

TechDirect, May 1, 2014

Welcome to TechDirect! Since the April 1 message, TechDirect gained 249 new subscribers for a total of 37,158. 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 Comments

EPA Solicits Public Comments on Action Plan for RE-Powering America's Land.

The U.S. EPA is seeking public comments on the draft action plan for its RE-Powering America's Land Initiative. The plan guides EPA's efforts over the next two years to encourage renewable energy development on current and formerly contaminated lands, landfills and mine sites when such development is aligned with the community's vision for the site. The cleanup of contaminated land and the production of renewable energy will provide long-term improvements to air quality in communities, while protecting public health. In 2010, the RE-Powering America's Land Initiative published its first management plan to provide a useful framework to engage stakeholders on the potential to site renewable energy on contaminated lands and track progress. This second action plan, Action Plan 2.0, identifies activities planned for the next two years. The agency will solicit comments for 30 days. Comments on the proposed plan are due by Friday, May 30. To submit a comment, please send to cleanenergy@epa.gov. A copy of the draft Action Plan 2.0 is available at http://www.epa.gov/oswercpa/action_plan.htm .

> Upcoming Live Internet Seminars

Soil Amendment Applications and Mine Site Restoration Impacts on Soil Ecosystem Services - May 7, 2014, 1:00PM-3:00PM EDT (17:00-19:00 GMT).

The next webinar in our CLU-IN mining webinar series will address topics in soil remediation and restoration. Presenters will discuss their research on the use of soil amendments, the impact of soil restoration at mine sites on ecosystem function and services, and deliberate decision-making in site restoration that benefits the whole ecosystem. Dr. Sally Brown will discuss how using residuals led to the development of new soil at a Jasper County, MO Superfund site. Her research team amended mine tailings at the site in the late 1990s and completed sampling in 2012. Dr. Brown will discuss the successful use of residuals at the site, as well as the ecological and economic values of using residuals even when replacement topsoil is readily available. The significance of considering the final fate of the site using a life cycle assessment will also be discussed. Andrew Trlica will present his research that measured soil carbon storage in former surface mines under long-term reclamation. He compared areas reclaimed with biosolids-based soil amendments with areas reclaimed using

conventional approaches. This study went on to use a life cycle assessment approach to examine the relative greenhouse gas balance and other ecosystem effects of different land reclamation strategies (for example, restoring a site to a low density residential use in comparison with restoring to a forest). 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 - May 13 and 15, 2014. 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 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> .

ITRC Mining Waste Treatment Technology Selection - May 20, 2014,

2:00PM-4:15PM EDT (18:00-20:15 GMT). ITRC's Mining Waste Team developed the ITRC Web-based Mining Waste Technology Selection site 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 Mining 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> .

ITRC Biochemical Reactors for Treating Mining Influenced Water - May 22, 2014,

11:00AM-1:15PM EDT (15:00-17:15 GMT). Mining influenced water (MIW) includes aqueous wastes generated by ore extraction and processing, as well as mine drainage and tailings runoff. MIW handling, storage, and disposal is a major environmental problem in mining districts throughout the U.S and around the world. Biochemical reactors (BCRs) are engineered treatment systems that use an organic substrate to drive microbial and chemical reactions to reduce concentrations of metals, acidity, and sulfate in MIWs. The ITRC Biochemical Reactors for Mining-Influenced Water technology guidance (BCR-1, 2013) and this associated Internet-based training provide an in-depth examination of BCRs; a decision framework to assess the applicability of BCRs; details on testing, designing, constructing and monitoring BCRs; and real world BCR case studies with diverse site conditions and chemical mixtures. At the end of this training, you should be able to complete the following activities: describe a BCR and how it works; identify when a BCR is applicable to a site; use the ITRC guidance for decision making by applying the decision framework; improve site decision making through understanding of BCR advantages, limitations, reasonable expectations, regulatory and other challenges; and navigate the ITRC Biochemical Reactors for Mining-Influenced Water technology guidance (BCR-1, 2013). For more information

and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live> .

> New Documents and Web Resources

Checklist: How to Address Changing Climate Concerns in an Analysis of Brownfield Cleanup Alternatives (ABCA) (EPA 560-Q-14-001). Our climate is changing and we need to adapt to make sure brownfield cleanups are still protective of human health and the environment now and into the future. To ensure that brownfield cleanups remain effective as the climate changes EPA has added a new term and condition to its cooperative agreements, starting with the FY13 Cleanup and Revolving Loan Fund (RLF) Grants, that requires recipients to "evaluate the resilience of the remedial options in light of reasonably foreseeable changing climate conditions (e.g., sea level rise, increased frequency and intensity of flooding and/or extreme weather events, etc.)." EPA has created an Analysis of Brownfield Cleanup Alternatives (ABCA) checklist to help these Cleanup and RLF grant recipients meet this new term and condition. View or download at

http://www.epa.gov/brownfields/sustain_plts/factsheets/EPA_OBLR_Climate_Adaptation_Checklist.pdf .

Sedimentary, My Dear Watson. Passive Sampling Methods and Sediment Remediation (Podcast). The management of contaminated sediment is often expensive and time-consuming, involving millions of dollars over many years at a single site. However, an easier solution may be coming to a regulatory agency near you. Passive sampling methods offer several advantages over traditional remediation and monitoring techniques, and are the focus of this podcast episode (12 minutes). Listen at

http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291551-3793/homepage/ieam_podcast_15.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:

- Framework for Site Characterization for Monitored Natural Attenuation of Volatile Organic Compounds in Ground Water
- RCRA Corrective Action: Case Studies Report
- Report of the United States Embassy Science Fellows Support to the Government of Japan, Ministry of the Environment: Observations and Commentary on Remediation of the Lands Off-Site from the Fukushima Daiichi Reactors
- Use of Compound-Specific Stable Isotope Analysis to Distinguish between Vapor Intrusion and Indoor Sources of VOCS
- Use of On-Site GC/MS Analysis to Distinguish between Vapor Intrusion and Indoor Sources of VOCs
- Treatment of N-Nitrosodimethylamine (NDMA) in Groundwater Using a Fluidized Bed Bioreactor
- Soil, Plant, and Terrain Effects on Natural Perchlorate Distribution in a Desert Landscape
- Vapor Intrusion (VI) Exposures: The Challenges of, Need for, and Benefits of Long Term Stewardship
- Environmental Impact Of Priority Contaminants: A Literature Review
- A History of Manufactured Gas Plants and New York State Electric & Gas Corporation's Role in the Industry, 1800s-Present
- Reference Guide to Treatment Technologies for Mining-Influenced Water

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 20 resources, events, projects and news items were added to EUGRIS in April 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:

TIMBRE Information System for Brownfield Regeneration (2014). TIMBRE, Tailored Improvement for Brownfield Regeneration in Europe ♦ aims to support end-users in overcoming existing barriers by developing and providing customised problem- and target-oriented packages of technologies, approaches and management tools for a megasite ♦s reuse planning and remediation. It is a web based expert system search engine to provide access to all the available information concerning brownfields and is coordinated by the Helmholtz-Centre for Environmental Research - UFZ, Leipzig. View or download at <http://www.timbre-project.eu> .

> Conferences and Symposia

LNAPLs: Science, Management, and Technology - ITRC 2-day Classroom Training offered two more times in 2014: Lexington, KY (June 3-4) and Richmond, VA (October 29-30). 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> .

General Session Webinar Registration Still Open!! 2014 TRI National Training Conference, Arlington, VA, May 7-9, 2014. General session webinar registration is still open for the 2014 National Training Conference on the Toxics Release Inventory (TRI) and Environmental Conditions in Communities, which will be held May 7-9, 2014 at the Hilton Crystal City in Arlington, VA. The Dillard University Deep South Center for Environmental Justice and the U.S. EPA are co-sponsoring the conference, which aims to promote greater participation, collaboration, community awareness, and public involvement regarding data on toxic chemical releases and related environmental information. This year's conference agenda includes sessions on current and emerging right-to-know issues, pollution prevention, community engagement, tools and data, and environmental public health from a diverse group of presenters. For more information and to register, see <http://www2.epa.gov/toxics-release-inventory-tri-program/2014-national-training-conference> .

Call for Abstracts!! 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. Abstracts for presentations and posters may be submitted electronically at <http://www.sustrem2014.com/mail.php> through May 14, 2014. For more information, visit <http://www.sustrem2014.com/> .

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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