

Message #81: November 2003

Welcome to TechDirect. Since the October 1 message, TechDirect gained 237 new subscribers for a total of 17,450. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at <http://clu-in.org/techdirect> . All previous issues of TechDirect are archived there.

The purpose of TechDirect is to identify new technical, policy and guidance resources related to the assessment and remediation of contaminated soil and ground water.

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.

EPA Brownfields Grants Solicitation

The U.S. EPA announced the availability of up to \$100 million in available grants to communities to address local Brownfields properties. EPA prepared guidelines on the application process for three types of grants: assessment; revolving loan fund; and cleanup. The Proposal Guidelines for Brownfields Assessment, Revolving Loan Fund and Cleanup Grants provides guidance to communities that plan to submit one or more types of proposals (October 2003, 65 pages). Proposals for all three grant types are due December 4, 2003. For more information on the grant solicitation and access to the proposal guidelines, see <http://www.epa.gov/swerosps/bf/applicat.htm#pg> .

Internet Seminars

ITRC Characterization and Remediation of Soils at Small Arms Firing Ranges, November 18. This session introduces the participants to the various physical (including hydraulic), chemical, and biochemical mechanisms available to treat or stabilize SAFRs after some unique characterization challenges are overcome. It is based on the ITRC document entitled: "Technical & Regulatory Guidance Document for Small Arms Firing Range Remediation Technologies." For more information and to register see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

NIEHS PCBs Health Effects, November 19. This event, sponsored by the NIEHS Superfund Basic Research Program, will highlight the cutting edge research being conducted by NIEHS scientists into the non-cancer endpoints of exposure to PCBs. Dr. Susan Korrick, of

Harvard University, will review findings from the population-based epidemiologic studies for which prenatal PCB exposure measures are available. The particular emphasis will be on findings related to growth and neurocognitive development in infancy and later childhood. Additionally, Dr. Rita Loch Caruso, of the University of Michigan, will discuss her findings that acute in vitro exposures to commercial PCB mixtures and microbially dechlorinated commercial PCB mixtures increase the frequency of spontaneous contractions of uteri from pregnant rats. For more information and to register, see

<http://clu-in.org/studio> .

New Documents

Superfund Lead-Contaminated Residential Sites Handbook (OSWER 9285.7-50). This Handbook, published by the U.S. EPA Office of Superfund Remediation and Technology Innovation, provides comprehensive reference for project managers addressing lead-contaminated residential sites. The handbook lays out only the minimum considerations and is intended to promote national consistency in characterizing and cleaning up lead-contaminated residential sites. Contents of the handbook include various aspects of the remediation process, from initial research on the nature and extent of site contamination, through cleanup level selection, prevention of recontamination, community involvement and health education programs (August 2003, 196 pages). View or download at

<http://www.epa.gov/superfund/programs/lead/products/handbook.pdf> .

TRW Recommendations for Performing Human Health Risk Analysis on Small Arms Shooting Ranges (OSWER 9285.7-37). This document, published by the U.S. EPA Technical Review Workgroup for Lead, provides guidance and recommendations for performing risk assessment on land currently or formerly used as ranges. This document supplements Region 2's Best Management Practices for Lead at Outdoor Shooting Ranges. This document contains brief discussions of the regulatory background for outdoor shooting ranges and the toxicology of lead on humans, an operational and physical description of the different types of outdoor shooting ranges, and the fate of spent lead ammunition in the environment and its bioavailability. This document also provides recommendations on how the Integrated Exposure Uptake Biokinetic model and the Adult Lead model can be used to predict the risk to human health from spent lead ammunition on small arms shooting ranges (March 2003, 23 pages). View or download at

<http://www.epa.gov/superfund/programs/lead/products/firing.pdf> .

Evapotranspiration Landfill Cover Systems Fact Sheet (EPA

542-F-03-015). This fact sheet, prepared by U.S. EPA's Technology Innovation Program, offers a summary of an innovative final cover design, called evapotranspiration (ET) covers, increasingly being considered as part of the remediation and final closure for landfills, contaminated areas at or near the ground surface, and other waste disposal sites. The fact sheet discusses general considerations in their design, performance, monitoring, cost, current status, limitations on their use, and project-specific examples. As of September 2003, ET covers have been proposed, tested, or installed at 64 sites located throughout the United States, generally from Georgia to Oregon (September 2003, 12 pages). View or download at <http://clu-in.org/techpubs.htm> . Additionally, an on-line database has been available since March 2003 that provides more information about specific projects using ET covers, and is available at <http://clu-in.org/products/altcovers> .

An Illustrated Handbook of DNAPL Transport and Fate in the Subsurface (R&D Publication 113). This report was published by the UK Environment Agency. It describes current understanding of DNAPL fate and transport in the subsurface. It applies those concepts to hydrogeological conditions found in the UK, in order to develop a series of conceptual models of DNAPL behavior following its release into the subsurface environment. It will help practitioners understand the principles of DNAPL fate and transport in the subsurface, and allow improved design of investigation and assessment of DNAPL pollution (June 2003, 67 pages). View or download at http://www.environment-agency.gov.uk/commondata/105385/dnapl_565627.pdf .

Whole-Cell Bacterial Biosensors and the Detection of Bioavailable Arsenic. This document was prepared by Heather Strosnider, a National Network of Environmental Management Studies grantee under a fellowship from the U.S. Environmental Protection Agency. The purpose of this paper is to provide a detailed analysis of whole-cell bacterial biosensors. It investigates the state and practice of using whole cell bacterial sensors for measuring the bioavailability of arsenic (August 2003, 23 pages). View or download at <http://clu-in.org/techpubs.htm> .

On-Site Processing and Subsampling of Surface Soil Samples for the Analysis of Explosives (ERDC/CRREL TR-03-14). This document was published by the U.S. Army Corps of Engineers. The on-site implementation of a sampling and analysis plan for the determination of explosives residues exposed a large uncertainty in our ability to quickly obtain representative subsamples from either large (>500 g) composite and/or large discrete samples. To improve the representativeness of on-site analysis, a simple on-site

processing (grinding and mixing) and subsampling protocol was evaluated. This approach reduces laboratory-subsampling variance for both sparsely vegetated and vegetated surface soils. Moreover, during a subsequent dynamic sampling and analysis effort, this protocol was successful in ranking explosives residue concentrations associated with a specific military training activity (August 2003, 26 pages). View or download at

http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR03-14.pdf .

Estimates for Explosives Residue from the Detonation of Army Munitions (ERDC/CRREL TR-03-16). This document was published by the U.S. Army Corps of Engineers. The objective of this study was to use the systematic approach developed by Jenkins et al. to quantify the explosives residues produced by the high-order detonation of a variety of munitions using accepted military protocols (September 2003, 96 pages). View or download at

http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR03-16.pdf .

Cleaning Up Contaminated Properties for Reuse and REVitalization: Effective TECHNical Approaches and Tools Conference - After Action Information The goal of RevTech conference was to showcase smart strategies for assessment and cleanup to advance reuse and land revitalization programs. The audience included: Local, State and Federal Cleanup and Development Officials; regulators; developers; the financial community; and technology vendors, service providers, and consultants. The after-action information includes the final agenda with presentations; the lists of poster presentations, exhibitors, and technology fair vendors; and abstracts and bio-sketches. For access to this information, see <http://www.brownfieldstsc.org/revtech/index.html> .

Conferences and Symposia

CALL FOR ABSTRACTS!! Accelerating Site Closeout, Improving Performance, and Reducing Costs Through Optimization, Dallas, June 15-17, 2004. This conference, sponsored by member agencies of the Federal Remediation Technologies Roundtable, will outline long-term remediation liabilities and optimization needs and opportunities; disseminate existing and emerging optimization strategies, technologies, tools and science; communicate lessons learned; and present remedial optimization within the context of site wide and multi-site management programs. Abstracts for oral presentations must be submitted by February 6, 2004. For information on how to submit an abstract, a list of abstract topics, and how to register for the conference, please visit

<http://clu-in.org/siteopt/siteopt.htm> .

NGWA Conference on Remediation: Site Closure and the Total Cost of Clean-up, November 13-14, 2003, New Orleans, LA. This conference will focus on actual remediation projects and the costs associated with numerous remediation technologies. Case studies from DoD, DOE, industrial sites, dry cleaner sites, petroleum hydrocarbon sites, and more will be presented. Three concurrent sessions, an industry display area, two workshops, a break-out session, and a field trip are featured. Full proceedings will be published. For more information and to register, see

<http://www.ngwa.org/pdf/e/conf/evsch0311135010.pdf> .

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.