 pages). View or download at <http://www.epa.gov/ORD/SITE/reports/540r98501.pdf>.

**Regulatory Guidance for Reactive Permeable Barriers Designed to Remediate Metals and Radionuclides in Groundwater (PBW-3)**. This document was published by the Interstate Technology and Regulatory Cooperation (ITRC) Work Group. It was developed to try to address the regulatory requirement of Permeable Reactive Barriers (PRBs) and try to achieve state consensus on the requirements. It is divided into sections dealing with site characterization, modeling, permitting, construction, monitoring, waste management, closure, health and safety and stakeholders concerns [December 1998, 67 pages]. View or download at <http://www.itrcweb.org/common/content.asp?en=TA549175&sea=Yes&set=Both&sca=Yes&sct=Long>.

**Evaluation of Selected Environmental Decision Support Software.**

This report was sponsored by the U.S. Department of Energy. It evaluates nineteen Decision Support Software (DSS) codes on a screening level in order to provide information to decision-makers on the utility of a particular code to a site specific application. The software packages analyzed addressed some or all of the following decision categories: remedy selection, remedial design optimization, cost benefit analysis, site characterization, plume characterization, and/or risk assessment issues [June 1997, 45 pages]. View or download from <http://clu-in.org/techpubs.htm>

**Using Simulation-Optimization Techniques to Improve Multiphase Aquifer Remediation.** This report was published by the Lawrence Berkeley National Laboratory. The T2VOC computer model for simulating the transport of organic chemical contaminants in non-isothermal multiphase systems has been coupled to the iTOUGH2 code which solves parameter optimization problems. This allows one to use linear programming and simulated annealing techniques to solve groundwater management problems, i.e. the optimization of operations for multiphase aquifer remediation. A cost function has to be defined, containing the actual and hypothetical expenses of a cleanup operation which depend - directly or indirectly - on the state variables calculated by T2VOC. Subsequently, the code iteratively determines a remediation strategy (e.g. pumping schedule) which minimizes, for instance, pumping and energy costs, the time for cleanup, and residual contamination. An illustrative sample problem is outlined to discuss potential applications of the code. See [http://ccs.lbl.gov/TOUGH2/Bibliography/Abstract/CON\\_SimOpt.html](http://ccs.lbl.gov/TOUGH2/Bibliography/Abstract/CON_SimOpt.html).

**Natural Attenuation of Chlorinated Solvents in Ground Water: Principles and Practices** This document was published by the Industrial members of the Remediation Technologies Development Forum (RTDF) and the Interstate Technology and Regulatory Cooperation (ITRC) Work Group. This document is not a how-to document, rather its purpose is to provide a framework to evaluate natural attenuation of chlorinated volatile organic compounds [May 1999, 123 pages]. View or download at <http://clu-in.org/conf/itrc/natatt/p&p.pdf> .

**Ground Water Currents (EPA 542-N-99-004).** Ground water Currents is a quarterly update that provides descriptions and performance data for developments in innovative ground water treatment. This issue features new techniques for ground water monitoring and active remedies for ground water contaminated with organics [July 1999, 4 pages]. View or download at <http://clu-in.org/techpubs.htm> . For hard copies contact (800) 490-9198 or (513) 489-8190 or fax your request to (513) 891-6685.

## ***Technology Highlight - Composting***

**Analysis of Compost as an Environmental Remediation Technology (EPA 530-R-98-008).** This report was published by the EPA Office of Solid Waste. It summarizes the available information on the use of compost for managing hazardous waste streams (as well as other applications) and indicates possible areas for future investigations [April 1998, 115 pages]. View or download this document at <http://www.epa.gov/compost> [Note: the document consists of four PDF files]. For hard copies contact (800) 490-9198 or (513) 489-8190 or fax your request to (513) 891-6685.

**Compost - New Applications for an Age-Old Technology (EPA 530-F-97-047).** This is a collection of fact sheets developed by EPA's Office of Solid Waste that address many innovative and cost-effective uses of compost to remediate or prevent pollution. The fact sheets discuss how compost can be used to remediate contaminated soils; remove oil, grease, and heavy metals from storm water runoff; destroy VOC's; facilitate reforestation, wetlands restoration, and revitalize wildlife habitats. The individual fact sheets from this collection are listed below and may be downloaded at <http://www.epa.gov/compost> [All are between 4-8 pages]. For hard copies contact (800) 490-9198 or (513) 489-8190 or fax your request to (513) 891-6685.

Innovative Uses of Compost:

Bioremediation and Pollution Prevention (EPA 530-F97-042)

Erosion Control, Turf Remediation, and Landscaping ((EPA 530-F97-043)

Disease Control For Plants and Animals (EPA 530-F97-044)

Composting of Soils Contaminated By Explosives (EPA 530-F97-045)

Reforestation, Wetlands Restoration, and Habitat Revitalization (EPA 530-F97-046)

### ***Other Items***

**Fractured Rock Site Profiles.** The U.S. Environmental Protection Agency's Technology Innovation Office (TIO), in cooperation with the Interstate Technology Regulatory Cooperation (ITRC) workgroup, is assembling information on efforts to identify and remediate contaminated fractured rock sites. Our goal is to establish a series of 1 to 2 page site profiles that will identify the nature and extent of the contamination problems at such sites, geology affecting site assessment and remediation efforts, characterization and

remediation actions taken or planned, and compile site contact information to open communication between individuals currently involved in using these technologies. To view existing site profiles or add new ones, please see <http://clu-in.org/fracrock> .

**Reminder! New Small Business Innovation Research (SBIR) Solicitation.** EPA's next Phase I Solicitation will open on August 11, 1999 and close on October 13, 1999. The Solicitation will be posted on the National Center for Environmental Research and Quality Assurance WEBSITE at: <http://www.epa.gov/ncerga> (click on Small Business). Please note that last year's solicitation is still on the WEBSITE for informational purposes only. The solicitation includes a description of the program and typical research topics. This solicitation is also available by fax. If you need a fax copy of last year's solicitation or if you have any questions, please call the EPA SBIR Helpline at (800) 490-9194.

**EPA Headquarters Telephone Directory, Customer Service Edition (STOCK NO. 055-000- 00626-01)**. This 472 page publication is currently at the printers and can be ordered from the Superintendent Of Documents for \$39.00 (U.S.). The phonebook includes: Headquarters personnel and key agency contact listings; hotline listings; Headquarters, Regional and Laboratory organizational listings; environmental topics/EPA experts; organizational index; quick reference information for EPA's major offices; and web addresses for EPA programs and offices. Allow a few weeks for delivery and use the stock number when ordering. Payment may be made with Visa, MasterCard, Discover/Novus. Contact 202-512-1800 (7:30 AM- 4:30 PM Eastern Daylight Time) or Fax request to (202) 512-2250. You may also pay by check. If so, mail your request to: Superintendent of Documents, PO Box 37194, Pittsburgh, PA. 15250-7954.

## ***Conferences and Symposia***

**Reminder!! In Situ Permeable Reactive Barriers: Application and Deployment, Seattle, WA, August 10-11.** EPA's National Risk Management Research Laboratory, and the Technology Innovation Office, in cooperation with the Remediation Technologies Development Forum and the Interstate Technology Regulatory Cooperation Work Group, are offering a 1.5- day training course on the use of permeable reactive barriers for remediating and managing contaminated groundwater. The training course is designed to assist professionals in the regulatory community in overseeing the design, implementation, and monitoring of groundwater remedies that involve the deployment of permeable

reactive barriers. Industry professionals and consultants will benefit from the updated technical information presented as well as the interaction with regulators and other professional colleagues. For course agenda and registration information, see <http://www.trainex.org/prb>.

**Reminder!! Abiotic In-Situ Technologies for Groundwater Remediation, Dallas TX, August 31- September 2.** This conference is sponsored by the U.S. EPA. The conference is being held to disseminate information on a number of abiotic in situ groundwater remediation approaches that are emerging as alternatives for treating sites that historically have been difficult to treat. The conference will include sessions on thermal technologies, electrokinetics, chemical oxidation, reactive zone treatment, VOC stripping, and flushing technologies. There is no cost to attend and space is limited.

***On-site InSights, the Innovative Technologies for Site Assessment and Monitoring Workshop, Los Angeles, September 15-16.*** This workshop is intended to bring state regulators, engineering contractors, site owners and also individuals involved in Brownfield's cleanups together for hands on training. Participants will receive valuable information on the operation, cost, logistics and data acceptance issues of "real world" innovative technologies that are usable today. Limited travel assistance available for state and city employees. Contact On-Site Insights, NHSRC/NJIT, 17 Glen Road, Wayland, MA 01778 or Dr. Andrea Kinney at (508) 358-3532, FAX (508) 358-5091 or email to [andreakinney@worldnet.att.net](mailto:andreakinney@worldnet.att.net).

If you have any questions or comments about TechDirect, please contact Jeff Heimerman at (703) 603-7191 or [heimerman.jeff@epa.gov](mailto:heimerman.jeff@epa.gov). To subscribe see <http://clu-in.org/techdrect>.