



## TechDirect, June 1, 2024

Welcome to TechDirect! Since the May 1 message, TechDirect gained 78 new subscribers for a total of 43,938. 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.

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### > Upcoming Live Internet Seminars

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**M2S2 MR-QAPP Toolkit, Module 2 - Remedial Actions: What's New and What's Not? - June 5, 2024, 1:00PM-4:00PM EDT (17:00-20:00 GMT).** This webinar will be focused on MR-QAPP Toolkit, Module 2 - Remedial Actions that was published in March 2023. Presentations will cover Worksheet 11 and how Data Quality Objectives (DQOs) are presented in this new toolkit as well as the new Measurement Performance Criteria (MPCs) and Measurement Quality Objectives (MQOs). There will also be a discussion of managing data deliverables using Delivery Units and Survey Units, and the related Data Usability Assessments (DUAs). Presentations will be suitable for the varied M2S2 webinar audience, which typically includes government, regulator, and contractor attendees, and there will be opportunities for questions and discussion. For more information and to register, see <https://www.clu-in.org/live>.

**Analytical Solute and Heat Transport Model (ASHTM): Tool to Assist Superfund Oversight - June 10, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT).** U.S. Environmental Protection Agency (EPA) and its contractors performing oversight at Superfund Sites review numerical models developed to simulate contaminant transport. An analytical transport model could be used to check the numerical model results but a practical modeling tool based on a 3D analytical solute transport model is not publicly or commercially available. The roles of an analytical model in Superfund oversight are to simulate the general plume behavior; guide the development of, and provide a check for, a more complex numerical solute transport model; and evaluate smaller scale transport such as during natural gradient tracer tests. EPA tasked APTIM to develop an analytical model for solute transport in a three-dimensional aquifer of finite thickness with uniform flow, dual porosity, sorption, sequential decay, and time-dependent source. The new model was verified against existing analytical models for special cases and against numerical models MT3DMS and RT3D, and published in two journal papers. EPA tasked RTI to develop a graphical user interface (GUI) for the model. Example applications are analysis of tracer tests at the Stringfellow Superfund Site and simulation of TCE plume at the Fresno Sanitary Landfill. For more information and to register, see <https://www.clu-in.org/live>.

**Federal Facilities Online Academy: Resolving Issues before Formal Dispute - June 12, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT).** This webinar is a two-hour course that identifies less formal options to address conflict before going to dispute under a federal facility agreement and provides project management tips and techniques to address disagreements early in the process. For more information and to register, see <https://www.clu-in.org/live>.

**ITRC PFAS Beyond the Basics: PFAS Treatment Technologies Training - June 13, 2024, 1:00PM-3:00PM EDT (17:00-19:00 GMT).** This training class builds on the earlier information for treatment technologies presented in the PFAS 101 CLU-IN training. It provides more in-depth information regarding considerations for implementing integrated PFAS treatment technologies and remediation strategies. This training introduces the concept that achieving site remedial objectives will likely necessitate the implementation of multiple treatment technologies and remediation strategies (i.e., an integrated remedial strategy). Specifically, this training uses a hypothetical conceptual site model to frame the discussion of remedial approaches for PFAS impacted source area soil, source area groundwater, and more dilute groundwater plumes. The training concludes with a discussion of select field implemented and developing disposal and destructive technologies for managing treatment residuals. For more information and to register, see <https://www.itrcweb.org> or <https://www.clu-in.org/live>.

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## > New Documents and Web Resources

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**Research Brief 353: Engineering Hydrogel Beads to Enhance Bioremediation of Groundwater Contaminant.** Oregon State University scientists and engineers developed an approach to cleaning polluted groundwater that uses tiny beads containing chemical-eating bacteria. In this study, funded by the NIEHS Superfund Research Program (SRP), the team identified a formula to maximize bead durability and bioremediation, or the removal of contaminants using bacteria. For more information, please visit [https://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief\\_ID=353](https://tools.niehs.nih.gov/srp/researchbriefs/view.cfm?Brief_ID=353)

**Tracking Groundwater Remediation Efforts Using Rare Earth Elements.** The May 28, 2024 edition of EPA's Science Matters Newsletter highlights research from the EPA Center for Environmental Solutions & Emergency Response (CESER)?. Groundwater remediation is commonly done with a permeable reactive barrier (PRB), which is a wall created below the ground that allows groundwater to flow through it. EPA scientists developed a new method to use patterns of rare earth elements to understand whether the contaminated groundwater interacted with the PRB as intended. For more information, please visit <https://www.epa.gov/sciencematters/tracking-groundwater-remediation-efforts-using-rare-earth-elements>,

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

- Standardizing Sediment Porewater Passive Samplers for Inorganic Constituents of Concern
- Guide to Per- and Polyfluoroalkyl Substances (PFAS) Sampling Within Natural Resource Damage Assessment and Restoration
- Evaluation and Review of Best Management Practices for the Reduction of Polychlorinated Biphenyls to the Chesapeake Bay

**EUGRIS Corner.** New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 2 resources, events, projects and news items were added to EUGRIS in May. 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.

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## > Conferences and Symposia

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### **US EPA and RAIS Screening Level Calculator Training for Chemical and Radionuclide Risk Analysis - Oak Ridge, TN, September 16-19, 2024.**

The organizers of this training have been publishing online "risk" (cancer risk and noncancer hazard index) calculators since 1996. This training will primarily provide the participant with operational knowledge of key EPA and RAIS calculators. Additionally, the training and exercises will delve into the ability of the calculators to address site-specific exposures, unique toxicity assessments, and complex risk characterizations. In addition to classroom activities, tours are given of the Spallation Neutron Source facility, the High Flux Isotope Reactor, Frontier (ORNL's exascale supercomputer), and the Historic Graphite Reactor from the Manhattan Project. For more information and to register, please visit <https://rais.ornl.gov/home/fall2024.html>

**2024 Remediation Innovative Technology Seminar - Multiple US Locations, June through July 2024.** The Remediation Innovative Technology Seminar (RITS) is NAVFAC's showcase for the latest Environmental Restoration (ER) technologies, methodologies, and guidance news. The seminar is developed for Department of the Navy (DON) Remedial Project Managers (RPMs) to share the latest innovations and best practices. Others eligible to attend include Department of Defense (DoD) personnel, federal/state/local regulators, and contractors with an active DON ER contract. DON personnel will be offered priority registration and others are welcome to attend based on availability. For more information and to register, please visit <https://exwc.navy.mil/Products-and-Services/Environmental-Security/NAVFAC-Environmental-Restoration-and-BRAC/Training/rits/>

**Tribal Lands and Environment Forum (TLEF) - Eugene, OR, August 12-15, 2024.** This is the fourteenth annual forum for environmental professionals from Tribes, USEPA, State/Local/Federal agencies, community organizations, and other interested parties to meet, share knowledge, and learn from one another how to improve management, protection, and restoration of Tribal lands for us and all our relations. This forum will be held in person and online. For more information and to register, please visit <http://nau.edu/tlef2024>

**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 (202) 566-0832 or [balent.jean@epa.gov](mailto: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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