TechDirect, June 1, 2014

Welcome to TechDirect! Since the May 1 message, TechDirect gained 183 new subscribers for a total of 37,276. 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.

> Upcoming Live Internet Seminars

Benchmark Dose Modeling Training - June 3-5, 2014. EPA wants to bring the Benchmark Dose Modeling training and tutorial to CLU-IN members. This is a 6 module training covering all aspects of this modeling tool. Intended audience is risk assessors. For more information and to register, see http://clu-in.org/live .

ITRC Use and Measurement of Mass Flux and Mass Discharge - June 10, 2014, 2:00PM-4:15PM EDT (18:00-20:15 GMT). The ITRC technology overview, Use and Measurement of Mass Flux and Mass Discharge (MASSFLUX-1, 2010), and associated Internet-based training provide a description of the underlying concepts, potential applications, description of methods for measuring and calculating, and case studies of the uses of mass flux and mass discharge. This Technology Overview, and associated Internet-based training are intended to foster the appropriate understanding and application of mass flux and mass discharge estimates, and provide examples of use and analysis. The document and training assumes the participant has a general understanding of hydrogeology, the movement of chemicals in porous media, remediation technologies, and the overall remedial process. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

ITRC Integrated DNAPL Site Strategy - June 12, 2014, 11:00AM-1:15PM EDT (15:00-17:15 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 measureable; 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 .

Frequently-Asked Questions about Monitored Natural Attenuation in

Groundwater - June 13, 2014, 1:30PM-3:00PM EDT (17:30-19:00 GMT). The talk will highlight a recently-published guidance document that uses the Frequently Asked Questions (FAQs) format to provide a concise overview of current knowledge regarding management of subsurface contaminant releases using monitored natural attenuation (MNA). The envisioned audience includes state regulators, federal regulators, industry, consultants, DoD staff, and members of the local community involved in selecting remedies for contaminated sites. The intended value of the document is to provide current knowledge in support of sound decisions. In the interest of brevity, the FAQs assume that the reader has a general understanding of hydrogeology, the movement of chemicals in porous media, remediation technologies, and the remedy selection process. The FAQ for MNA was inspired by the fact that it has been over a decade since publication of *Natural Attenuation of Fuels and Chlorinated Solvents* which was co-authored by one of the FAQ authors (Newell). While still useful for certain topics, by 2014 it was missing several important advances in characterization, data interpretation, and regulatory thinking that are now mainstays of MNA. The FAQ for MNA is an attempt to identify and highlight the important advances that have occurred since 1999. As part of the webinar, Dr. John Wilson, formally of USEPA and now with Scissortail Environmental, will be interviewed and give his perspective about how MNA fits into today's remediation projects. For more information and to register, see http://clu-in.org/live .

ITRC Green & Sustainable Remediation - June 17, 2014, 2:00PM-4:15PM EDT (18:00-20:15 GMT). Many state and federal agencies are just beginning to assess and apply green and sustainable remediation (GSR) into their regulatory programs. This training provides background on GSR concepts, a scalable and flexible framework and metrics, tools and resources to conduct GSR evaluations on remedial projects. The training is based on the ITRC's Technical & Regulatory Guidance Document: Green and Sustainable Remediation: A Practical Framework (GSR-2, 2011) as well as ITRC's Overview Document, Green and Sustainable Remediation: State of the Science and Practice (GSR-1, 2011). Beyond basic GSR principles and definitions, participants will learn the potential benefits of incorporating GSR into their projects; when and how to incorporate GSR within a project's life cycle; and how to perform a GSR evaluation using appropriate tools. In addition, a variety of case studies will demonstrate the application of GSR and the results. The training course provides an important primer for both organizations initiating GSR programs as well as those organizations seeking to incorporate GSR considerations into existing regulatory guidance. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

Military Munitions Support Services - MMRP Tools - June 24, 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 make presentations on a variety of topics relative to the latest updates on successful use of MMRP tools such as VSP, UXO Estimator, and advanced classification. For more information and to register, see http://clu-in.org/live .

ITRC Groundwater Statistics for Environmental Project Managers - June 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 .

CEC Preliminary Assessment/Site Inspection (PA/SI) Webinar Series - June 30, July 2, 7, 9, 11, 14, 21, 28, 30. The CERCLA Education Center (CEC) is offering a nine-part Preliminary Assessment and Site Inspection (PA/SI) Webinar Series in June and July 2014. PA/SI is an intermediate training course designed for personnel who are required to compile, draft and review PA, SI and HRS documentation records and packages submitted for sites proposed for the National Priorities List (NPL). **This course is open to EPA, federal, state, tribal and contractor personnel who support site investigation programs.** The PA/SI Webinar Series provides an introduction to the Superfund site assessment process and describes the preliminary assessment and site inspection phases of this process. The course will incorporate a mix of lecture and exercises using Quickscore for each of the four pathways. The objective of the exercise is to give participants the opportunity to evaluate and score PA information using the HRS Quickscore software. Participants will use information from a fictitious site to (1) evaluate and calculate a preliminary HRS score, and (2) develop release and target hypotheses that should be pursued in an SI. In order to receive credit for taking the course, participants must participate in each session. If you are unable to make one of the sessions, archived versions will be made available at www.clu-in.org that you can take to receive credit for the missed live session. In order to receive credit for a missed session, you must complete the missed session within 2 months of the originally scheduled date and submit an evaluation form from that archived module. For more information and to register, see http://clu-in.org/live .

> New Documents and Web Resources

EPA Issues New Groundwater Guidance Document. The Office of Superfund Remediation and Technology Innovation and the Federal Facility Restoration and Reuse Office recently issued a new groundwater guidance document, the *Groundwater Remedy Completion Strategy* (OSWER Directive 9200.2-144). Its purpose is to help focus resources on the information and decisions needed to effectively complete groundwater cleanups. It is part of a suite of groundwater guidance, including the 2011 *Groundwater Road Map* (http://www.epa.gov/superfund/health/conmedia/gwdocs/pdfs/gwroadmapfinal.pdf), being developed by EPA to help focus resources on the information and decisions needed to effectively complete groundwater cleanups (May 2014, 28 pages). View or download at http://www.epa.gov/superfund/health/conmedia/gwdocs/pdfs/EPA_Groundwater_Remedy_Completion.pdf .

Technology News and Trends (EPA 542-N-14-001). This issue highlights how remedies for contaminated sites may be vulnerable to the impacts of climate change and how measures may be taken to adapt remedies to the impacts. Potential impacts include extreme or sustained changes in temperatures, increased flood events or droughts, increased wind intensity, more frequent and intense wildfires, and sea level rise. The U.S. EPA Superfund program has developed an approach that raises awareness of the vulnerabilities and applies climate change science as a standard business practice in site cleanup projects. Articles featured in this issue examine vulnerabilities at three National Priorities List sites, describe the effects of intense weather events at these sites, and detail adaptation measures already implemented or

planned to increase the remedies' resilience to climate change impacts (May 2014). View at http://clu-in.org/tnandt/0514 .

Cleanups in My Community 1.6 Released. Cleanups in My Community has been reorganized and improved, including the following changes:

- Incorporated the latest Tribal Boundary data.
- Implemented a new print service that allows users to search for a specific site or location and print that information with the radius intact.
- Enable water-related legend icons to be dynamically generated when the user zooms in on a site.
- Included the latest The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Property Profile Form fields in the Advance Brownfields report and the Profile forms.
- Added five additional Incidents of National Significant (INS) points to the map, linking to EPA web pages on these incidents.
- Included a link to the new Department of Energy Geospatial Environmental Mapping System (GEMS).
- Corrected the display of Brownfields Targeted Brownfields Assessments (TBAs) so that they display by state and added hyperlinks to Grants profile forms.
- Modified the display of Brownfields Jurisdiction data so that where no Place of Performance is specified, the Grant State is used.

View and use at http://www.epa.gov/cimc .

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:

- Feasibility of Specific Soil Washing with Recycled Solutions (SSWRS) for the Removal of Selected Metals and Organic Compounds from Contaminated Soil, and Mathematical Model to Assess Pollutant Transfer by SSWRS
- PCB Method Comparison of High and Low Resolution Sediment Analysis
- Cost Analysis of Remediation Systems for Depleted Uranium
- Feasibility of Phytoremediation of Common Soil and Groundwater Pollutants
- The Processing and Beneficial Use of Fine-Grained Dredged Material: A Manual for Engineers
- A Primer for Remedial Project Managers on Water Quality Standards and the Regulation of Combined Sewage Overflows under the Clean Water Act
- In Situ Air Sparging [USACE Engineer Manual update]
- Design: In Situ Thermal Remediation [USACE Engineer Manual update]
- Abandoned Uranium Mines in the United States: Four Draft Reports
- Review of EPA's Integrated Risk Information System (IRIS) Process

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 6 resources, events, projects and news items were added to EUGRIS in May 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:

SIPE - An environmental Standards Information Portal for Europe. The aim of SIPE is to promote and increase the use of research results in support of Standards (related to the environmental compartments air, water, soil and waste) to stakeholders from Research, Standardisation bodies, policy and enterprises/SMEs. The SIPE-RTD

Web Portal is now available in its first version for testing at http://www.sipe-rtd.info .

> 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 .

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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