



TechDirect, October 1, 2021

Welcome to TechDirect! Since the September 1 message, TechDirect gained 68 new subscribers for a total of 40,008. 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

Remediation Management of Complex Sites - October 7, 2021, 1:00PM-3:15PM EDT (17:00-19:15 GMT). This training course and associated ITRC guidance: Remediation Management of Complex Sites (RMCS-1, 2017), provide a recommended holistic process for management of challenging sites, termed "adaptive site management." By participating in this training course we expect you will learn to apply the ITRC guidance document to: identify and integrate technical and nontechnical challenges into a holistic approach to remediation; use the Remediation Potential Assessment to identify whether adaptive site management is warranted due to site complexity; understand and apply adaptive site management principles; develop a long-term performance-based action plan; apply well-demonstrated techniques for effective stakeholder engagement; access additional resources, tools, and case studies most relevant for complex sites; and communicate the value of the guidance to regulators, practitioners, community members, and others. For more information and to register, see <https://www.itrcweb.org> Or <https://clu-in.org/live>.

Risk Communication Strategies to Reduce Exposures and Improve Health: Sessions 1-4 - October 8, 20, and 22, 2021, 1:00PM-3:00PM EDT (17:00-19:00 GMT). The NIEHS Superfund Research Program (SRP) is hosting a Risk e-Learning webinar series focused on strategies to communicate potential environmental health risks to reduce exposures and improve health. The four-part series will showcase effective risk communication strategies and how they have been tailored to the needs of diverse communities. The first session took place in September 2021 and an archive of the session is available here: https://clu-in.org/conf/tio/srpreih1_092421/. In the second session, presenters will describe research on designing and framing communication messages so that they are sensitive to the cultural and social context of communities. These efforts aim to combat misinformation and mistrust when communicating health and environmental risks. In the third session, presenters will discuss how they have

engaged and communicated with underserved and vulnerable communities and developed strategies to tailor messages to these communities so they can participate and use the information equitably. The fourth and final session will feature work by SRP-funded researchers who are translating research into communication tools and tailoring them for specific community needs. These specialized tools work to successfully communicate health risks and increase environmental health literacy. For more information and to register, see <https://clu-in.org/live>.

Introduction to the 2021 Streamlined Model RD/RA Consent Decree and Statement of Work - October 12, 2021, 1:00 PM-2:30 PM (17:00 - 18:30 GMT). On August 31, 2021 the U.S. Environmental Protection Agency (EPA) and the Department of Justice (DOJ) issued an updated version of its Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly known as Superfund) model remedial design/remedial action (RD/RA) consent decree (CD) and accompanying statement of work (SOW). These documents serve as the basis for negotiating cleanup work agreements with potentially responsible parties at Superfund sites. On October 12 presenters will provide an overview of the updated model documents, an explanation of the key revisions including some enhanced community involvement provisions, and a demonstration of new tools that will allow drafting attorneys to easily modify the consent decree for particular situations (e.g., operable unit v. site wide CD). Superfund practitioners, community groups, and other interested stakeholders will gain important insight into the development of these new models and the impact on the negotiation process. For more information and to register, see <https://clu-in.org/live>.

ITRC Long-term Contaminant Management Using Institutional Controls - October 14, 2021, 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>.

ITRC Characterization and Remediation of Fractured Rock - October 19, 2021, 1:00PM-3:15PM EDT (17:00-19:15 GMT). The basis for this training course is the ITRC guidance: Characterization and Remediation of Fractured Rock. The purpose of this guidance is to dispel the belief that fractured rock sites are too complex to characterize and remediate. The physical, chemical and contaminant transport concepts in fractured rock have similarities to unconsolidated porous media, yet there are important differences. By participating in this training class, you should learn to use ITRC's Fractured Rock Document to guide your decision making so you can: develop quality Conceptual Site Models (CSMs) for fractured rock sites, set realistic remedial objectives, select the best remedial options, monitor remedial progress and assess results, and value an interdisciplinary site team approach to bring collective expertise to improve decision making and to have confidence when going beyond containment and monitoring -- to actually remediating fractured rock sites. For more information and to

register, see <https://www.itrcweb.org> OR <https://clu-in.org/live>.

ITRC Sustainable Resilient Remediation (SRR) - October 21, 2021, 1:00PM-3:15PM EDT (17:00-19:15 GMT). Extreme weather events and wildfires are increasing and impacting hazardous waste sites. The primary goal of cleanups, which is protecting human health and the environment, is undermined. Confronted with these risks, environmental professionals should assess, and design remedies that are sustainable and resilient. Sustainable resilient remediation (SRR) is an optimized solution to cleaning up and reusing a hazardous waste site that limits negative environmental impacts, maximizes social and economic benefits, and creates resilience against increasing threats. The objective of the ITRC Sustainable Resilient Remediation (SRR-1) is to provide resources and tools for regulators, stakeholders, consultants, and responsible parties to help integrate sustainable and resilient practices into remediation projects. This guidance updates the Interstate Technology and Regulatory Council's (ITRC) Technical and Regulatory Guidance: Green and Sustainable Remediation: A Practical Framework (ITRC 2011a) and includes a strong resilience component to address the increasing threat of extreme weather events and wildfires.

Recommendations for careful and continuous consideration of the social and economic costs and benefits of a cleanup project are included. For more information and to register, see <https://www.itrcweb.org> OR <https://clu-in.org/live>.

Free Brownfields Technical Assistance Available to Communities - October 25, 2021, 1:00PM-2:30PM EDT (17:00-18:30 GMT). Find out how to access FREE technical expertise in your next brownfield project! EPA's Brownfields and Land Revitalization Program funds several expert organizations so they can support your efforts to assess, cleanup and reuse brownfield sites in your community. Learn how these organizations can help you manage a brownfield redevelopment project, incorporate equitable development and environmental justice principles, and support brownfields job training and education. For more information and to register, see <https://clu-in.org/live>.

ITRC Connecting the Science to Managing LNAPL Sites, a 3 Part Series - October 26, November 2 and 9. The newly updated LNAPLs (Light Non-Aqueous Phase Liquids) 3-part training course series is based on the ITRC guidance: LNAPL Site Management: LCSM Evolution, Decision Process, and Remedial Technologies (LNAPL-3, 2018) and focuses on connecting the science to managing LNAPL sites and helping you: build upon your understanding of LNAPL behavior in the subsurface (Part 1), develop your LNAPL conceptual site model and LNAPL remedial goals (Part 2), and select/implement LNAPL technologies (Part 3). After this training series, the expectation is that you will have the skills and understanding to use ITRC science-based resources to improve decision making at your LNAPL sites. For regulators and other government agency staff, this improved understanding can hopefully be incorporated into your own LNAPL programs. It is expected that participants will attend this 3-part training series in sequence. For more information and to register, see <https://www.itrcweb.org> OR <https://clu-in.org/live>.

ITRC Integrated DNAPL Site Characterization - November 4, 2021, 1:00PM-3:15PM EDT (17:00-19:15 GMT). The Integrated DNAPL Site Characterization Team has synthesized the knowledge about dense nonaqueous phase liquid (DNAPL) site characterization and remediation acquired over the past several decades, and has integrated that information into a new document, Integrated DNAPL Site Characterization and Tools Selection (ISC-1, 2015). This guidance is a resource to inform regulators, responsible parties, other problem holders, consultants, community stakeholders, and other interested parties of the critical concepts related to characterization approaches and tools for collecting subsurface data at DNAPL sites. After this associated training, participants will be able to use the guidance to develop and support an integrated approach to DNAPL site characterization, including: identify

what site conditions must be considered when developing an informative DNAPL conceptual site model (CSM); define an objectives-based DNAPL characterization strategy; understand what tools and resources are available to improve the identification, collection, and evaluation of appropriate site characterization data; and navigate the DNAPL characterization tools table and select appropriate technologies to fill site-specific data gaps. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

> New Documents and Web Resources

Updated Vapor Intrusion Focus Area. Vapor intrusion refers to the migration of chemical vapors from a subsurface source, such as contaminated soil, groundwater, or utility conduit, into an overlying building or structure. Vapor-forming chemicals that potentially can provide subsurface sources for vapor intrusion include chlorinated volatile organic compounds (VOCs), such as chlorinated solvents, petroleum hydrocarbons, pesticides, polychlorinated biphenyls, elemental mercury, and per- and polyfluoroalkyl substances (PFAS). Although this issue area focuses on vapor intrusion, groundwater intrusion can be a source of vapors in indoor air. Groundwater intrusion occurs when the water table is elevated, such as following a heavy rain, and floods the lower level of a building. For more information and to access the updated Focus Area, please visit <https://clu-in.org/vi>.

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:

- Former Breneman Site Oswego County Oswego, New York Final Engineering Report
- Final Remedial Design Report Soil Vapor Extraction and Treatment System and In Situ Bioremediation Bandera Road Ground Water Plume Superfund Site Bexar County, Texas
- Summary of Environmental Investigation and Remediation, A-Street Ditch Segment 1 Pilot Study
- Guide for Development of Sample Collection Plans for Radiochemical Analytes in Outdoor Building and Infrastructure Materials Following Homeland Security Incidents
- Year 3 Data Package Enhanced Natural Recovery/Activated Carbon Pilot Study Lower Duwamish Waterway
- Review of Phytoremediation Technologies for Radiological Contamination
- GIS and Site Assessment Project

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. Several resources, events, projects and news items were added to EUGRIS in September 2021. 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

5th Annual Design and Construction Issues at Hazardous Waste Sites (DCHWS West), POSTPONED to Early 2022. This event, originally planned for October 2021 has been postponed to early 2022. For more information, please visit

<https://sites.google.com/samephiladelphiaipost.org/dchws/west-symposium/fall-2021-dchws>.

2021 National Brownfields Training Conference - Oklahoma City, OK, December 8-11, 2021. The National Brownfields Training Conference is the largest event in the nation focused on environmental revitalization and economic redevelopment. Held every two years, the National Brownfields Conference attracts over 2,000 stakeholders in brownfields redevelopment and cleanup to share knowledge about sustainable reuse and celebrate the EPA brownfields program's success. Whether you're a newcomer or a seasoned professional, Brownfields 2021 offers something for you! For more information, please visit <https://brownfields2021.org>

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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