

TechDirect, August 1, 2014

Welcome to TechDirect! Since the July 1 message, TechDirect gained 205 new subscribers for a total of 37,619. 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 groundwater.

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.

> Request for Proposals

FY 2015 Brownfields Area-Wide Planning (BF AWP) Grant Guidelines. EPA is announcing the availability of funding to eligible entities who wish to develop an area-wide plan for brownfields assessment, cleanup, and subsequent reuse. This funding is for research, technical assistance, and/or training activities directed to one or more brownfield site(s) located in a specific area (such as a neighborhood, district, local commercial corridor, community waterfront or city block). Each project funded under this grant must result in an area-wide plan which includes specific plan implementation strategies for assessing, cleaning up, and reusing the brownfields site(s) as well as related brownfields and project area revitalization strategies. EPA anticipates awarding approximately 20 projects in total, funded at up to \$200,000 each. Please note that applicants who received a BF AWP grant from EPA in Fiscal Year 2010 or 2013 (FY10 or FY13) are not eligible to apply under this competition. The proposal submission deadline is September 22, 2014. For more information and grant guidelines, see <http://www.epa.gov/brownfields/applicat.htm> .

> Upcoming Live Internet Seminars

If Cells Could Talk, What Would They Tell Us About Environmental Exposures? Applications of Cell-Based Bioanalytical Methods - August 11, 2014, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This two-part seminar will feature Dr. Michael Denison of the University of California Davis Superfund Research Program (SRP) and Dr. Scott Boitano from the University of Arizona SRP, and will focus on applications of cell-based bioanalytical methods to better understand environmental toxicities. The ability of toxic chemicals, such as dioxin-like chemicals and endocrine disruptors, to modulate intracellular receptor-mediated signal transduction is one way that diverse toxicants can produce common responses. In the laboratory, these cellular mechanisms can be taken advantage of and used to develop screening methods to better detect and quantitate such chemicals in a variety of sources to which people may be exposed. Dr. Denison will describe the development, validation, and screening applications of Chemically-Activated Luciferase eXpression (CALUX) cell bioassays. Diseases associated with the airway often contain living cells with compromised cellular physiology. Thus, traditional cellular toxicity assays that measure cell death as a single toxicity endpoint may miss the more subtle sub-cytotoxic changes seen in airway epithelial cells. To better evaluate both cytotoxic and sub-cytotoxic changes, researchers have adapted a human airway epithelial cell line for use in the xCELLigence real time cell analyzer to evaluate concentration- and time-dependent effects of toxic compounds. Dr. Boitano will discuss these findings and how they allow us to better understand the toxicity impact of nanoparticles, metals and metalloids, as well as other toxicants, on airway health and disease. For more information and to register, see <http://clu-in.org/live> .

Military Munitions Support Services - Explosives Safety - August 21, 2014, 1:00PM-4:45PM EDT (17:00-20:45 GMT). This is one of the monthly webinar sessions for the Military Munitions Support Services (M2S2) community. During this session, speakers will provide updates on explosives safety policy, processes, best practices, and incident review. For more information and to register, see <http://clu-in.org/live> .

ITRC Groundwater Statistics for Environmental Project Managers - August 26, 2014, 2:00PM-4:15PM EDT (18:00-20:15 GMT). Statistical techniques may be used throughout the process of cleaning up contaminated groundwater. It is challenging for practitioners, who are not experts in statistics, to interpret, and use statistical techniques. ITRC developed the Technical and Regulatory Web-based Guidance on Groundwater Statistics and Monitoring Compliance (GSMC-1, 2013) and this associated training specifically for environmental project managers who review or use statistical calculations for reports, who make recommendations or decisions based on statistics, or who need to demonstrate compliance for groundwater projects. The training class will encourage and support project managers and others who are not statisticians to: use the ITRC Technical and Regulatory Web-based Guidance on Groundwater Statistics and Monitoring Compliance (GSMC-1, 2013) to make better decisions for projects; apply key aspects of the statistical approach to groundwater data; and answer common questions on background, compliance, trend analysis, and monitoring optimization. ITRC's Technical and Regulatory Web-based Guidance on Groundwater Statistics and Monitoring Compliance (GSMC-1, 2013) and this associated training bring clarity to the planning, implementation, and communication of groundwater statistical methods and should lead to greater confidence and transparency in the use of groundwater statistics for site management. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

> New Documents and Web Resources

Engineering Paper: In Situ Thermal Treatment Technologies: Lessons Learned. The purpose of this paper is to convey useful information gained from approximately 10 years of development and deployment of in situ thermal treatment (ISTT) technologies. This paper is the result of a series of in-depth interviews with U.S. EPA Remedial Project Managers (RPMs) and On-Scene Coordinators (OSCs) and with ISTT vendors whose experience extends beyond federal response action sites to include state-regulated cleanups and Brownfields/voluntary cleanups, as well as international projects. While the focus is on federally-funded cleanup sites, many of the lessons learned will be of interest to RPMs and OSCs who are overseeing potentially-responsible party (PRP)-lead cleanups (May 2014, 46 pages). View or download at <http://clu-in.org/techpubs.htm> .

Redesigned Environmental Response Television Website. Environmental Response Television (ERTV) provides video support to EPA's Environmental Response Team (ERT) by providing broadcast-quality documentary video programs on alternative hazardous waste treatment technologies, unique hazardous waste sites, site investigations, and other ERT activities. ERTV's entire catalog of 129 videos is now available for streaming. Browse and watch at <http://ertvideo.org> .

Evaluating Potential Exposures to Ecological Receptors Due to Transport of Hydrophobic Organic Contaminants in Subsurface Systems (EPA 600-R-10-015). This technical paper recommends several types of screening assessments to evaluate site conditions for the potential to enhance transport of Hydrophobic Organic Contaminants (HOCs), as well as site artifacts that result from inadequate well installation and sampling procedures within a ground-water monitoring network. These assessments are incorporated into a suggested three-tiered decision analysis process that attempts to address all potential mechanisms that can result in HOC transport to surface water. For sites in which a complete exposure pathway exists from ground water to surface water, the paper summarizes a process for using HOC exposure information to estimate risks to ecological receptors (June 2014, 69 pages). View or download at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=219928> .

Radiation Risk Assessment At CERCLA Sites: Q & A (OSWER Directive 9200.4-40). This fact sheet provides an overview of current EPA guidance for risk assessment and related topics for radioactively contaminated CERCLA sites. It provides answers to several commonly asked questions regarding risk assessments at radioactively contaminated CERCLA sites. Also, it provides further guidance that dose assessments should only be conducted under CERCLA where necessary to demonstrate ARAR compliance, and that dose-based ARARs should be 12 mrem/yr or less to be considered protective. In addition it also provides guidance on how to comply with indoor radon standards. This fact sheet supersedes an earlier Q&A from December 1999 (May 2014, 47 pages). View or download at

http://www.epa.gov/superfund/health/contaminants/radiation/pdfs/Rad%20Risk%20QA%20with%20transmit%20memo_June_13_2014.pdf .

Developing a Program for Contaminated Site Management in Low and Middle Income Countries. The objective of this document is to summarize the rationale and the major policy, legislation, regulatory, implementation, and organizational issues involved in creating a contaminated site program, especially for low and middle income countries. It offers alternatives regarding the design and implementation of such a program. It proposes an action agenda of short- and longer-term actions to be considered in forming a contaminated site program, including creation of a national management plan for contaminated sites. In addition to providing some optional approaches for the many policy and programmatic issues, the document provides numerous references from the experience of other country programs for international financial institutions and assistance agencies and country ministry leaders, staff and concerned stakeholders to draw upon in considering program options. This guide recommends developing a national management plan for contaminated sites that addresses goals and objectives for the program, outlines operational procedures, and calls for regular reporting on results and environmental outcomes (May 2014, 65 pages). View or download at

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

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:

- Assessment of the Natural Attenuation of NAPL Source Zones and Post-Treatment NAPL Source Zone Residuals
- Validation of a Novel Bioassay for Low-Level Perchlorate Determination
- Special Series: Passive Sampling Methods for Contaminated Sediments
- Special Series: Ecological Soil Clean-Up Values for Metals
- Hexavalent Chromium Removal: Research Project Report to the California Department of Public Health
- A Risk/Benefit Appraisal for the Application of Nano-Scale Zero-Valent Iron (nZVI) for the Remediation of Contaminated Sites
- Management of Contaminants Stored in Low Permeability Zones: A State-of-the-Science Review
- Frequently Asked Questions about Monitored Natural Attenuation in Groundwater
- Chlorinated Solvent Source Zone Remediation
- Enhanced Knowledge in Mercury Fate and Transport for Improved Management of Hg Soil Contamination

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 2014. 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:

A Risk/Benefit Appraisal for the Application of Nano-Scale Zero Valent Iron (nZVI) for the Remediation of Contaminated Sites (2014). This NanoRem report paper assesses the relative risks and benefits of nZVI usage for in situ remediation, and identify the areas where further investigation might be required. An overview of nZVI use in field, pilot and laboratory trials to date is provided. This

paper supports Milestone 3 of the NanoRem project, and is intended to help stakeholders by providing a basis for evidence-based decisions. View or download from

http://www.nanorem.eu/Stream.aspx?p=/App_Data/docs/user7Gallery/NANOREM%20NZVI%20risk%20benefit%20issues%20paper%20FINAL.pdf

Queensland Government: Managing contaminated land. The Queensland Government in Australia is responsible for ensuring known contaminated sites and sites that have been used for notifiable activities that can lead to potential contamination, are managed in a way that will help prevent environmental and health risks in Queensland. Read about their policies, guidelines and efforts in this collection online. View or download at

<http://www.qld.gov.au/environment/pollution/management/contaminated-land/guidelines/> .

> Conferences and Symposia

Registration Still Open! National Conference on Mining-Influenced Waters: Approaches for Characterization, Source Control and Treatment, Albuquerque, NM, August 12-14, 2014.

Sponsored by the U.S. EPA, this free conference will provide a forum for the exchange of scientific information on current and emerging approaches to assessing characterization, monitoring, source control, treatment and/or remediation of mining-influenced waters. For more information and to register, see <http://www.epa.gov/nrmrl/events/event08142014.html> .

3rd International Conference on Sustainable Remediation 2014, Ferrara, Italy, September 17-19, 2014.

This conference will focus on five topics concerning sustainable remediation: conceptual framing; tools, metrics and indicators; greening remediation, eco-efficient technologies and opportunities from synergy; case studies; and stakeholder involvement and participative approaches. For more information and to register, see <http://www.sustrem2014.com/> .

LNAPLs: Science, Management, and Technology - ITRC 2-day Classroom Training, Richmond, VA, October 29-30, 2014. 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 local, state, and federal government; students; community stakeholders; and tribal representatives, ITRC has a limited number of scholarships (waiver of registration fee only) available.

For more information and to register, see <http://www.itrcweb.org/training> .

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. To unsubscribe, send a blank email to [\\$subst\('Email.UnSub'\)](mailto:$subst('Email.UnSub')). 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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