TechDirect, November 1, 2014

Welcome to TechDirect! Since the October 1 message, TechDirect gained 421 new subscribers for a total of 38,304. 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

Funding Available for 2015 Brownfields Assessment and Cleanup Grants. These brownfields grants may be used to address sites contaminated by petroleum and hazardous substances, pollutants, or contaminants (including hazardous substances co-mingled with petroleum). Opportunities for funding are as follows: Brownfields Assessment Grants (each funded up to $200,000 over three years; Assessment Coalitions are funded up to $600,000 over three years) and Brownfields Cleanup Grants (each funded up to $200,000 over three years). Please note that applicants who received an Assessment grant from EPA in Fiscal Year 2014 (FY14) are eligible to apply under this competition. If the applicant was a member of a coalition that was awarded a grant in FY14, that applicant is also eligible to apply under this assessment competition. The proposal submission deadline is December 19, 2014. EPA will provide one guideline outreach webinar on November 5, 2014 at 2:00PM EST (19:00 GMT). The purpose of this training webinar is to assist applicants with understanding the Assessment and Cleanup Grant Guidelines and in applying for the grants. Join the webinar at https://epa.connectsolutions.com/fy15brownfields and/or via conference call: 1-866-299-3188, access code: 2025661817#. For more information and to view the grant guidelines, see http://www.epa.gov/brownfields/applicat.htm.

> Upcoming Live Internet Seminars

ERT Presents Development of Ecological Preliminary Remediation Goals - November 3, 2014, 1:00PM-3:00PM EST (18:00-20:00 GMT). This seminar provides an overview of Ecological Preliminary Remediation Goals (PRGs) for common terrestrial and aquatic receptors. The seminar begins with a general discussion and background information about ecological PRGs. Topics included in the presentation include description of performance measures, criteria with which PRGs must comply, how PRGs are derived and used, and how background is incorporated into the PRG process. In addition, there will be a brief discussion pertaining to how risk management in considered in the PRG process. 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 - November 4 and 6, 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.

Overview of New EPA Superfund Groundwater Guidance and Tools - November 4, 2014, 12:30PM-1:30PM EST (17:30-18:30 GMT). Groundwater remediation is a component of more than 90 percent of active Superfund sites and achieving remedial action objectives can take years or even decades. Collectively federal agencies, states and potentially responsible parties (PRPs) spend hundreds of millions of dollars each year to address contaminated groundwater. Given the importance of groundwater, the challenges and costs associated with groundwater remedies, the EPA has recently issued a new suite of guidance and tools to help focus resources on the information and decisions needed to effectively complete groundwater remedies and to ensure that these remedies protect human health and the environment. This 1 hour webinar will describe the benefits and utility of the following recently issued EPA guidance and tools: Guidance for Evaluating Completion of Groundwater Restoration Actions (Nov. 2013), Groundwater Remedy Completion Strategy (May 2014), Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions at a Groundwater Monitoring Well (Aug. 2014), and Groundwater Statistical Tool (Aug. 2014). The above EPA groundwater guidance and other resources are available on EPA's website at http://www.epa.gov/superfund/health/conmedia/gwdocs/. Participants may also be interested in the CLU-IN seminar on Evaluating Completion of Groundwater Restoration Remedial Actions on November 12, 2014. For more information and to register, see http://clu-in.org/live.

NARPM Presents...Evaluating Completion of Groundwater Restoration Remedial Actions - November 12, 2014, 1:00PM-3:00PM EST (18:00-20:00 GMT). This session is designed to assist RPMs, EPA technical support staff, and states in understanding EPA's new guidance for evaluating remedial action completion for groundwater restoration projects. The training will be based on the "Guidance for Evaluating Completion of Groundwater Restoration Remedial Action," November 2013; "Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions," August 2014; and the Groundwater Statistical Tool, August 2014. This training will assist participants in understanding how groundwater contaminant well data and site-specific conditions may be evaluated to assess whether restoration of a contaminated aquifer is complete. By taking this webinar, participants will achieve the following objectives: understand EPA's recommendations for determining if a groundwater restoration remedial action is complete; understand recommendations for evaluating contaminant of concern concentration levels on a well-by-well basis; be exposed to the groundwater statistics tool and understand how it may be used to evaluate well-specific data; and understand how well-specific conclusions may be used to make a determination that the restoration remedial action is complete. For more information and to register, see http://clu-in.org/live.

ITRC Project Risk Management for Site Remediation - November 13, 2014, 11:00AM-1:15PM EST (16:00-18:15 GMT). Remediation Risk Management (RRM) is a

course of action through which all risks related to the remediation processes (site investigations, remedy selection, execution, and completion) are holistically addressed in order to maximize the certainty in the cleanup process to protect human health and the environment. Remediation decisions to achieve such a goal should be made based on threshold criteria on human health and ecological risks, while considering all the other potential project risks. Through this training course and associated ITRC Technical and Regulatory Guidance Document: Project Risk Management for Site Remediation (RRM-1, 2011), the ITRC RRM team presents tools and processes that can help the site remediation practitioner anticipate, plan for, and mitigate many of the most common obstacles to a successful site remediation project. Examples of project risks include remediation technology feasibility risks; remedy selection risks; remedy construction, operation and monitoring risks; remedy performance and operations risks; environmental impacts of systems during their operation; worker safety risk, human health and ecological impacts due to remedy operation; as well as costs and schedules risks including funding and contracting issues. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live.

Mining Remediation and Sustainability - November 17, 2014, 2:00PM-4:00PM EST (19:00-21:00 GMT). This webinar features three presentations delivered at the 2014 National Conference on Mining Influenced Waters (MIW). The session highlights EPA's efforts to identify lower-maintenance and innovative MIW treatment technologies, work being conducted by the International Network for Acid Prevention (INAP), and efforts undertaken by Barrick Gold Corporation to clean up and implement best industry practices at a mining-impacted river in the Dominican Republic. For more information and to register, see http://clu-in.org/live.

NARPM Presents...Interactions between Superfund and RCRA - Case Studies and Review - November 18, 2014, 1:00PM-3:00PM EST (18:00-20:00 GMT). The interface between RCRA and Superfund is diverse, whether it is waste analysis and disposal or an adjacent RCRA Corrective Action site with co-mingling plumes. The goal of this webinar is to inform Superfund RPMs, and others, of the RCRA process be it regulation, guidance or personal interactions between the programs. Case studies from Superfund RPMs and RCRA Corrective Action PMs will provide real world examples of this interaction. In addition, a high-level overview of RCRA is provided to set up each case study example. For more information and to register, see http://clu-in.org/live.

Porewater Concentrations and Bioavailability: How You Can Measure Them and Why They Influence Contaminated Sediment Remediation - Sessions II, III, and IV - November 19, December 1 and 15, 2014. NARPM Presents and Risk e-Learning are offering a four-part webinar series to help you understand why, how, and when to measure porewater concentrations and bioavailability as part of contaminated sediment assessment and management. Hosted jointly by the EPA Contaminated Sediments Forum and the National Institute of Environmental Health Science's Superfund Research Program, this webinar series will also focus on the use of passive sampling devices (PSD) and what they tell us about contaminant bioavailability. Previously held as a course at the National Association for Remedial Project Managers (NARPM) Training Program meeting, the webinar series features experts in the field of porewater and bioavailability and includes lectures and case studies, including practical tips to maximize the utility of porewater and bioavailability measurements. Presenters will explain the basics of chemical fate, transport, and uptake, with a focus on porewater as a key route of exposure and a strong indicator of bioavailability. PSDs are a promising technology for measuring porewater concentrations and assessing bioavailability, particularly for common sediment contaminants such as polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlorinated pesticides, and dioxin-like compounds. The webinar series will include information about direct measurements of porewater, such as centrifuging sediment samples or Henry Samplers, which may also be used and are particularly useful for measuring metals.

For more information and to register, see http://clu-in.org/live.

SERDP and ESTCP Webinar, Novel Sampling Approaches for Improving the Management of Contaminated Sediment Sites - November 20, 2014, 12:00PM-1:30PM EST (17:00-18:30 GMT). The third scheduled event in the SERDP and ESTCP webinar series will be held on Thursday November 20 and will feature Dr. Philip Gschwend (MIT) and Dr. Bart Chadwick (SPAWAR Systems Center Pacific) who will discuss new sampling tools and approaches for improving the characterization and informing the remediation of contaminated sediments. Specifically, the presenters will discuss the use of an in-situ friction-sound probe for mapping particle size at contaminated sediment sites as well as the use of passive sampling in support of remediation at these sites. To view presentation abstracts and speaker biographies, and to register for this free webinar, please visit the SERDP and ESTCP website at http://www.serdp-estcp.org/Tools-and-Training/Webinar-Series/11-20-2014.

ITRC Integrated DNAPL Site Strategy - December 2, 2014, 2:00PM-4:15PM EST (19:00-21:15 GMT). The ITRC Integrated Dense Nonaqueous Phase Liquid Site Strategy (IDSS-1, 2011) technical and regulatory guidance document will assist site managers in development of an integrated site remedial strategy. This course highlights five important features of an IDSS including: a conceptual site model (CSM) that is based on reliable characterization and an understanding of the subsurface conditions that control contaminant transport, reactivity, and distribution; remedial objectives and performance metrics that are clear, concise, and measurable; treatment technologies applied to optimize performance and take advantage of potential synergistic effects; monitoring based on interim and final cleanup objectives, the selected treatment technology and approach, and remedial performance goals; and reevaluating the strategy repeatedly and even modifying the approach when objectives are not being met or when alternative methods offer similar or better outcomes at lower cost. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

NARPM Presents...ICs in Decision Documents - December 3, 2014, 2:00PM-3:30PM EST (19:00-20:30 GMT). Join in this seminar to learn about effective documentation of Institutional Controls (ICs) in Superfund decision documents. This webinar will help Remedial Project Managers (RPMs) and IC Coordinators better understand the specific requirements for formally documenting ICs in Explanation of Significant Differences (ESD), Record of Decision (ROD) Amendments, and RODs. Participants will hear both the regional and headquarters' perspective on the appropriate use of ICs in remedy decisions and be provided with site-specific examples. The presenters will identify the expectations of the NCP, as well as explore additional policy and guidance to assist RPMs in documenting ICs. Finally, participants will understand how properly documented ICs can help ensure meaningful public involvement as well as facilitate the development of the Institutional Control Implementation and Assurance Plans (ICIAPs). For more information and to register, see http://clu-in.org/live.

> New Documents and Web Resources

Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management. Petroleum Vapor Intrusion (PVI) is the process by which volatile petroleum hydrocarbons (PHCs) released as vapors from light nonaqueous phase liquids (LNAPL), petroleum-contaminated soils, or petroleum-contaminated groundwater migrate through the vadose zone and into overlying buildings. This ITRC guidance document uses a scientifically-based approach to support improved decision making at potential petroleum vapor intrusion (PVI) sites by employing an eight-step

process. By applying this approach, decision makers can confidently screen out sites, and therefore focus limited resources on the small fraction of petroleum-contaminated sites that warrant vapor control or additional site management. This ITRC guidance complements the ongoing work of U.S. EPA Office of Underground Storage Tanks (OUST) in addressing the PVI pathway (October 2014, 388 pages). View or download at http://www.itrcweb.org/PetroleumVI-Guidance/. For more information on 2015 dates for the corresponding Internet-based training course, see http://www.itrcweb.org/Training/ListEvents?TopicID=28&SubTopicID=48.

Research Brief: Measuring Vapor Intrusion to Estimate Underground Contamination. Vapor intrusion involves the movement of contaminants from beneath a home or a business up into the air inside the building. The vapor source is typically groundwater that contains low to moderate concentrations of either chlorinated solvents, such as trichloroethylene (TCE), or petroleum-related compounds, such as benzene. The importance of measuring vapor intrusion is that even in low concentrations, long-term exposure to these volatile chemicals may pose an unacceptable risk of chronic health effects. Scientists from the Brown University Superfund Research Program have taken a step toward providing a simpler, accurate screening method to determine whether chemicals in underground sources are seeping into buildings and contaminating indoor air. The researchers developed process models to predict the concentrations of vapors that enter indoor environments. Results from the process models were consistent with advanced computer modeling techniques. For more information, see http://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=238.

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:

- Vapor Intrusion from Entrapped NAPL Sources and Groundwater Plumes: Process Understanding and Improved Modeling Tools for Pathway Assessment
- Rhizosphere Bacterial Degradation of RDX: Understanding and Enhancement
- Floating Treatment Wetlands (FTWS) in Water Treatment: Treatment Efficiency and Potential Benefits of Activated Carbon
- Proceedings of the 23rd Annual International Conference on Soil, Water, Energy & Air, 18-21 March 2013, San Diego, CA: Selected Manuscripts
- Fire Fighting Foams with Perfluorochemicals: Environmental Review

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 11 resources, events, projects and news items were added to EUGRIS in October 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:

Nuclear Site Remediation and Restoration during Decommissioning of Nuclear Installations (Nuclear Energy Agency, 2014). This report, prepared by the Task Group on Nuclear Site Restoration of the NEA Co-operative Programme on Decommissioning, highlights lessons learned from remediation experiences of NEA member countries that may be particularly helpful to practitioners of nuclear site remediation, regulators and site operators. It provides observations and recommendations to consider in the development of strategies and plans for efficient nuclear site remediation that ensures protection of workers and the environment. View or download at http://www.oecd-nea.org/rwm/pubs/2014/7192-cpd-report.pdf

> Conferences and Symposia

LNAPLs: Science, Management, and Technology - ITRC 2-day Classroom Training, Denver, CO, April 7-8, 2015; Seattle (area), WA, September 15-16, 2015; Austin, TX, November 18-19, 2015. 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.

Call for Abstracts! 8th Symposium on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April 15-17, 2015. The applications of engineering and science associated with cleaning up hazardous waste sites continue to evolve rapidly. The goal of this symposium, co-sponsored by U.S. EPA, is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues affecting our field. Abstracts are being accepted through November 21, 2014 in the following topic areas: project management, technology, lessons learned and case studies, and new approaches for hazardous waste cleanups. For more information and to view the call for abstracts, see https://www.regonline.com/builder/site/tab1.aspx?EventID=1609144.

Call for Abstracts! 13th International UFZ-Deltares Conference on Sustainable Use and Management of Soil, Sediment and (Ground)Water Resources (AquaConSoil), Copenhagen, Denmark, June 9-12, 2015. The 13th International AquaConSoil Conference will focus on sustainable use and management of soil, sediment and water resources through four themes: dealing with contamination of soil, groundwater and sediment; soil, groundwater and sediment in the biobased, circular economy; managing multiple functions of the subsurface; and the role of the subsurface in climate change adaptation. It will provide opportunities for scientists, companies and policy makers to extend and enforce their network, start new cooperation activities and be informed of the latest developments in the field of sustainable use and management of soil, sediment and water resources. The call for abstracts is open until November 30, 2014. For more information and to submit an abstract, see http://www.aquaconsoil.org/themes--call.html.

Call for Ideas Extended! 2015 National Brownfields Training Conference, Chicago, IL, September 2-4, 2015. Your ideas for interactive, insightful, and engaging educational sessions are being sought for Brownfields 2015. Submit your ideas for educational sessions tailored to encourage conversations and participation from attendees. The conference planning committee is looking for ideas in the following topic areas/tracks: Moving Forward: How Do We Get from Ideas and Plans to Assessment and Cleanup; Heavy Lifting: Leveraging Available Financing to Spur Brownfields Redevelopment; Put on Your Marketing Hat: Real Estate and Development; Planning for a Better Environment; Working Toward a Sustainable Future; Making a Visible Difference in Communities; Worry Beads: How to address Liability and Avoid Enforcement; Launching a New Era of State, Tribal, and Local Partnerships. The call for ideas is open until December 8, 2014. For more information and to submit your idea, see http://www.brownfieldsconference.org/en/education/call_for_ideas.

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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