



TechDirect, August 1, 2018

Welcome to TechDirect! Since the July 1 message, TechDirect gained 33 new subscribers for a total of 39,066. 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.

> Request for Applications

Superfund Research Program Multiproject Center Grants (P42). The National Institute of Environmental Health Sciences (NIEHS) is announcing the continuation of the Superfund Research Program (SRP) Centers. This program supports coordinated, multiproject, multi- and interdisciplinary Centers that address the broad, complex health and environmental issues that arise from hazardous waste sites. SRP Center grants support problem-based, solution-oriented research Centers that consist of multiple, integrated projects representing the biomedical and environmental science and engineering disciplines. The Center cores also are tasked with administrative, community engagement, research translation, research support, and training functions. Per NIEHS legislative authority, only Higher Education Institutions may apply. Letters of intent are due by November 19, 2018, and applications are due by December 19, 2018. For more information and application instructions, see

<https://grants.nih.gov/grants/guide/rfa-files/RFA-ES-18-002.html>.

> Upcoming Live Internet Seminars

Superfund Redevelopment Initiative Series: Superfund and Cultural Competence - Building a Foundation for Effective Community Engagement - August 2, 2018, 2:00PM-3:30PM EDT (18:00-19:30 GMT). EPA staff interact with impacted communities across the country. These communities may represent a broad range of cultures, including cultures based in race/ethnicity, class, place and other forms of identity. Each EPA site team may also represent a diverse range of cultural perspectives, skill sets and differing professional cultures. This webinar will show how

understanding cultural competence skills and tools can help people connect across difference or perceived difference and work together more effectively. This webinar will deepen participants' understanding of what culture is and how it impacts Superfund work, and demonstrate through a series of case studies how becoming culturally competent can improve remedial outcomes, prepare job trainees for successfully entering the workforce, and improve dynamics of remedial teams whose members have different areas of expertise. The Superfund Redevelopment Initiative is hosting this webinar and is happy to answer any follow up questions about the webinar from the press or other interested parties. For more information and to register, see <https://clu-in.org/live>.

NARPM and OSC Academy Presents...NHPA for RPMs and OSCs - August 9, 2018, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This webinar provides OSCs and RPMs with an overview of the National Historic Preservation Act (NHPA) and the requirements of Section 106 under CERCLA. The focus will be on EPA's Emergency Response and Removal Program. NHPA applies to your response action if your action constitutes an undertaking and will have a potential effect on a property that is eligible for or included in the National Register of Historic Places. The overview of the steps of the Section 106 consultation process includes: a review of NHPA under CERCLA; determining if a response action constitutes an undertaking; establishing the area of potential effects of the undertaking; identifying any historic properties within that area, and evaluating whether the undertaking will affect such properties, and if so, whether the effects may be adverse; and where there are adverse effects anticipated, identifying ways to minimize or mitigate any adverse effects. The primary audience for this training is EPA OSCs and RPMs; however, it is open to other federal agencies, states, tribes and consultants who are interested in learning more about the NHPA statute. For more information and to register, see <https://clu-in.org/live>.

NARPM Presents...Using Bioavailability to Assess Contaminated Sediment Risk: Passive Sampling and Porewater Remedial Goals (PWRGs) - August 13, 2018, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This webinar will introduce the use of passive samplers to assess bioavailability and the development of Porewater Remediation Goals (PWRG). Passive sampling devices (PSD) are a technology with growing acceptance for measuring porewater concentrations and assessing bioavailability of contaminants in sediment, particularly for common sediment contaminants such as PCBs, PAHs, chlorinated pesticides and dioxin-like compounds. Instructors will explain the basics of what passive samplers are and how they work, as well as provide an overview of the deployment, analysis, and application of PSDs. The webinar will also discuss the derivation of Porewater Remediation Goals (PWRG) for the protection of the benthic organisms using exposures measured with PSDs. This section of the course will focus on the application of PSD data to ecological risk assessment, including the application of Final Chronic Values from Ambient Water Quality Criteria, use of PSD in toxicity and bioaccumulation testing, development of a site specific PWRG, and calculation of a sediment RG based on site-specific equilibrium partitioning. Instructors will also discuss the implementation of PWRGs as it relates to risk assessment and management at Superfund sediment sites. By taking the webinar, participants will achieve the following objectives: understand how PSD measures bioavailability of contaminants in sediment porewater; be provided with an overview for planning and executing a PSD sampling event; understand how to apply PSD data to ecological risk assessment; learn how to develop a site-specific PWRG to protect the benthic organisms; and consider other uses of PSD methods for RI/FS, remedy selection, and remedy implementation at Superfund sediment sites. The target audience is EPA Remedial Project Managers and risk assessors, as well as other regulatory staff, contractors, and responsible parties. For more information and to register, see <https://clu-in.org/live>.

ITRC Long-term Contaminant Management Using Institutional Controls - August

14, 2018, 1:00PM-3:15PM EDT (17:00-19:15 GMT). Institutional controls (ICs) are administrative or legal restrictions that provide protection from exposure to contaminants on a site. When ICs are jeopardized or fail, direct exposure to human health and the environment can occur. While a variety of guidance and research to date has focused on the implementation of ICs, ITRC's Long-term Contaminant Management Using Institutional Controls (IC-1, 2016) guidance and this associated training class focuses on post-implementation IC management, including monitoring, evaluation, stakeholder communications, enforcement, and termination. The ITRC guidance and training will assist those who are responsible for the management and stewardship of ICs. After attending the training, participants will be able to: describe best practices and evolving trends for IC management at individual sites and across state agency programs; use this guidance to improve IC reliability and prevent IC failures, improve existing, or develop new, IC Management programs, identify the pros and cons about differing IC management approaches; use the tools to establish an LTS plan for specific sites; and use the elements in the tools to understand the information that should populate an IC registry or data management system. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

Military Munitions Support Services AGC QA Seeding- August 15, 2018, 1:00PM-4:00PM EDT (17:00-21:00 GMT). Contractor performance metrics are measured by two blind seeding systems on Munitions Response (MR) projects - Quality Assurance and Quality Control. Quality Assurance (QA) seeding is the primary quality system used by the Government to independently check the Contractor's performance at MR sites. QA seeding consists of Government personnel (or a third-party QA Contractor) burying blind seeds at depths and in locations that allow for easy detection. Whereas the Quality Control (QC) seeding is implemented by the Contractor to continually test the depth of detection of their instruments and verify coverage. While QC seeding is generally a larger program with a higher density and variety of blind seeds, it is operated by the Contractor and can present a potential conflict of interest of performance by either not having or not abiding by a firewall plan. Outside of the initial input into the development of the UFP- or AGC-QAPP, the QC seeding program is reported to the Government and taken at face value. The Range Support Center has several challenging projects that overcame significant hurdles to their quality systems, both QA and QC. This M2S2 webinar will present project case studies and introduces a new template for use in scoping a QA seeding program. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

ITRC Bioavailability of Contaminants in Soil: Considerations for Human Health Risk Assessment - August 16, 2018, 1:00PM-3:15PM EDT (17:00-19:15 GMT). The basis for this training course is the ITRC guidance: Bioavailability of Contaminants in Soil: Considerations for Human Health Risk Assessment (BCS-1). This guidance describes the general concepts of the bioavailability of contaminants in soil, reviews the state of the science, and discusses how to incorporate bioavailability into the human health risk assessment process. The target audience for this guidance and training course are: project managers interested in decreasing uncertainty in the risk assessment which may lead to reduced remedial action costs, and risk assessors new to bioavailability or those who want additional confidence and training in the current methods and common practices for using bioavailability assessment to more accurately determine human health risk at a contaminated site. As a participant in this training you should learn to: apply the decision process to determine when a site-specific bioavailability assessment may be appropriate, use the ITRC Review Checklist to develop or review a risk assessment that includes soil bioavailability, consider factors that affect arsenic, lead and PAH bioavailability, select appropriate methods to evaluate soil bioavailability, and use tools to develop site-specific soil bioavailability estimates and incorporate them into human health risk assessment. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

Superfund Research Program Progress in Research Webinar Series - August 23, September 4, 10, and October 1. This Superfund Research Program (SRP) Progress in Research webinar series highlights promising research from SRP Centers awarded grants in 2017. In each of the four sessions, awardees will describe their research projects, accomplishments, and next steps. The first session will include presentations from Duke University and University of Arizona. The second session will include presentations from the University of Louisville, University of New Mexico, and University of Washington. The third session will include presentations from Columbia University, Massachusetts Institute of Technology, and University of Rhode Island. The fourth session will include presentations from Boston University, Texas A&M University, and University of California, Davis. For more information and to register, see <https://clu-in.org/live>.

Vapor Intrusion (VI) Investigation using the Trace Atmospheric Gas Analyzer (TAGA) Mobile Laboratories - August 29, 2018, 1:00PM-2:30PM EDT (17:00-18:30 GMT). Vapor intrusion has been a topic of intense interest in the United States for the recent past. The concern that the vapor intrusion pathway poses is whether an unacceptable risk exists for the occupants. To determine the risk associated with the vapor intrusion pathway, confounding factors due to the presence of these chemical from other sources need to be qualitatively and quantitatively identified so that the contributions from the vapor intrusion alone can be assessed. Because risk is compound specific and many compounds have unacceptable chronic risk levels at extremely low concentrations, an analytical technique is needed that has high selectivity and sensitivity, as well as, continuous real-time analytical updates to accurately and economically assess vapor intrusion sites. This presentation addresses a technology and practice that meets these requirements. This webinar is a result of Recommendation 9 of EPA's Superfund Task Force, which encourages the Superfund program to "utilize state-of-the-art technologies to expedite cleanup." Actions under this recommendation include expanding the use of new remediation technologies and approaches to address contaminated sites. For more information and to register, see <https://clu-in.org/live>.

NARPM Presents...Tools for Estimating Groundwater Contaminant Flux to Surface Water - September 5, 2018, 1:00PM-3:00PM EDT (17:00-19:00 GMT). Surface water bodies adjacent to sites with contaminated groundwater may receive impacts that impair otherwise functional ecosystems and create new exposure pathways, increasing human health risks. Optimizing site characterization protocols to improve the remedy design effort is best achieved by developing knowledge of the potential extent and magnitude of contaminated groundwater discharge into the surface water body. Through field-based research, EPA's Office of Research and Development has developed several approaches to more reliably characterize system hydrology and assess contaminant flux. A series of standard methods and spreadsheet-based calculation tools have been developed to facilitate data collection and analysis, and all in an affordable and consistent manner. A case study example will be used to highlight these novel approaches to improve understanding of the spatial and temporal dynamics of contaminant transport across the groundwater-surface water transition zone. For more information and to register, see <https://clu-in.org/live>.

Highlight from the CLU-IN Seminar Archives. Each edition of TechDirect highlights a previously recorded internet seminar from our archives that may be of interest to our readers. We welcome your feedback on this addition to TechDirect.

Military Munitions Support Services - Advanced Classification, Sponsored by: US Army Corps of Engineers, Archive of Apr 21, 2016 Seminar (4 Hours). This Military Munitions Support Services seminar included multiple presentations subject matter experts discussing advanced classification of munitions sites. For more information or to replay, visit https://clu-in.org/conf/tio/m2s2fy16-2_042116/

> New Documents and Web Resources

Superfund Task Force Recommendations 2018 Update. The Superfund Task Force was commissioned on May 22, 2017 to provide recommendations on how EPA could streamline and improve the Superfund program. On July 25, 2017, EPA issued the Superfund Task Force Report, which included 42 recommendations in five goal areas. The 2018 Superfund Task Force Report highlights the numerous accomplishments achieved by the hard-working EPA staff who planned and implemented specific actions to expedite reduction of risks to human health and the environment and to accelerate the reuse of properties affected by hazardous substance contamination. In addition to highlighting the accomplishments of the 2018 efforts, the report outlines next steps for the recommendations that remain open. The ongoing recommendations, to be completed by September 2019, demonstrate a continued commitment by EPA to engage partners and stakeholders at all levels in making cleanup and land revitalization decisions that will provide future generations with a cleaner and healthier environment. View or download at <https://www.epa.gov/superfund/superfund-task-force-recommendations-2018-update>.

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:

- Biosparging Pilot Study: Technical Memorandum
- Treatment of Perfluorinated Alkyl Substances in Wash Water Using Granular Activated Carbon and Mixed-Media
- Superfund X-Ray Fluorescence Field Operations Guide [for Lead and Arsenic]
- Standard Operating Procedure for an In Vitro Bioaccessibility Assay for Lead and Arsenic in Soil
- 1,4-Dioxane Remediation by Extreme Soil Vapor Extraction (XSVE)
- Long-Term Performance Assessment at a Highly Characterized and Instrumented DNAPL Source Area Following Bioaugmentation
- Field Study of High-Density Passive Sampler and Large-Volume Purge Methods to Characterize Subslab Vapor Plumes, Former AI Phillips Cleaners, 515 Lagoon Drive, Honolulu, Oahu, Hawaii
- Availability of Draft ATSDR Toxicological Profile: Perfluoroalkyls
- Environmental Sampling & Analytical Methods (ESAM) Program
- The Pathway to Phytotechnologies
- Adaptation Strategies for Resilient Cleanup Remedies

Superfund Research Program (SRP) Research Briefs. To learn more or get monthly updates on research advances from the SRP visit <https://tools.niehs.nih.gov/srp/researchbriefs/index.cfm>.

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 25 resources, events, projects and news items were added to EUGRIS in July 2018. 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.

> Conferences and Symposia

2018 Environmental Measurement Symposium, New Orleans, LA, August 6-10, 2018. The Environmental Measurement Symposium is the combined meeting of the Forum on Laboratory Accreditation and the National Environmental Monitoring Conference (NEMC) and is the largest conference focused on environmental measurements in North America. The NELAC Institute (TNI) and the U.S. EPA are co-sponsors. The theme of this year's symposium is "The Future Landscape of Science." For more information and to register, see <https://iattend.net/EventHome?id=ems18>.

Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management, Seattle (area), WA, October 10-11, 2018. 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, participants will 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. For more information and to register, see <http://www.itrcweb.org/training>.

Registration Now Open! 3rd Western Symposium Design and Construction Issues at Hazardous Waste Sites, Denver, CO, November 5-7, 2018. This event is designed to encourage dialogue and information sharing on design and construction issues relevant to hazardous waste sites in the western United States. The applications of engineering and science associated with cleaning up hazardous waste sites continue to evolve rapidly. The goal of this symposium is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues affecting our field. For more information and to register, see <https://www.samedmp.org/dchws-west>.

Best Practices for Site Characterization Throughout the Remediation Process, Boston, MA, December 3-6, 2018. 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>.

US EPA to lead a session on "Impacts of Climate Change and Extreme Weather Events on Remedial Design" at the Fifth International Symposium on Bioremediation and Sustainable Environmental Technologies, Baltimore, MD,

April 15-18, 2019. Remedies at contaminated sites may be vulnerable to the impacts of climate change and extreme weather events. Interested parties are encouraged to submit an abstract about approaches to designing climate- and weather-resilient remedies. This topic is one of several anticipated in the "Sustainable Site Management Strategies" track of the symposium. Submission of an abstract for the "**Green and Sustainable Remediation (GSR)**" track of the symposium also is encouraged. Abstracts are due on August 31, 2018. For more information and to complete the abstract submission form, see

<https://www.battelle.org/newsroom/conferences/bioremediation-symposium/abstract-specifications-submittal>.

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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