



TechDirect, March 1, 2020

Welcome to TechDirect! Since the February 1 message, TechDirect gained 57 new subscribers for a total of 39,364. 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.

> Funding Opportunity

National Institute of Environmental Health Sciences (NIEHS) Superfund Research Program (SRP) Optimizing Natural Systems for Remediation: Utilizing Innovative Materials Science Approaches to Enhance Bioremediation (R01 RFA-ES-20-004).

This Funding Opportunity Announcement (FOA) calls for teams including bioremediation and materials science (e.g. nanotechnology, microenvironmental engineering, etc.) expertise to submit applications to advance the knowledge and practice of bioremediation to address current and emerging recalcitrant hazardous substances and complex mixtures. Letters of Intent are due March 20, 2020, and applications are due April 20, 2020. There will be an informational webinar on March 9, 2020, from 2-3 pm EDT (registration is required). For questions, please contact Dr. Heather Henry, heather.henry@nih.gov, 984-287-3268. For more information and webinar registration, see <https://www.niehs.nih.gov/research/supported/centers/srp/funding/funding2/>.

> Upcoming Live Internet Seminars

Federal Facilities Online Academy - March 2, 2020 through September 14, 2020.

This voluntary training program has been developed for EPA RPMs, project managers from other federal agencies, State government, and Tribal groups who work on federal facility Superfund cleanups. Please consider participating in all 12 courses, 11 Webinars and 1 In-Person Training, to obtain a certificate upon completion of the entire Federal Facility Academy series. For more information and to register for upcoming sessions or view archived sessions, see <https://trainex.org/offeringlist.cfm?courseid=1819>.

ITRC Groundwater Statistics for Environmental Project Managers - March 5, 2020, 1:00PM-3:15PM EST (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 <https://clu-in.org/live>.

ProUCL Utilization 2020: Part 3: Background Level Calculations - March 9, 2020, 1:00PM-2:30PM EDT (17:00-18:30 GMT). ProUCL version 5.1.002 (5.1) is the latest update of the ProUCL statistical software package for analysis of environmental data sets with and without nondetect (ND) observations. In the first installment of a three part ProUCL e-learning seminar series, instructors presented the live interactive use of ProUCL v5.1 from initial data loading, all the way through the major steps of statistical data analysis in ProUCL. The second installment presented live interactive use of ProUCL v5.1 focusing specifically on the finer points of regression and trend analysis within the ProUCL software. The final installment will focus mainly on background dataset analysis and associated background threshold value (BTV) comparisons within the ProUCL software. To view the archives of Part 1 and 2, see https://clu-in.org/conf/tio/ProUCLAt0Z1_012720/ and https://clu-in.org/conf/tio/ProUCLAt0Z2_021020/. For more information and to register for part 3, see <https://clu-in.org/live>.

Reducing Cost Risk in Remedial Action Budgets Using Supplemental Analyses - March 11, 2020, 1:30PM-3:00PM EDT (17:30-19:00 GMT). The cost estimates for selected remedies in Records of Decision (RODs) that are used for remedial action budgeting often use simplified information (such as scope of work activities and related quantities) as opposed to remedial action (RA) construction cost estimates developed during remedial design. Remedial action budgets developed from the ROD selected remedy cost estimates have inherent limitations due to the use of the estimate (i.e. selecting a remedy through comparisons of alternatives). Due to differing stakeholder perspectives and potential overreliance on the selected remedy cost estimates developed during the ROD, there can be confusion about why the RA cost estimate prepared during Remedial Design is different than the cost estimate in the ROD. Differences between the selected remedy cost estimate in the ROD and the RA cost estimate can lead to difficulties with project execution including the need to request additional funding and/or schedule delays. Based on prior CERCLA project experiences, CDM Smith has developed tools consistent with cost estimating industry standards and EPA guidance that can be used to communicate the reasons for these differences in estimates including Basis of Estimate documents and ROD cost comparison tables. The additional information will focus on case studies and lessons learned from CERCLA projects that led to the development of these tools and explain how they help show the actual differences in remedy scope and related costs as the level of project definition increases during remedial design, for example why cost items that at first glance appear to be similar ("apples to apples") could actually differ ("apples

and oranges"). For more information and to register, see <https://clu-in.org/live>.

ITRC Long-term Contaminant Management Using Institutional Controls - March 17, 2020, 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>.

CERCLA 108(b) Financial Responsibility Requirements Proposal for the Chemical Manufacturing Industry - March 18, 2020, 1:00PM-2:00PM EDT (17:00-18:00 GMT). On January 11, 2017, the Agency made a determination to proceed with rulemakings that will either develop proposed financial responsibility requirements under CERCLA 108(b), or determine such requirements are not warranted. The third of the three industries for which EPA is developing rulemaking proposals is for the Chemical Manufacturing Industry. This webinar will provide an overview of the rulemaking proposal for the Chemical Manufacturing Industry only. For more information and to register, see <https://clu-in.org/live>.

ITRC Geospatial Analysis for Optimization at Environmental Sites - March 19, 2020, 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 life-cycle 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 <https://clu-in.org/live>.

Superfund and Brownfields Funding Vehicles for Tribes - March 23, 2020, 1:00PM-2:30PM EDT (17:00-18:30 GMT). The webinar will provide information about potential tribal funding vehicles to help address contaminated land as well as to build capacity within tribes for environmental response including: Brownfields Funding Opportunities, Superfund Subpart O Funding Opportunities, and Superfund Community Involvement Funding Opportunities. Among the topics covered will be what makes tribes eligible for each of the kinds of funding vehicles, what kinds of activities can be

fund by each, and how Superfund and Brownfields funding interact (or don't). The webinar should provide tribal environmental professionals with a greater understanding of different potential funding vehicles that may support their work at impacted sites and should assist them in discussing funding options with their EPA regional counterparts. For more information and to register, see <https://clu-in.org/live>.

ITRC TPH Risk Evaluation at Petroleum-Contaminated Sites - March 31, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT). The basis for this training course is the ITRC guidance: TPH Risk Evaluation at Petroleum-Contaminated Sites (TPHRisk-1, 2018). The guidance builds on long-standing and current research and experience, and presents the current science for evaluating TPH risk at petroleum-contaminated sites. As a participant in this training you should learn to: recognize the ITRC document as a go-to resource for evaluating TPH risk at petroleum-contaminated sites, recognize how TPH-impacted media interacts with the environment and changes over time, select appropriate analytic method(s) to match site objectives, and apply the decision framework to determine when a site-specific target level may be more appropriate than a generic screening level for TPH. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

FRTR Presents...Synthesizing Evolving Conceptual Site Models (CSMs) with Applicable Remediation Technologies - April 1, 2020, 1:00PM-3:00PM EDT (17:00-19:00 GMT). This webinar features presenters and material from the November 2019 FRTR Meeting held in Reston, VA. The session will include two presentations: Developing Conceptual Site Models of Contaminated Fractured Rocks to Support In-Situ Remediation (presented by the U.S. Geological Survey) and Using Remedy Implementation Information to Guide Remedy Optimization (presented by the Pacific Northwest National Laboratory, U.S. Department of Energy, and EPA). For more information and to register, see <https://clu-in.org/live>.

> New Documents and Web Resources

ITRC Optimizing Injection Strategies and In Situ Remediation Performance. There are many types of in situ remediation amendments and emplacement technologies, and each site provides unique challenges that can limit the effectiveness of the in situ remedy. The importance of proactive planning, including using processes such as site characterization analysis, bench- and field-testing and/or design optimization testing, and performance evaluation, cannot be overemphasized. Many challenges encountered during in situ remediation can be overcome with a thorough understanding of the contaminant phase and distribution, site hydrogeology and biogeochemistry, and the amendment's physical and chemical characteristics. This comprehensive guidance is intended to assist a broad audience with overcoming common in situ remediation challenges, covering major topics such as remedial design, implementation, and monitoring. View and use at <https://ois-isrp-1.itrcweb.org>.

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:

- Season Two In Situ Treatment Completion Report Lockheed Martin Middle River Complex 2323 Eastern Boulevard Middle River, Maryland

- Statistical Software ProUCL 5.1.00 for Environmental Applications for Data Sets With and Without Nondetect Observations

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 7 resources, events, projects and news items were added to EUGRIS in February 2020. 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

Best Practices for Site Characterization Throughout the Remediation Process, Atlanta, GA, March 24-26, 2020. This training course is based on best management practices (BMP) implemented by 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://www.trainex.org/BPSCR>.

13th Symposium on Design and Construction Issues at Hazardous Waste Sites, Philadelphia, PA, April 1-3, 2020. The applications of engineering and science associated with cleaning up hazardous waste sites continue to evolve rapidly. Our goal is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues affecting our field. We will make every effort to mirror all aspects of past symposiums in terms of format and spirit. For more information and to register, see <https://www.same.org/Get-Connected/Find-a-Post/Philadelphia/DCHWS>.

ITRC 2020 Annual Meeting - Minneapolis, MN, April 20-24, 2020. ITRC invites you to attend its 25th Anniversary Annual Meeting! With an expected attendance of over 400 cleanup professionals, the meeting is a great opportunity to network with your peers and collaborate on solutions to some of the top environmental and health challenges nationwide, including: 1,4-dioxane, PFAS, harmful cyanobacterial blooms, soil background & risk, incremental sampling methodology, vapor intrusion mitigation, and green & sustainable remediation with resiliency. Additionally, the meeting includes a keynote plenary breakfast, networking opportunities at an evening reception and morning meet-and-greet, and a six-hour PFAS training class. For more information and to register, see <https://itrc.wildapricot.org/event-3654004>.

U.S EPA and RAIS Screening Level Calculator Training for Chemical and Radionuclide Risk Analysis - Oak Ridge National Laboratory, Oak Ridge, TN, April 14-17, 2020. This 4 day training will review EPA risk assessment tools for chemicals and radionuclides as well as the Risk Assessment Information System. The first day of training will be tours of the spallation neutron source facility and the high flux isotope reactor. The second and third days of the training are focused on chemical risk assessment and include tours of Summit supercomputer and the historic graphite reactor. The optional fourth day of the training is exclusively about radiation risk and dose assessment. This training is primarily intended for fresh and seasoned environmental professionals working on risk assessment projects at the Federal or State level. The risk calculators covered in this training are used by many State

government agencies, Federal agencies, and university staff and researchers. Participants, educators, and project managers will also benefit from the training. A very basic knowledge of risk assessment, computer usage, web browsing, and good manners is assumed. For more information and to register, see <https://rais.ornl.gov/home/spring2020.html>

ASTSWMO 2020 RCRA Corrective Action Conference - Lexington, KY, June 3-5, 2020. The Conference will feature the theme, "RCRA Corrective Action: 2020 and The Road Ahead", to acknowledge 2020 as the milestone year for achieving RCRA corrective action goals and the work that remains beyond 2020. Session topics will reflect the theme. On June 3, the Conference will be open only to State and Territorial (State) members and EPA Headquarters and Regional staff for discussions of regulators' issues. On June 4-5, ASTSWMO is pleased to invite, in addition to State members and EPA, officials from the U.S. Department of Defense (DoD) and other federal government agencies, industry, and other entities. For more information and to register, see <http://astswmo.org/event/astswmo-2020-rcra-corrective-action-conference/>

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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