



TechDirect, July 1, 2017

Welcome to TechDirect! Since the June 1 message, TechDirect gained 178 new subscribers for a total of 39,149. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at <https://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

FRTR Presents...Heavy Metals-Mining Site Characterization and Treatment Session 1 - July 10, 2017, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This presentation describes the Red Devil Mine's risk assessment process, a "multiple lines of evidence" approach developed by the Bureau of Land Management (BLM) to incorporate a number of site-specific risk assessment findings into site decision making. Mercury and other site contaminants from Red Devil Mine and other abandoned mines in the Kuskokwim River watershed have been measured in multiple media, leading to concerns about human and ecological risk. Of specific concern is whether mercury methylation and food chain biomagnification poses a risk to human subsistence consumers of locally caught fish. We discuss a number of data sets used to evaluate these risks, including multi-year telemetry studies to track fish movements in relation to mercury sources throughout the Kuskokwim watershed. Fish tissue concentrations of mercury were also collected from many of the tagged fish and are discussed in the context of site and regional consumption patterns. For more information and to register, see <https://clu-in.org/live>.

ITRC Groundwater Statistics for Environmental Project Managers - July 18, 2017, 1:00PM-3:15PM EDT (17:00-19:15 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 <https://clu-in.org/live>.

Military Munitions Support Services - Making Decisions - July 20, 2017, 1:00PM-4:15PM EDT (17:00-20:15 GMT). This session will discuss critical elements and concepts of the decision making process. For more information and to register, see <https://clu-in.org/live>.

Pre-CERCLA Screening Webinar - July 24, August 15, 30, 2017, 1:00PM-4:00PM EDT (17:00-20:00 GMT). The Office of Superfund Remediation and Technology Innovation (OSRTI) is offering a training webinar on the recent "Pre-CERCLA Screening Guidance" issued by the U.S. EPA in December 2016. This guidance is used by EPA, State, and Tribal Superfund site assessment staff and support contractors when deciding if a new site should be added to the Superfund "active site inventory" for more thorough pre-remedial site evaluation. The training webinar will cover all elements of the guidance, from planning the screening to approving the recommended course of action based on the screening. It includes an in-depth discussion of the Pre-CERCLA Screening Checklist/Decision Form that must be completed for each Pre-CERCLA screening. The webinar provides opportunities for participation by the audience, including a section for questions and answers. Recommended Audience: EPA, State, and Tribal staff and managers and contractor support staff who are involved with planning, conducting, reviewing, and approving Pre-CERCLA screening activities. For more information and to register, see <https://clu-in.org/live>.

ITRC Geospatial Analysis for Optimization at Environmental Sites - July 25, 2017, 1:00PM-3:15PM EDT (17:00-19:15 GMT). The purpose of ITRC's Geospatial Analysis for Optimization at Environmental Sites (GRO-1) guidance document and this associated training is to explain, educate, and train state regulators and other practitioners in understanding and using geospatial analyses to evaluate optimization opportunities at environmental sites. With the ITRC GRO-1 web-based guidance document and this associated training class, project managers will be able to: evaluate available data and site needs to determine if geospatial analyses are appropriate for a given site; for a project and specific lifecycle stage, identify optimization questions where geospatial methods can contribute to better decision making; for a project and optimization question(s), select appropriate geospatial method(s) and software using the geospatial analysis work flow, tables and flow charts in the guidance document; with geospatial analyses results (note: some geospatial analyses may be performed by the project manager, but many geospatial analyses will be performed by technical experts), explain what the results mean and appropriately apply in decision making; and use the project manager's tool box, interactive flow charts for choosing geospatial methods and review checklist to use geospatial analyses confidently in decision making. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

FRTR Presents...Heavy Metals-Mining Site Characterization and Treatment Session 2 - July 26, 2017, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This webinar will focus on different techniques that can be implemented for site characterization and bioremediation. Aqueous Geochemical Modeling can be used to evaluate the cost effectiveness and feasibility of treatment strategies for metal-laden discharges from coal and metal mines. Best practices for monitoring and modeling Anaerobic biochemical

reactors (BCR) will be described as it relates to bioremediation of mining sites. For more information and to register, see <https://clu-in.org/live>.

> New Documents and Web Resources

Superfund Research Program (SRP) Research Briefs. To get monthly updates on research advances from the SRP you can subscribe to their Research Brief mailing list at <https://list.nih.gov/cgi-bin/wa.exe?SUBED1=SRP-BRIEF&A=1>.

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 <https://clu-in.org/products/tins/>. The following resources were included in recent issues:

- In-Situ Thermal Remediation Construction Completion Report: Solvents Recovery Service of New England (SRSNE) Site
- Designing, Assessing, and Demonstrating Sustainable Bioaugmentation for Treatment of DNAPL Sources in Fractured Bedrock: ESTCP Cost and Performance Report
- Applying Bioaugmentation to Treat DNAPL Sources in Fractured Rock
- Practical Assessment and Optimization of Redox-Based Groundwater Remediation Technologies
- Petroleum Metabolites: Literature Review and Assessment Framework
- A Guide to Nanoparticles for the Remediation of Contaminated Sites
- Risk-Based Management and Remediation Guidance for Benzo(a)pyrene
- Guidance for the Assessment, Remediation and Management of MTBE
- Demonstration of In Situ Treatment with Reactive Amendments for Contaminated Sediments in Active DoD Harbors
- Plume 2 Pilot Test Annual Monitoring Report, Chemours Oakley Site, Oakley, California
- Phase II: Identification and Characterization of Natural Sources of Perchlorate
- Development of a Passive Multisampling Method to Measure Dioxins/Furans and Other Contaminant Bioavailability in Aquatic Sediments
- Optimization of Integrative Passive Sampling Approaches for Use in the Epibenthic Environment
- Actively Shaken In-Situ Passive Sampler Platform for Methylmercury and Organics
- Multipurpose Sediment Passive Sampler with Improved Tissue Mimicry to Measure the Bioavailable Fraction
- Predicting the Fate and Effects of Resuspended Metal Contaminated Sediments
- Mechanisms and Permanence of Sequestered Pb and As in Soils: Impact on Human Bioavailability
- Vapor Intrusion Estimation Tool for Unsaturated-Zone Contaminant Sources: User's Guide

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

> Conferences and Symposia

Best Practices for Site Characterization Throughout the Remediation Process, Dallas, TX, August 1-3 & New York, NY, September 12-14, 2017. This training course is based on best management practices (BMP) implemented by the U.S. EPA, partnership organizations, federal and state partners, and consultants. Participants will learn how to streamline projects in a legal, technically sound, and cost-effective manner. By taking the course, participants achieve the following objectives: integrate best practices into traditional project activities; effectively collect and communicate critical project information; design dynamic work strategies; recognize and overcome the challenges presented while implementing a dynamic work strategy; and use BMPs to support all phases of the environmental cleanup life cycle. For more information and to register, see <https://trainex.org/offeringlist.cfm?courseid=1515>.

National Environmental Monitoring Conference (NEMC), Washington, DC, August 7-11 2017. The theme of the 2017 conference is "Effectively Communicating Scientific Information." NEMC is held annually as a part of the Environmental Measurement Symposium - a combined meeting of the NEMC and The NELAC Institute (TNI)'s Forum on Environmental Accreditation. The Symposium is co-sponsored by TNI under a cooperative agreement with the U.S. EPA. Some of the highlights for the week include: a special half-day general session focused on the conference theme; over 160 oral and poster presentations on a variety of cutting-edge environmental monitoring issues; meetings of TNI Committees to further TNI efforts on environmental laboratory accreditation, proficiency testing, and accreditation of field sampling and measurement organizations; an exhibit program showcasing the latest innovations in environmental monitoring; special keynote presentations on topics of general interest; and an open meeting of EPA's Environmental Laboratory Advisory Board. For more information and to register, see <http://www.nemc.us>.

Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management - ITRC 2-day Classroom Training, Ann Arbor, MI, October 10-11, 2017, includes optional bonus day on October 12 with a Vapor intrusion update from the Michigan Department of Environmental Quality. This 2-day ITRC classroom training is based on the ITRC Technical and Regulatory Guidance Web-Based Document, Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management (PVI-1, 2014) and led by internationally recognized experts. Within the training class - hear about EPA's Technical Guide For Addressing Petroleum Vapor Intrusion At Leaking Underground Storage Tank Sites (June 2015). The ITRC guidance document and EPA guide are complementary documents with the ITRC training course providing the "how-to" knowledge and skills for screening, investigating, and managing the petroleum vapor intrusion pathway. The class will enable you to develop the skills to screen-out petroleum sites based on the scientifically-supported ITRC strategy and checklist; focus the limited resources investigating those PVI sites that truly represent an unacceptable risk; and communicate ITRC PVI strategy and justify science-based decisions to management, clients, and the public. 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 fee waivers available. The ITRC 2-day class is preapproved for continuing education for CT LEPs, MA LSPs, and SC PGs and approval has been requested for DE PGs, NE Water Well Standards, and NJ LSRPs. For more information and to register, see <http://www.itrcweb.org/training>.

Groundwater High-Resolution Site Characterization (HRSC), Dallas, TX, November 15-16, 2017. This training course focuses on groundwater characterization and discusses (1) the impacts of subsurface heterogeneity on the investigation and cleanup of groundwater and related media, (2) the need for scale-appropriate measurements and adequate data density, and (3) the tools and strategies that are available to overcome the impacts of subsurface heterogeneity. After taking this course, participants will be armed with information that will allow them to improve their subsurface investigation approaches and develop more realistic and comprehensive conceptual site models (CSM). CSMs developed based on HRSC strategies and tools will decrease site uncertainty, improve the remedy selection process for groundwater remedies, and better enable the evaluation, design, and implementation of targeted in situ and ex situ groundwater remedies. The Groundwater HRSC course is an advanced 2-day course. The recommended audience includes EPA, federal, state, tribal and private industry technical project managers, practitioners and other stakeholders involved in groundwater investigation and remediation. For more information and to register, see <https://trainex.org/hrsc>.

Registration Now Open! 2017 National Brownfields Training Conference, Pittsburgh, PA, December 5-7, 2017. With the session selection process completed, Brownfields 2017 is set to offer attendees a robust and expansive conference experience. This years conference programming and speakers will engage attendees on topics at the forefront of todays brownfields and economic development landscapes; challenging both emerging and seasoned professionals as well as a diverse range of brownfields stakeholders to think outside the norms when addressing land revitalization and redevelopment. Take advantage and register during the pre-registration period for the lowest conference registration fees. For more information and to register, see <https://www.brownfields2017.org/register/>.

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 <https://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 Jean Balent at (703) 603-9924 or balent.jean@epa.gov. Remember, you may subscribe, unsubscribe or change your subscription address at <https://clu-in.org/techdirect> at any time night or day.

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