

## Message #29: July, 1999

Since June 1, TechDirect gained 227 new subscribers for a total of 6675. Welcome to all the new subscribers! We hope this service continues to meet your needs. If any of the resources previously featured have been particularly useful in your work, please take a moment to let us know.

**Reminder!** If you experience problems with URLs that do not work, please try the URL again making sure to eliminate the period that may be present at the end. Also, if you wish to subscribe, unsubscribe or change your email address for your TechDirect subscription, you may do so 24 hours a day, 365 days a year at <http://clu-in.org/techdrct> -- it is easy and will help us better maintain the list.

### ***New Documents***

#### **Solidification/Stabilization Resource Guide (EPA 542-B-99-002).**

This report was published by the EPA Technology Innovation Office and contains over 125 reference articles on these technologies. These articles are grouped by four key issues: Performance, Evaluation and Testing Protocol; Contaminant or Waste Specific Procedures; Durability and Degradation; and Long Term Effectiveness. To help the reader quickly identify topics of interest or current practices related to these technologies within the last five years, a short abstract for each of the referenced article is included [April 1999, 89 pages]. Download or view 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.

#### **Multi-Phase Extraction: State of the Practice (EPA**

**542-R-99-004).** This report was published by the EPA Technology Innovation Office. It describes the state-of-the-practice for Multi-Phase Extraction (MPE) of contaminated soil and groundwater, focusing primarily on the application and use of MPE at sites with halogenated volatile organic compounds (VOCs). MPE technology is described, including various configurations used, the types of conditions to which MPE would be applicable, and the advantages and limitations of using MPE at these types of sites. It also contains three case studies in which the cost and performance of MPE systems are documented [June 1999, 77 pages]. Download or view 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.

**Brownfields Technical Guides.** The EPA National Risk Management Research Laboratory published three technical documents to facilitate assessment and cleanup of brownfields sites and a companion resource document that describes cost estimating resources. The guides present a general overview of site information that should be obtained prior to site characterization and contain descriptions of typical industrial operations that could have occurred at sites used for these purposes, matrix listing of contaminants typically associated with the site type and the media in which the contaminants can be found. Tables within the guides identify available site characterization tools and technologies and sample collection practices. The cost estimating tools document includes databases, web sites, computer software and services that can assist a decision maker to develop an order of magnitude cost estimate, or evaluate one that is presented to the decision maker. Hard Copies only at this time, contact (800) 490-9198 or (513) 489-8190 or fax your request to (513) 891-6685.

- Technical Approaches to Characterizing and Cleaning Up Automotive Repairs Sites under the Brownfields Initiative (EPA/625/R-98/008)
- Technical Approaches to Characterizing and Cleaning Up Iron and Steel Mill Sites under the Brownfields Initiative (EPA/625/R-98/007)
- Technical Approaches to Characterizing and Cleaning Up Metal Finishing Sites under the Brownfields Initiative (EPA/625/R-98/006)
- Cost Estimating Tools and Resources for Addressing Sites under Brownfields Initiative (EPA/625/R-99/001)

**Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators (EPA 510-B-97-001).**

Produced by the EPA Office of Underground Storage Tanks (OUST), this guide is designed to help regulators evaluate conventional and new site assessment technologies and promote the use of expedited site assessments. Contains information of the expedited site assessment process, surface geophysical methods, soil-gas surveys, direct push technologies, and field methods for the analysis of petroleum hydrocarbons [March 1997, 310 pages]. Download or view at <http://www.epa.gov/swerst1/pubs/index.htm#sam>. Hard copies are available for \$26 from General Printing Office (202) 512-1800.

**Historical Case Analysis of Chlorinated Volatile Organic Compound Plumes (UC-AR- 133361).** This report was published by Lawrence Livermore National Laboratory. It describes the findings and conclusions resulting from a study of nationwide historical case

data gathered from sites contaminated with chlorinated volatile organic compounds (CVOCs). The purpose of this study is to use data from multiple sites to perform a statistical evaluation of the hydrogeologic, geochemical and biochemical factors affecting the extent and growth behavior of CVOC plumes in groundwater [March 1999, 183 pages]. View or download at <http://www.llnl.gov/tid/lof/documents/pdf/235429.pdf>.

**Groundwater and Soil Cleanup: Improving Management of Persistent Contaminants.** This report was published by the National Research Council for the Department of Energy. This report advises DOE on technologies and strategies for cleaning up three types of contaminants in ground water: metals, radionuclides and Dense Non Aqueous Phase Liquids (DNAPLs). The report contains reviews of regulations applicable to contaminated sites, state of the art in remediation technology development, and obstacles to technology deployment that apply well beyond sites in the DOE weapons complex [June 1999, 257 pages]. View at <http://books.nap.edu/books/0309065496/html/R1.html>. Hard copies available at cost through the National Academy Press, see <http://www.nap.edu/catalog/9615.html>.

**Nitrate-Based Bioremediation Homepage.** A new website has been developed by EPA's Robert S. Kerr Environmental Research Center to provide a summary of the Kerr Laboratory Subsurface Protection and Remediation Division's research program on the use of nitrate as an alternate electron acceptor for bioremediation of fuel-contaminated aquifers. This website links to several other files detailing both laboratory and field work conducted on nitrate-based bioremediation over a 10 year period, and provides summaries of the individual research projects, data graphics, photos, abstracts of published articles and reports, additional unpublished data, and a research bibliography. See <http://www.epa.gov/ada/research/bioremed.html> for more details.

**Heads Up! 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.

## ***Conferences and Symposia***

**Workshop on Heavy Metal Contaminants in Water, Snow Bird, UT, August 2-5.** This conference is being sponsored by the U.S. EPA, U.S. DOE, and the U.S. Army Corps of Engineers. It will focus on examining systems approaches, treatment options, alternative processes and innovative technologies for treating heavy metals in waste streams. There will be a heavy emphasis on managing contaminated groundwater at mining sites. For more information and registration, see <http://www.exchangemonitor.com/HeavyMetal.PDF>. Questions about the conference may be directed to [heavymetals@exchangemonitor.com](mailto:heavymetals@exchangemonitor.com).

**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>.

**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.

**Assessment and Management of MtBE-Impacted Sites, Sacramento area, September 14-15 and 28-29.** These two-day workshops are sponsored by the University of California, Riverside in cooperation with University Extensions - Davis, Los Angeles, and San Diego. Currently there is considerable national debate on the issue of evaluating and managing sites impacted by leaked fuel oxygenated with MtBE (methyl tertiary butyl ether). This workshop

provides a practical, risk-based approach to manage and prioritize MtBE-impacted sites. The course presents the available scientific information, including fate and transport plume studies, and explores management techniques that are protective of health and environmental resources and that are consistent and technically defensible. Topics include classification of sites, leak prevention and source control, risk-based investigative strategies, quantitative risk evaluation, and management options.

**Workshop on Tools that Improve Restoration Systems, Las Vegas, Nevada, October 26-28, 1999**, sponsored by the U.S. EPA Office of Research and Development (ORD), will be convened to explore the role of reliability management (approaches to predict and measure the uncertainty in remedial actions) at hazardous waste sites implementing long term remedial solutions, such as containment barriers or pump and treat systems. The workshop will review the state-of-practice in reliability engineering (techniques that quantify and improve the probability of successful remedies) and failure analysis (techniques that show the differences of what is intended and what is achieved for a remedy). It will be held in conjunction with the **11th National Technical Information Exchange (TIE) Workshop**, sponsored by the U.S. Department of Energy. For more information on this workshop, contact Rebecca Glos of SAIC at [rebecca.l.glos@cpmx.saic.com](mailto:rebecca.l.glos@cpmx.saic.com) or refer to the TIE conference web site at <http://em.doe.gov/tie/elvntie.html>.

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/techdrct>.