



TechDirect, August 1, 2012

Welcome to TechDirect! Since the July 1 message, TechDirect gained 212 new subscribers for a total of 32,191. 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.



TechDirect's purpose 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.

> Upcoming Live Internet Seminars

OSC Readiness Presents...Electro-Plating Process, Cleanup, and Case Study - August 2, 2012, 1:00PM-3:00PM EDT (17:00-19:00 GMT). EPA On-Scene Coordinators (OSC) have addressed abandoned electroplating facilities for decades. In order to understand what the hazardous substances are and where to expect to find them, it is wise to understand the process. The first portion of this webinar will focus on the process, followed by a "composite" case study of about one dozen abandoned electroplating facilities. For more information and to register, see <http://clu-in.org/live>.

OSC Readiness Presents...QA for OSCs - August 9, 2012, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This webinar will focus on quality assurance and how it relates to emergency response and removal actions. Specifically, the following topics will be presented: introduction to quality assurance (QA) and the EPA's QA process, Quality Assurance Project Plan (QAPP) categories, use of the generic QAPP for chemical measurements, generation of screening level data, production of a QA Sampling Report, and how QA can help the OSC. Participants will learn a step-by-step approach to addressing QAPP needs related to emergency response and removal action sites and discover practical recommendations for improving the QAPP preparation phase for emergency response and removal action activities. For more information and to register, see <http://clu-in.org/live>.

ITRC Mine Waste Treatment Technology Selection - August 14, 2012, 2:00PM-4:15PM EDT (18:00-20:15 GMT). ITRC's Mining Waste Team developed the ITRC Web-based Mine Waste Technology Selection site (<http://www.itrcweb.org/miningwaste-guidance/>) to assist project managers in selecting an applicable technology, or suite of technologies, which can be used to remediate mine waste contaminated sites. Decision trees, through a series of questions, guide users to a set

of treatment technologies that may be applicable to that particular site situation. Each technology is described, along with a summary of the applicability, advantages, limitations, performance, stakeholder and regulatory considerations, and lessons learned. Each technology overview links to case studies where the technology has been implemented. In this associated Internet-based training, instructors provide background information then take participants through the decision tree using example sites. Project managers, regulators, site owners, and community stakeholders should attend this training class to learn how to use the ITRC Web-based Mine Waste Technology Selection site to identify appropriate technologies, address all impacted media, access case studies, and understand potential regulatory constraints. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

In-Situ Microcosm Array, A New Tool for In Situ Remediation Tests - August 15, 2012, 2:00PM-4:00PM EDT (18:00-20:00 GMT). In this webinar, we will introduce a new technology, the In-Situ Microcosm Array (ISMA), for conducting multiple treatability studies in saturated subsurface environments (in situ) at the same time, in the same well. Participants will come away with an understanding of the needs and challenges of treatability studies for in situ remediation, of how the ISMA works, how it can address pertinent needs, and what kind of data are generated using this innovative diagnostic downhole device for remedial design. For more information and to register, see <http://clu-in.org/live>.

Brownfields Assessment Grant Guideline - August 16, 2012, 4:00PM-5:00PM EDT (20:00-21:00 GMT). This webinar will focus on the Brownfield Assessment Grant program. Grants in this program cover all brownfield work prior to cleanup including: brownfield inventories; Phase 1 background on a property; Phase 2 sampling to determine extent of contamination at a site; and cleanup planning. Applicants to this program can choose to submit a community wide assessment which designates a target area from which many properties will be chosen for assessment work after the grant is awarded, to site specific property assessments where assessment work will focus on one property. The panel will also review applications from one entity vs. coalition applications. The assessment grants are available only to governmental entities. For more information and to register, see <http://clu-in.org/live>.

ITRC Soil Sampling and Decision Making Using Incremental Sampling Methodology Parts 1 and 2 - August 21 and 28, 2012. This 2-part training course along with ITRC's web-based Incremental Sampling Methodology Technical and Regulatory Guidance Document (ISM-1, 2012) is intended to assist regulators and practitioners with the understanding the fundamental concepts of soil/contaminant heterogeneity, representative sampling, sampling/laboratory error and how ISM addresses these concepts. Through this training course you should learn: basic principles to improve soil sampling results, systematic planning steps important to ISM, how to determine ISM Decision Units (DU), the answers to common questions about ISM sampling design and data analysis, methods to collect and analyze ISM soil samples, the impact of laboratory processing on soil samples, and how to evaluate ISM data and make decisions. In addition this ISM training and guidance provides insight on when and how to apply ISM at a contaminated site, and will aid in developing or reviewing project documents incorporating ISM (e.g., work plans, sampling plans, reports). For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Superfund Redevelopment Initiative Webinar Series: Recognizing the Positive Economic Impacts of Superfund Reuse - August 22, 2012, 2:00PM-4:00PM EDT(18:00-20:00 GMT). Superfund site cleanup and reuse has resulted in restored value to site properties and new economic opportunities for surrounding communities. Communities reuse Superfund sites in many ways new parks, shopping centers, athletic fields, wildlife sanctuaries, manufacturing facilities, residences, new roads and infrastructure centers are just a few examples. Once a site property is ready for reuse,

it can revitalize a local economy with jobs, new businesses, tax revenues and local spending. EPA looks at many types of economic impacts of reuse at Superfund sites, including: number of on-site jobs, annual employment income from on-site jobs, on-site property value information, local property tax revenues, and other economic impacts that are unique to specific sites. This webinar will share the stories of how Superfund Redevelopment is spurring economic growth in three communities. For more information and to register, see <http://clu-in.org/live>.

OSC Readiness Presents...Increasing the Use of Poison Centers for Public Health Surveillance and Response: A CDC and ATSDR Perspective - August 23, 2012, 1:00PM-3:00PM EDT (17:00-19:00 GMT). In this training, representatives from the CDC National Center for Environmental Health will discuss the national surveillance capability to better detect and respond to chemical, environmental, drug, foodborne, biological and radiological exposures and illnesses of potential public health significance using the National Poison Data System (NPDS). The National Poison Data System is owned and operated by the American Association of Poison Control Centers (AAPCC). Since 2001, CDC and AAPCC have developed methods to use NPDS data for near, real-time surveillance of exposures to hazardous substances of potential public health significance. CDC uses NPDS to: improve national surveillance for chemical, environmental, drug, foodborne, biological and radiological exposures and illness of potential public health significance; identify early markers of chemical, environmental, drug, foodborne, biological and radiological events in order to provide an effective and rapid public health response; and identify and track exposures and cases of illness during an emerging or known public health threat. Also to be discussed is the Poison Center and Public Health Collaborations Community of Practice, a platform for federal, state, and local public health agencies, CDC, AAPCC, and regional Poison Centers (PCs) to share ideas, interests and ways to work together to enhance public health hazardous exposure and illness surveillance. As community membership continues to grow, the Community of Practice will increasingly become an invaluable resource in bolstering collaboration between PC and local, state and federal public health department/organizations to improve public health surveillance and practice. The community currently has over 200 members. The Agency for Toxic Substances and Disease Registry (ATSDR) will present "Increasing the use of Poison Centers by the Federal and State Regional Response Team (RRT) in Region 6 to provide medical and public health support". Highlight the development of the Poison Control Activation Guidance document, communication through the RRT6, and the use of the Poison Center 24/7 hotline by the EPA Federal On-Scene Coordinators during a HAZMAT response. For more information and to register, see <http://clu-in.org/live>.

Brownfields Cleanup Grant Guideline - August 23, 2012, 4:00PM-5:00PM EDT (20:00-21:00 GMT). This webinar will go into details about the EPA's Brownfield Cleanup Grant. This grant funds cleanup activities for applicants who: currently own a brownfield site that has met the statutory requirements for liability protection by completing a Phase 1 prior to purchase; has completed a Phase 2; and has completed an analysis for brownfields cleanup alternatives (ABCA). The webinar will go over the guidelines relating to threshold criteria which determine who is an eligible applicant, what brownfield sites are eligible for funding, and community notification of the application. Next the webinar will focus on the ranking criteria which address the need for a brownfield cleanup in your community and description of your project. Audience: Any potential brownfield applicant which includes any governmental entity, nonprofits, and tribes. For more information and to register, see <http://clu-in.org/live>.

NARPM Presents...An Overview of Asbestos - Health Effects, Regulations, Sampling and Analysis, and a Case Study - August 30, 2012, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This presentation will describe EPA's asbestos work from a Superfund perspective, but also will touch on NESHAPs and other regulations that deal with asbestos. A brief overview of health effects will highlight the diseases associated

with asbestos exposure. The presentation also will discuss challenges in addressing asbestos contamination in soil and how EPA recommends sampling at sites contaminated with asbestos. For more information and to register, see <http://clu-in.org/live>.

Brownfields RLF Grant Guideline - August 30, 2012, 4:00PM-5:00PM

EDT(20:00-21:00 GMT). This webinar will go into details about the EPA's Brownfield Revolving Loan Fund grant. This grant funds cleanup activities through grants and loans. Grants can be given to brownfield site owners including nonprofits and governmental entities. Loans can be given to brownfield site owners including nonprofits, governmental entities and private property owners. The webinar will go over the guidelines relating to threshold criteria which determine who is an eligible applicant, fiscal requirements to run a loan program, and community notification of the application. Next the webinar will focus on the ranking criteria which address the need for a brownfield cleanups in your community and description of your revolving loan program. Audience: Any potential brownfield applicant which includes any governmental entity and tribes. For more information and to register, see <http://clu-in.org/live> .

> New Documents and Web Resources

Technology News and Trends (EPA 542-N-12-003). This issue highlights technologies for characterizing and remediating sites with persistent organic pollutants (POPs) such as polychlorinated biphenyls (PCBs), dioxin/furans, and certain pesticides. A total of 22 POPs are now recognized by the Stockholm Convention as having the properties of: remaining intact for exceptionally long periods of time, becoming widely distributed throughout the environment, accumulating in the fatty tissue of living organisms, and posing toxicity threats to humans and wildlife. Historically, cleanup of soil, sediment, and groundwater contaminated with POPs commonly involved excavation, dredging, or ex situ thermal processes followed by offsite disposal. Use of these technologies can result in significant project costs, landfill burdens, potential dispersion of contaminants, and/or combustion-related creation of carcinogens. New alternatives undergoing tests in laboratory or field settings often involve bioremediation, plant-based, or oxygenation technologies (June 2012). View at <http://www.clu-in.org/products/newsletters/tnandt/> .

July 2012 State Coalition for Remediation of Drycleaners Newsletter. The State Coalition for Remediation of Drycleaners (SCRD) produces a newsletter to announce recent events and undertakings. The June 2012 issue discusses the May 2012 SCRDR annual meeting and upcoming events (July 2012, 6 pages). View or download at <http://drycleancoalition.org/download/news0712.pdf> .

EPA's Superfund Program Purchases Renewable Energy Certificates. As part of its Superfund Green Remediation Strategy, the U.S. EPA is identifying methods to achieve the goal of using 100% renewable energy to power Superfund site operations. The goal may be achieved by onsite production of renewable energy, procurement of local green power, and purchase of renewable energy certificates (RECs). EPA's Superfund Program recently purchased 100,000 RECs for 2012 from the Western Area Power Administration, an arm of the U.S. Department of Energy, for electricity used to remediate Superfund sites. The RECs are generated from wind farms constructed in 2009 or later in North Dakota, South Dakota, Iowa, and Minnesota and are Green-e certified. More information at <http://www.epa.gov/superfund/renewableenergy/> .

Groundwater Remedy Optimization Progress Report: 2010 - 2011 (OSWER 9283.1-38). The purpose of this report is to provide a summary and analysis of

progress toward implementation of the site-specific recommendations resulting from independent optimization reviews at Superfund sites. The report summarizes successful implementation strategies, opportunities for improvement, barriers to implementation, and changes in project costs as a result of optimization. This summary report describes implementation of optimization recommendations during calendar years 2010 and 2011 at the 24 sites that have been subject to tracking. The report contains updated information for 14 sites where implementation has continued since the last summary report, as well as 10 sites subject to a more recent review which are being reported for the first time. View or download at

<http://www.epa.gov/superfund/cleanup/postconstruction/optimize.htm> .

Potential Advantages of Reusing Potentially Contaminated Land for Renewable Energy. EPA developed this fact sheet to promote the significant advantages of redeveloping potentially contaminated lands, landfills, and mining sites for renewable energy development, relative to other sites (June 2012, 4 pages). View or download at

http://www.epa.gov/renewableenergyland/docs/contaminated_land_resuse_factsheet.pdf .

A New Solar-Powered Approach for Groundwater Contamination.

Trichloroethylene (TCE), a chlorinated hydrocarbon that is used as an industrial solvent and degreaser, is one of the most common soil and groundwater contaminants in the United States. A research team led by Akram Alshawabkeh, Ph.D., from the Northeastern University Superfund Research Program has developed a new, low-cost strategy for remediating this contaminant. In a study published in the February 2012 edition of Environmental Science & Technology, the researchers outline a novel method that uses iron ions (Fe(II)) along with a palladium (Pd) catalyst to enhance oxidative degradation of TCE, which typically occurs as a side reaction during traditional TCE hydrodechlorination. Their method is particularly suited for sustained treatment of aquifers since a solar-powered system can be engineered for in situ implementation.

View the full research brief at http://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=211 .

Technology Innovation News Survey Corner. The Technology Innovation News Survey contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. Recent issues, complete archives, and subscription information is available at <http://clu-in.org/products/tins/> . The following resources were included in recent issues:

- Modeling and Optimization of GEDIT for In Situ Contaminant Destruction in the Vadose Zone: Final Report Addendum
- Passive Reactive Berm (PRBERM) to Provide Low Maintenance Lead Containment at Active Small Arms Firing Ranges: ESTCP Cost and Performance Report
- In Situ Bioremediation of Energetic Compounds in Groundwater
- Biological Processes Affecting Bioaccumulation, Transfer, and Toxicity of Metal Contaminants in Estuarine Sediments
- In Situ Thermal Remediation of DNAPL Source Zones
- Cryogenic Collection of Complete Subsurface Samples for Molecular Biological Analysis
- Oxygenase-Catalyzed Biodegradation of Emerging Water Contaminants: 1,4-Dioxane and N-Nitrosodimethylamine
- Development of a Portable Surface Enhanced Raman Sensor for Real-Time Detection and Monitoring of Perchlorate and Energetics
- Development of a Protocol and a Screening Tool for Selection of DNAPL Source Area Remediation: ESTCP Cost and Performance Report
- Guide to Phytoscreening: Using Tree Core Sampling and Chemical Analyses to Investigate Contamination in the Groundwater and Soil
- Emerging Contaminants in Groundwater

- The Impacts of Endocrine Disrupters on Wildlife, People and Their Environments: The Weybridge+15 (1996-2011) Report

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 9 resources, events, projects and news items were added to EUGRIS in July 2012. These can be viewed at <http://www.eugris.info/whatsnew.asp> . Then select the appropriate month and year for the updates in which you are interested. The following resource was posted on EUGRIS:

Persistent Organic Pollutants Worldwide Update IHPA Newsletter 23 posted by the International HCH & Pesticides Association. It will cover, among others, the news on science and technology for disposal of obsolete stocks and remediation of POPs contamination, which might be of interest for commercial exploitation both in developed and developing countries. View or download at <http://eugris.info/newsdownloads/IHPA-POPs-Newsletter-No23.pdf>

> Conferences and Symposia

Training Opportunities for Small and Disadvantaged Businesses (SDBs). The U.S. EPA Technology Innovation and Field Services Division (TIFSD) is offering training that is designed to build the technical capacity of SDBs in the site characterization and remediation field. The training is part of an exciting new initiative designed to build the technical capacity of SDBs as they compete for environmental cleanup jobs in a greener workforce. The following courses are scheduled to be offered in 2012: Groundwater High-Resolution Site Characterization, August 7-8 in Boston, MA (<http://trainex.org/HRSC>); Best Management Practices for Site Assessment, Remediation, and Greener Cleanups, August 13 in Denver, CO (<http://trainex.org/BMP-SARGC>); and Triad Training for Practitioners, August 14-16 in Denver, CO (<http://trainex.org/TriadPractitioners>). There are no tuition costs for these courses. Other environmental professionals who may find these courses of interest include EPA, federal, state, and tribal technical project managers and stakeholders involved in the cleanup and reuse of hazardous waste sites. For additional information on this initiative, visit <http://clu-in.org/smallbusiness> .

LNAPLs: Science, Management, and Technology ITRC 2-day Classroom Training, Novi, MI, October 16-17, 2012. Led by internationally recognized experts, this 2-day ITRC classroom training will enable you to develop and apply an LNAPL Conceptual Site Model (LCSM), understand and assess LNAPL subsurface behavior, develop and justify LNAPL remedial objectives including maximum extent practicable considerations, select appropriate LNAPL remedial technologies and measure progress, and use ITRC's science-based LNAPL guidance to efficiently move sites to closure. Interactive learning with classroom exercises and Q&A sessions will reinforce these course learning objectives. For more information and to register, see <http://www.itrcweb.org/crt.asp> .

Call for Poster Abstracts!! Partners in Environmental Technology Technical Symposium & Workshop, Washington, DC, November 27-29, 2012. This event is sponsored by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP). SERDP and ESTCP are the Department of Defense's environmental research and demonstration programs, harnessing the latest science and technology to develop and demonstrate innovative, cost-effective, and sustainable solutions. Abstracts should address technical accomplishments as well as scientific and engineering aspects of the project or technology. Abstracts with a commercial or sales slant will be rejected. The deadline for submitting abstracts for consideration is August 13, 2012. For more information and to submit an abstract, see <http://symposium2012.serdp-estcp.org/Posters> .

NOTE: For TechDirect, 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/techdirect> at any time night or day.

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