

Message #49: March 2001

Welcome to TechDirect. March 2001 marks the fourth anniversary of TechDirect. Over the last 48 months, I have tried to sift through and identify the technical and policy resources that help you do your work. While I am sure not everything in TechDirect that comes across your desk is directly helpful, I continue to hope that you find something useful in every message. TechDirect started in late February of 1997 with about 1200 subscribers. I am very happy that so many people are finding this a useful resource. Since the February 1 message, TechDirect has 259 new subscribers for a total of....10,161. I strive to make TechDirect current and relevant. If I fail to do that, let me know. 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 48 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!! The EPA Technology Innovation Office , ITRC and other partners are hosting a number of free two-hour Live technical seminars over the Internet in March. Space is still available, but you must register to participate. Upcoming seminars include:

ITRC Natural Attenuation of Chlorinated Solvents: March 6 and 8
Dynamic Data Collection and Field Analytical Technologies: March 15

Field Analytical Technologies for VOCs in Groundwater: March 20
Enhanced In Situ Bioremediation of Chlorinated Solvents: March 27 and 29

Permeable Reactive Barriers for Chlorinated Solvent, Inorganic, and Radionuclide Contamination: April 11 and 12

For descriptions and registration information for these webcasts, see <http://clu-in.org/studio> . The slides and audio from past selected deliveries are accessible anytime night or day in the Studio archive.

CLU-IN Studio Update. Five environmental response videos, produced by the U.S. EPA Environmental Response Team (ERT), have been added to the CLU-IN Studio site at <http://clu-in.org/studio> . The videos range from run times of 6-13 minutes and cover removal and remediation approaches at specific sites. For the past several years,

the EPA ERT has been producing informational videos that cover new cleanup approaches. We plan to add several of these videos to the Studio over the coming months. If you experience congestion problems on or around March 1, try back a few days later.

New Documents

NATO/CCMS Pilot Study Evaluation of Demonstrated and Emerging Technologies for the Treatment of Contaminated Land and Groundwater (Phase III): 2000 Annual Report (EPA 542-R-01-001). This document reports on the second meeting of the Phase III Pilot Study. The Phase III study focuses on technologies for soil and groundwater cleanup and addresses the issues of sustainability, environmental merit and cost effectiveness and on new emerging remediation techniques (January 2001, 246 pages). View or download at <http://clu-in.org/techpubs.htm> . Hard copies available in 2-3 weeks at (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

NATO/CCMS Pilot Study: 2000 Special Session - Decision Support Tools (EPA 542-R-01-002). This report covers material presented and discussed at a special session on decision support tools at a conference sponsored by the NATO Committee on the Challenges of Modern Society in Wiesbaden Germany in June 2000. The report contains nine papers on different aspects of decision support tools that exist for remediation related activities. It also contains a paper that captures the discussions from the closing session of a European conference on decision support issues (January 2001, 128 pages). View or download at <http://clu-in.org/techpubs.htm> . Hard copies available in 2-3 weeks at (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

Data Quality Objectives Process for Hazardous Waste Site Investigations (EPA 600-R-00-007). This document, published by the EPA Office of Environmental Information, is based on the principles and steps developed in Guidance for the Data Quality Objectives Process (QA/G-4) (EPA, 1994b) but is specific to hazardous waste site investigations. This guidance is also consistent with Data Quality Objectives Process for Superfund: Interim Final Guidance (EPA, 1993) and Soil Screening Guidance: User's Guide (EPA, 1996a). Although this document focuses on EPA applications, such as site assessments under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Recovery and Conservation Act (RCRA), this guidance is applicable to programs at the state and local level (January 2000, 143 pages). View or download at <http://clu-in.org/techpubs.htm> .

Technology Status Report: In-Situ Electrokinetic Remediation

of Metal Contaminated Soils (SFIM-AEC-ET-CR-99022). This report was published by the U.S. Army Environmental Center and the DOD Environmental Security Technology Certification Program (ESTCP). This report provides an overview of the current developmental status of electrokinetic remediation for metals contaminated soils. Concerns with its in situ application and issues that require further investigation are identified. The results of a field demonstration conducted at Naval Air Weapons Station (NAWS) Point Mugu are presented to illustrate the concerns with the in situ application of this technology at its current stage of development (July 2000, 30 pages). View or download at

http://www.estcp.org/documents/techdocs/ISERMCS_Report.pdf .

Statistical Estimation and Visualization of Ground-Water Contamination Data (EPA 600-R-00-034). This report, published by the U.S. EPA National Risk Management Research Laboratory, presents methods of visualizing and animating statistical estimates of ground water and/or soil contamination over a region from observations of the contaminant for that region. The primary statistical methods used to produce the regional estimates are nonparametric regression and geostatistical modeling (kriging). A method is proposed for estimating the total amount of contaminant present in a region (August 2000, 59 pages). View or download at http://www.epa.gov/ada/download/reports/epa_600_r00_034.pdf . For a hard copy, contact Kay Cooper at (580) 436-8651 or fax (580) 436-8503.

Physical and Chemical Factors Affecting Contaminant Hydrology in Cold Environments (ERDC/CRREL TR-00-21). This report, produced by the U.S. Army Corps of Engineers, surveys some of the physical and chemical effects of cold temperatures that should be considered when developing a contaminant-transport model. This discussion begins with a working definition of cold regions for the purpose of contaminant hydrology modeling: an area with appreciable frozen ground and with a substantial fraction of the annual precipitation falling as snow. The chemical thermodynamics of geochemical solutions below 0 Centigrade is reviewed. Particular attention is placed on the physical -chemical properties of ice and liquid water at subzero temperatures. Finally, models that estimate the liquid water content and hydraulic conductivity of frozen ground are discussed (December 2000, 37 pages). View or download at

http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR00-21.pdf .

Frozen Soil Barriers for Explosives Containment (ERDC/CRREL TR-00-19). This report was produced by the U.S. Army Corps of Engineers. The specific objectives of this work were to test the efficacy of frozen barriers to restrain movement of RDX, TNT, and

picric acid through soils; test the concept of leaching contaminated soils above a frozen barrier as a method for soil cleanup; and compare the mobility and stability of explosives in an aged, field-contaminated soil versus a freshly contaminated soil (September 2000, 14 pages). View or download at

http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR00-19.pdf .

The Tri-Service Site Characterization and Analysis Penetrometer System-SCAPS: Innovative Environmental Technology from Concept to Commercialization

(SFIM-AEC-ET-TR-99073). This report, published by the U.S. Army Environmental Center, summarizes the development, field demonstration and regulatory acceptance activities associated with the SCAPS technologies that are used to detect, identify and quantify subsurface contamination in soil and groundwater (January 2000, 48 pages). View or download at <http://aec.army.mil/prod/files/scaps99073.pdf> .

CLU-IN's Site Characterization Pages Get a Make-over! Clu-In's Site Characterization section now splits the entries into two broad categories: Technology Tools and Educational Materials.

Technology Tools offers information related directly to selection and application. For example, the Field Analytical Technologies Encyclopedia (FATE) is offered, and links to related pages developed by other government agencies. Programs that specialize in developing and evaluating new site characterization technologies are featured, and links to sources of methods for implementing the tools. The Educational Materials section provides background information and guidance relevant to supporting and implementing smart site characterization. It also includes papers that discuss the policy implications of using innovative techniques and sections on Brownfields, systematic planning, quality assurance, dynamic work plans, statistics, and sampling considerations. Case studies illustrate how these ideas have been applied in the real world, and share lessons learned as site characterization practice undergoes this modernization trend toward faster, cheaper, more accurate, site investigations. See <http://www.clu-in.org/char1.cfm> .

ETV Call for Technologies!! The Environmental Technology Verification (ETV) program Site Characterization and Monitoring Center is interested in testing small diameter (0.75 inch or less) bladder pumps or other sampling devices that are designed for deployment in narrow-diameter, direct-push wells. Criteria for participation in the program include a commercially available technology, willingness to cost share a portion of the testing costs, willingness to participate in the study design process, and a commitment to deploy and operate the technology at one or more

contaminated sites during the verification testing process. If you have a groundwater sampling technology that meets these criteria or would like to refer a technology for verification testing, please contact either Wayne Einfeld, ETV Project Manager at Sandia National Laboratories (505-845-8314, weinfel@sandia.gov) or Eric Koglin, ETV Program Manager (702-798-2432, koglin.eric@epamail.epa.gov).

Conferences and Symposia

SBIR Proposal Preparation Workshop, Philadelphia, March 27. EPA Region III is hosting a free workshop for interested small businesses to learn about EPA's Small Business Innovation Research (SBIR) program and the specific environmental technology needs EPA is including in its upcoming SBIR Solicitation. The EPA solicitation opens on March 29th and closes on May 24th. The workshop will emphasize practical information on critical elements of the program including writing winning proposals, commercialization and sources of assistance. The formal workshop will run from 9:30a.m. to 1:00p.m: onsite registration opens at 9:00a.m. Space at this workshop is limited, so register early to reserve a spot. You may register by calling the Business Assistance Center of the Office of Environmental Innovation at (800) 228-8711 or online at

www.epa.gov/region03/sbac/contact.htm.

Call for Papers!! WTQA 2001, Arlington VA, August 12-16. The Waste Testing and Quality Assurance Conference planners have a call for abstracts that extends until April 1. You are invited to submit an abstract for topics involving sampling, organic methods and analysis, physical property testing, and QA/QC. In addition you are invited to submit abstracts for the following special sessions: PT Issues QA, Air Emission Source Testing & Monitoring, Successful Use of New Field Analytical Technologies, and Analysis of Military-Unique Compounds. Please submit abstracts via the Internet at <http://www.wpi.org/wtqa> , by email to E-mail to eileen_otoole@wpi or fax them to: Ms. Eileen O'Toole, WPI, at (540) 557-6085.

UXO/Countermine Forum 2001, New Orleans, April 9-12. The Forum is DoD's preeminent conference on the technology, programs and partnerships in the UXO and countermine arenas. The conference brings together researchers, developers, manufacturers and policy makers from the state, federal and international arenas to meet and share ideas and progress on UXO and mine detection and clearance. This conference is the right forum to find ways to ensure soldiers, sailors, airmen, marines, and innocent civilians will not be victims of mines and unexploded ordnance. Registration and exhibit

information is available toll-free at 1-888-808-5303; by e-mail at TheForum@tva.gov or <http://www.denix.osd.mil/TheForum> .

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.