

Message #110: April 2006

Welcome to TechDirect! Since the March 1 message, TechDirect gained 362 new subscribers for a total of 24,786. 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 TechDirect messages of the past can be searched by keyword or can be viewed as individual issues.

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

Special Notices

EPA Small Business Innovation Research (SBIR) solicitation open! EPA invites small business firms to submit research proposals for its SBIR Phase I solicitation. EPA is interested in advanced technologies that address Great Lakes environmental problems, environmental problems in America's Heartland, drinking water and wastewater management for EPA's Office of Water and critical EPA research topics (innovation in manufacturing, nanotechnology, solid and hazardous waste and homeland security). The objective of the EPA Phase I SBIR is to determine the technical feasibility and preliminary commercialization potential of the proposed effort with a relatively small agency investment before consideration of further Federal support in Phase II. The maximum award under this Phase I solicitation is \$70,000 and the term of performance should not exceed six months. The solicitation opened March 23 and closes May 24. See http://es.epa.gov/ncer/rfa/2006/2006_sbir_phase1.html for full details.

Lead Paint Test Kit Development; Request for Comments. EPA published Lead Paint Test Kit Development; Request for Comments in the Federal Register of March 16, 2006 (FRL-7760-3). EPA is seeking information concerning the development of test kits or similar technologies for testing lead in paint that could be used by renovators, repair persons, and painters complying with a future

regulation for renovation, repair, and painting activities. The information will be considered in formulating EPA's policy and research decisions regarding the development of lead paint test kits. The Request for Comments is available under docket ID number EPA-HQ-OPPT-2006-0044 at <http://www.regulations.gov/>. The Request for Comments may also be accessed directly at <http://www.epa.gov/fedrgstr/EPA-TOX/2006/March/Day-16/t3824.pdf> . Comments must be received on or before April 17, 2006. Directions for submitting comments are included in this linked document.

Webcast Seminars

ITRC Constructed Treatment Wetlands - April 4. This course, developed by the Interstate Technology and Regulatory Council (ITRC), is based on Technical and Regulatory Guidance for Treating Storm Water and Wastewater Using Constructed Treatment Wetlands (WTLND-1). It describes the physical, chemical, and biological mechanisms operating in wetlands treatment systems, the contaminants to which they apply, the characteristics of sites suitable to treat in this fashion, and relevant regulatory issues. For more information and to register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

ITRC Perchlorate: Overview of Issues, Status, and Remedial Options - April 6. Improved analytical methodology has increased the known extent of perchlorate contamination in the U.S. A variety of remediation technologies are currently commercially available and being used for perchlorate remediation. This training, based on ITRC's Perchlorate: Overview of Issues, Status, and Remedial Options (PERC-1), explains why perchlorate is a hot topic in the environmental community including up-to-date information on sources, occurrences, toxicity and exposure, regulatory status and remediation alternatives. For more information and to register, see <http://www.itrcweb.org> OR <http://clu-in.org/studio> .

ITRC Characterization, Design, Construction and Monitoring of Bioreactor Landfills - April 11. Bioreactors are landfills where controlled addition of non-hazardous liquid wastes, sludges, or water accelerates the decomposition of waste and landfill gas generation. This training, based on the ITRC's Characterization, Design, Construction, and Monitoring of Bioreactor Landfills (ALT-3, 2006), teaches the principles used to make critical decisions during permitting, operating, and monitoring a bioreactor landfill. This training also provides a general understanding of the biological degradation of solid wastes under aerobic and anaerobic waste conditions and the degradation products associated with each

process. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

ITRC An Overview of Direct-push Well Technology for Long-term Groundwater Monitoring - April 18. Direct-push wells have been used for temporary groundwater monitoring purposes for many years but are generally prohibited for use as long-term groundwater monitoring wells. Recent research indicates that direct-push wells are as well suited for long-term environmental groundwater monitoring purposes as conventionally constructed wells. This training introduces ITRC's The Use of Direct-push Well Technology for Long-term Environmental Monitoring in Groundwater Investigations (SCM-2, 2006), provides a background in the principles of direct-push wells, and presents the state of the art regarding recent research. See related document below. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

ITRC Remediation Process Optimization Advanced Training - April 20. Remediation Process Optimization (RPO) is the systematic evaluation and enhancement of site remediation to ensure that human health and the environment are being protected over the long term at minimum risk and cost. The purpose of this ITRC training is to present an overview of the material covered in five technical fact sheets that ITRC's RPO Team produced to enhance site remediation optimization and decision-making. The training modules provide additional information and techniques to improve project schedules, effectively manage resources, emphasize risk, and discuss tools to efficiently cleanup contaminated sites. For more information and to register, see <http://www.itrcweb.org> Or <http://clu-in.org/studio> .

Introduction to Environmental Insurance and Other Risk Management Tools - May 2. This seminar is designed to be an introductory session on the role environmental insurance and other risk management mechanisms can play in property cleanup and reuse, considering both benefits and limitations. The presentation will provide an overview of risk management and redevelopment approaches, environmental insurance coverage, and negotiating environmental insurance coverage and claims. Real life examples and links to additional resources will also be provided. For more information and to register, <http://clu-in.org/studio> .

New Documents and Web Resources

Superfund and Mining Megasites: Lessons from the Coeur D'alene River Basin. The National Academy of Sciences (NAS) performed an independent evaluation of EPA's scientific and

technical practices related to the Coeur d'Alene Basin Superfund site in northern Idaho. This NAS report outlines the results of their evaluation study. Areas of the cleanup examined include: site characterization, human and ecological assessment, remedial planning and decision-making (December 2005, 504 pages). This document can be downloaded in its entirety or by section at

<http://www.epa.gov/superfund/reports/coeur.htm> .

Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA 600-R-05-123a). This report was published by EPA's Office of Research and Development. It provides guidance to superfund remedial project managers, on-scene coordinators, facility owners, and potentially responsible parties for conducting an air pathway analysis for landfill gas emissions under the Comprehensive Environmental Response, Compensation, and Liability Act, Superfund Amendments and Reauthorization Act, and the Resource Conservation and Recovery Act. The document provides procedures and a set of tools for evaluating LFG emissions to ambient air, subsurface vapor migration due to landfill gas pressure gradients, and subsurface vapor intrusion into buildings (September 2005, 217 pages). View or download at <http://clu-in.org/techpubs.htm> .

Parameter Source Catalog. The Parameter Source Catalog is a web-based, searchable and updatable catalog of existing sources of information on parameters and other data used in pathway modeling for environmental cleanup of sites contaminated with radioactive materials. It was produced under the direction of the Interagency Steering Committee on Radiation Standards (ISCORS). The member agencies are: Environmental Protection Agency, Nuclear Regulatory Commission, and the Departments of Energy, Defense, Human Health and Services, Labor, and Transportation. The Catalog is intended for use by professionals, managers, and others involved or interested in the use of transport/exposure pathway modeling to determine the doses and risks associated with contaminated sites. It provides subject and text search capabilities, and information on parameter definitions, on transport/exposure pathways, and on models and codes. It contains a tutorial for new users, and answers to frequently asked questions. See <http://web.ead.anl.gov/iscors/home.cfm> .

Demonstration Applications of ARAMS for Aquatic and Terrestrial Ecological Risk Assessment (ERDC/EL TR-06-1). This report was published by the U.S. Army Corps of Engineers. The Adaptive Risk Assessment Modeling System (ARAMS) has been developed for the Army to provide the capability to conduct risk assessments associated with exposure to constituents of potential concern. ARAMS provides a reliable and repeatable methodology for

conducting collaborative and comparative risk assessments, thus providing a savings in time and cost for conducting such assessments and potentially leading to significant remediation cost savings by providing more accurate risk-based cleanup targets. The objectives of this study were to describe and demonstrate the application of ARAMS for ecological risk characterization at two field sites, an aquatic site and a terrestrial site (January 2006, 101 pages). View or download at <http://el.ercd.usace.army.mil/elpubs/pdf/trel06-1.pdf> .

The Use of Direct-push Well Technology for Long-term Environmental Monitoring in Groundwater Investigations (SCM-2). This Interstate Technology and Regulatory Council (ITRC) technical/regulatory guidance document presents detailed information related to Direct Push well technology, including the following: a description of Direct Push well technology; equipment and installation requirements; known regulatory barriers and concerns; technology advantages and limitations; health and safety issues; stakeholder involvement; and comparative data between Direct Push and conventionally drilled wells in the form of multiple case studies as they relate to contaminant detection and water level measurements. This document is intended to provide the information required to make an informed decision regarding the use of Direct Push wells for long term groundwater chemistry monitoring and for static ground water levels. View or download at

http://www.itrcweb.org/Documents/SCM_2_ForWeb.pdf . Request a hard copy at at http://www.itrcweb.org/gd_SCM.asp .

Property Revitalization: Lessons Learned from BRAC and Brownfields (BRNFLD-2). This document was published by the Interstate Technology and Regulatory Council. It provides: an overview of the BRAC process; an overview of the brownfield program and associated incentives; an overview of the redevelopment process and property constraints; a discussion of environmental considerations and cleanup processes; and an evaluation of competing interests between economic, environmental, and social impacts when analyzing reuse options; and a discussion of the various solutions and techniques available for the cleanup and reuse efforts (January 2006, 103 pages). View or download at

http://www.itrcweb.org/Documents/Brnflld_2web.pdf . Request hard copies at http://www.itrcweb.org/gd_Brnfllds.asp .

The Legacy of Lindane HCH Isomer Production. This report, published by the International HCH and Pesticides Association, describes the various aspects of the production, management, formulation, storage and disposal of hexachlorocyclohexane (HCH) isomers with particular emphasis on the alpha, beta, delta

and gamma (Lindane) isomers. The production of Lindane is inefficient as for each ton of Lindane 8-12 tons of isomers are produced. These isomers have ended up as hazardous waste which has been discarded in uncontrolled dumps in many places in the world. Although attempts have been made to use these residuals for the production of TCB, HCl and other derivatives most of the attempts have been unsuccessful. A global review has been made, in order to estimate the global amount of HCH-isomers (January 2006, 26 pages). View or download at <http://clu-in.org/techpubs.htm> .

Technology News and Trends newsletter (EPA 542-N-06-002).

This issue of Technology News and Trends highlights innovative technologies used to treat contaminants affecting soil, ground water, and surface water at mining sites. In addition to complex problems associated with acid rock drainage (ARD), these sites typically involve remote locations, limited access, extreme climates, a predominance of heavy metal contaminants, and large volumes of contaminated tailings. The U.S. EPA is working with other federal and state agencies, academia, and private industry to demonstrate innovative technologies and associated performance measures for use at these sites (March 2006, 8 pages). View or download at <http://clu-in.org/techpubs.htm> .

Conferences and Symposia

Reminder! 2006 Design and Construction Issues at Hazardous Waste Sites Conference, Philadelphia, April 19-20. This EPA conference will provide a forum for discussion between the private sector and the federal and state government regarding design and construction issues at hazardous waste sites including effective methods, lessons learned, and application of technologies. EPA anticipates up to eight panel sessions across the topical areas of groundwater, post-construction, and project management. For agenda and registration information, please visit <http://www.rdra.org/construction> .

Long-Term Monitoring Optimization (LTMO) Training (Spring 2006). EPA and the U.S. Army Corps of Engineers are partnering with the states of Georgia, Kansas, Missouri, Nebraska, New Jersey, and South Carolina to offer this important training in four locations Atlanta, GA, Columbia, SC, Trenton, NJ, and Kansas City, KS this Spring. The training provides state and federal regulators with information about new quantitative methods of LTMO for groundwater. Responsible parties have used LTMO techniques at more than 50 sites nationwide and are likely to use them at more sites in the future. It is important for regulators to be familiar with LTMO techniques. Regulators can use these methods to make

appropriate decisions about the optimal location and frequency of groundwater monitoring and about approving changes to groundwater monitoring networks. The training includes information about some of these methods, such as the Monitoring and Remediation Optimization System (MAROS), the Geostatistical Temporal-Spatial algorithm or GTS, and the three-tiered monitoring network optimization (MNO) approach. While the training is designed primarily for state and federal regulators, federal facilities cleanup managers, potentially responsible parties (PRPs), and contractors are welcome to participate. State and federal regulators will receive registration priority. Hands-on training in the use of MAROS also will be provided for a limited number of students at the Atlanta, Trenton, and Kansas City deliveries. For dates and details about each training and to register, visit <http://www.trainex.org>.

2006 Midwestern States Risk Assessment Symposium, Indianapolis, August 21-24. The primary topic is chlorinated solvents. The topic is divided into sessions on Trichloroethylene and Dry Cleaners. Each session will feature nationally prominent speakers. Call for Poster abstracts still open. For more information and to register, see

<http://web.e-enterprise.purdue.edu/wps/portal/Environment/msras> .

National Sustainable Design Expo and Competition, Washington DC, May 9-10. More than 350 college and university students will be on the National Mall competing for EPA's Second Annual P3 (People, Prosperity, Planet) Award. This EPA showcase features novel designs for green buildings, innovative alternative fuel technologies, ideas on rainwater collection, and even options for "greening" the apparel industry. It is an opportunity to see cutting-edge technologies developed by university students and their faculty advisors; learn what nonprofit organizations and government agencies are doing to advance sustainability; and experience sustainable products that are currently available. The competition will culminate in an awards ceremony to recognize those projects selected to receive the EPA's P3 Award, which potentially features a \$75,000 grant. The Green Building Initiative, American Institute of Chemical Engineers, and the International Center for Appropriate and Sustainable Technology will announce separate awards at that time. Additionally, Duke University, in partnership with industry, will announce a new sustainability initiative at the Expo. Go to <http://www.epa.gov/P3> to learn more about the event and competition.

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