

Message #74: April 2003

Welcome to TechDirect. Since the March 1 message, TechDirect gained 355 new subscribers for a total of 16,254. 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 issues of TechDirect 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.

Special Announcement

CLU-IN Customer Survey. The U.S. EPA Technology Innovation Office is conducting an ongoing customer satisfaction survey on the effectiveness of our TechDirect information service, our Hazardous Substance Clean-Up Information (CLU-IN) website and our Internet Seminars in meeting your needs and expectations. Please consider taking a few moments to let us know what you think about our resources and services. This survey will take approximately six to twelve minutes to complete. All responses will be anonymous. See <http://clu-in.org/survey/techdirect> .

EPA Small Business Innovation Research (SBIR) Solicitations. EPA issued four Phase I Solicitations in March - Monitoring and Control of Air Pollution, Technology Solutions for Western USA Environmental Problems, Building Decontamination, and the Regular Solicitation. All four solicitations opened on March 27, 2003, and will close on May 23, 2003. If you need a faxed copy or if you have any questions, call the EPA HELPLINE at: (800) 490-9194. The new SBIR solicitations are located at <http://www.epa.gov/ncer/sbir/>

New Documents

In Search of Representativeness: Evolving the Environmental Data Quality Model. This reprint, entitled "In Search of Representativeness: Evolving the Environmental Data Quality Model" was published in the November/December 2002 issue of the journal Quality Assurance: Good Practice, Regulation, and Law. This article asserts that data representativeness is fundamental to data

quality, yet the data quality model for contaminant data remains focused on analytical methods to the neglect of strategies to accommodate environmental heterogeneity. Advancing technology enables the cost-effective, high density, adaptive sampling needed to assure data representativeness, supporting a next generation data quality model that explicitly manages sampling uncertainties (November 2002, 12 pages). View or download at <http://clu-in.org/techpubs.htm> .

Guidance on the Use of Passive Diffusion Samplers to Detect Volatile Organic Compounds in Ground Water Discharge Areas, and Example Applications in New England (Water-Resources Investigations Report 02-4186) . This document was published by the USGS, DOI, and EPA. It was prepared under the auspices of the EPA, Office of Solid Waste and Emergency Response Monitoring and Measurement for the 21st Century Initiative. The document provides guidance on passive vapor diffusion (PVD) sampler assembly, deployment, and recovery to detect volatile organic compounds in ground-water discharge areas. The report also discusses the use of PVD samplers at nine Superfund sites in New England to identify likely discharge areas for VOCs in ground water (December 2002, 80 pages). View or download at

<http://water.usgs.gov/pubs/wri/wrir024186/pdf/wri024186.pdf> .

Study of Five Discrete Interval-Type Groundwater Sampling Devices (TR-02-12). This report was published by the U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory. Five relatively newly developed groundwater-sampling devices (the Kabis, HydraSleeve, Discrete Interval, Pneumo-Bailer, and USGS Passive Diffusion Bag [PDB] samplers) were tested to determine their ability to recover representative concentrations of a variety of analytes, including volatile organics, explosives, pesticides, and metals (August 2002, 57 pages). View or download at

http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR02-12.pdf

Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies (EPA 600-S-02-500). This paper was published by the U.S. EPA National Risk Management Research Laboratory. It explains when and how to apply first-order attenuation rate constant calculations in monitored natural attenuation (MNA) studies. First-order attenuation rate constant calculations can be an important tool for evaluating natural attenuation processes at ground-water contamination sites. Specific applications identified in U.S. EPA guidelines (U.S. EPA, 1999) include use in characterization of plume trends (shrinking, expanding, or showing relatively little change), as well as estimation of the time required for achieving remediation goals (November

2002, 28 pages). View or download at <http://www.epa.gov/ada/download/issue/540S02500.pdf> . For hard copies, contact Kay Cooper at (580) 436-8651 or fax (580) 436-8503.

New, Emerging and/or Less Expensive Solutions for the Destruction of Land Contaminated with Pesticides:

State-of-the-Art. This NATO/CCMS Fellowship Report, produced by John Vijgen, describes the current international development on pesticides seen in the framework of the POPs Convention (9 of the 12 POPs are pesticides), and a status of the emerging technologies related to remedial actions towards pollution problems caused by pesticides (December, 2002, 28 pages). View or download at <http://clu-in.org/techpubs.htm> .

Assessment and Recommendations for Improving the Performance of Waste Containment Systems (EPA 600-R-02-099).

This report was published by the U.S. EPA National Risk Management Research Laboratory. It is the first comprehensive evaluation of the performance of composite and natural bottom containment liners constructed in accordance with RCRA Subtitle C (with implications for Subtitle D facilities). The report is a result of cooperative research between US EPA's ORD, The Geosynthetic Institute, GeoSyntec Consultants and the University of Illinois. The document offers detailed study of 187 landfill cells at waste containment landfill 54 sites. It is arranged in 3 parts: geosynthetic liner technical issues, soil liner technical issues, field performance assessments (December 2002, 1004 pages). View or download by section at <http://www.epa.gov/ORD/NRMRL/Pubs/600R02099/600R02099.pdf> .

NATO/CCMS Pilot Study Evaluation of Demonstrated and Emerging Technologies for the Treatment of Contaminated Land and Groundwater (Phase III) Reports.

The Council of the North Atlantic Treaty Organization (NATO) established the Committee on the Challenges of Modern Society (CCMS) develop programs to share information among countries on environmental and societal issues that complement other international endeavors and to provide leadership in solving specific problems of the human environment. They have produced three new documents, which can be viewed or downloaded at <http://clu-in.org/techpubs.htm> or <http://www.nato.int/ccms/pilot.htm> . For hard copies, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

2002 Annual Report (EPA 542-R-02-001). This report lists progress on ongoing projects and a country Tour de Table of current work (January 2003, 291 pages).

2002 Special Session Report - Monitoring and Measurement (EPA 542-R-02-011). This special sessions report contains the

presentations on monitoring and measurement technologies from the NATO/CCMS Pilot Study (Phase III) meeting in Rome (January 2003, 167 pages).

2002 Overview Report (EPA 542-R-02-012). The Overview Report covers the entire 5 year pilot (January 2003, 19 pages).

A Discussion of the Effects of Thermal Remediation Treatments on Microbial Degradation Processes. This document was prepared by Karen Dettmer, a National Network of Environmental Management Studies grantee, under a fellowship from the U.S. Environmental Protection Agency. It discusses the potential effects -- beneficial and detrimental -- of thermal processes on contaminant degrading microorganisms in soil and groundwater (August 2002, 25 pages). View or download at <http://clu-in.org/techpubs.htm> .

Internet Seminars

In April 2003, there will be SIX live internet seminar topics offered through the CLU-IN website. For more information on the following courses, and to register, see <http://clu-in.org/studio> . For ITRC-sponsored seminars, you may also register at <http://www.itrcweb.org> . Archived versions of past seminars are available at <http://clu-in.org/studio> .

NIEHS - Bioavailability - Metals, April 9. This event will highlight recent advances in assessing and limiting the bioavailability of metal contaminants, including current research into phosphate treatment of lead (Pb)-contaminated soils. The seminar will also discuss development of a sampling device called the "Gellyfish" that can measure the free metal ion concentration of many metals at the same time.

EPA SBIR, April 10. This seminar is being held to assist small businesses in the development of proposals for the EPA Small Business Innovation Research program. In addition, topics for the 2003 solicitation will be presented.

ITRC Advanced Techniques on Installation of Iron Based Permeable Reactive Barriers and Non-Iron Based Barrier Treatment Material Documents and Web Resources - April 15. This seminar uses case studies to describe long-term performance of iron-based systems and details how to design them according to the heterogeneities of the subsurface.

ITRC In Situ Chemical Oxidation - April 17. It provides technical and regulatory information to help you 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.

ITRC Systematic Approach to In Situ Bioremediation in Groundwater: Nitrates, Carbon Tetrachloride & Perchlorate - April 22. This course presents a decision tree for reviewing, planning, evaluating, and approving in situ bioremediation (ISB) systems in the saturated subsurface. It defines site parameters and appropriate ranges of criteria necessary for characterization, testing, design and monitoring of ISB technologies.

ITRC Passive Diffusion Bag Samplers for Volatile Organic Compounds in Ground Water - April 29. This seminar will present the technical and regulatory considerations associated with deployment of diffusion samplers, and summarize major points of the recently issued USGS document, Users Guide For Polyethylene-Based Passive Diffusion Bag Samplers To Obtain Volatile Organic Compound Concentrations In Wells.

Conferences and Symposia

Registration/Poster Abstracts Solicitation! RevTech Conference - Cleaning Up Contaminated Properties for Reuse and Revitalization: Effective Technical Approaches and Tools - July 22-24, Pittsburgh, PA. EPA's Technology Innovation Office is co-sponsoring this conference on how and where innovative technologies and approaches can be considered in a reuse setting. Opportunities exist for technology vendors and service providers who would like to present a poster at the conference. Posters should focus on applications that show effective clean up in a reuse setting. If you are interested in presenting a poster, please submit a one-paragraph abstract describing the technology/application. Abstracts must be submitted by April 25, 2003. To see the conference agenda, register, get a hotel or submit a poster abstract, see <http://www.brownfieldstsc.org/revtech.htm> .

U.S. EPA Bioavailability Workshop, April 15-16, Tampa, FL. The 2003 U.S. EPA Bioavailability Workshop will provide the EPA with expert technical opinions specific to applications of bioavailability measurements for human health risk assessment. The EPA expects to use information presented during this workshop in its efforts to establish the most scientifically-sound approach to utilizing bioavailability measurements at contaminated sites. National experts will participate through presentations and panel discussions. Candid scientific discussion will be encouraged among invited scientists and the workshop audience. For more information, see <http://conference.syrres.com/> .

In-Situ Sediment Capping Workshop, May 12-14, Cincinnati, OH. This workshop is sponsored by NOAA, U.S. EPA, and USACE. It will review the science, technology and applications of capping at contaminated sediment sites, look at lessons learned, and talk about future directions of research and practice. For registration and agenda information, see <http://www.sediments.org/capping-workshop.html> .

Reminder! Using Science to Assess Environmental Vulnerabilities (ReVA-MAIA) Conference, May 13-15. This conference is sponsored by the U.S. EPA. Its purpose is to bring environmental decision makers and researchers together to illustrate practical uses of recently developed approaches, tools, and decision support systems that can be used to assess current and future environmental vulnerabilities. The conference will highlight research approaches and models developed by ORD's Regional Environmental Vulnerability Assessment (ReVA) program; however, all researchers interested in the assessment of environmental vulnerability and environmental forecasting are invited to participate. Agenda and registration information available at <http://www.reva-maia.org> .

NOTE: 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. Remember, you may subscribe, unsubscribe or change your subscription address at <http://clu-in.org/techdrct> at any time night or day.