



## TechDirect, January 1, 2017

Happy Holidays and may you have a prosperous new year!



Welcome to TechDirect! Since the December 1 message, TechDirect gained 601 new subscribers for a total of 38,236. 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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### > Funding Opportunities

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**FY 2017 Brownfields Environmental Workforce Development and Job Training (EWDJT) Grants.** These grants are provided to eligible entities, including nonprofit organizations, to develop environmental programs that recruit, train, and place unemployed and under-employed residents of communities affected by brownfields and other environmental contaminants with the skills needed to secure full-time, sustainable employment in the environmental field and in assessment and cleanup work taking place in their communities. Each Environmental Workforce Development and Job Training Grant may be funded up to \$200,000 over a three year period. The proposal deadline is February 24, 2017. For more information and guidelines, see

<https://www.epa.gov/brownfields/apply-brownfields-grant-funding>.

**State Implementation Support Grant.** EPA is announcing \$1 million in a grant to provide support state implementation support related to CERCLA 128(a). The EPA anticipates award of one cooperative agreement to support state implementation for CERCLA 128(a) and other brownfields related issues. The purpose of this cooperative agreement is to fund research, training, and technical assistance to promote and stimulate information exchange among State officials managing solid, hazardous and brownfields response programs (response programs), and EPA officials to jointly resolve Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 128(a) "co-implementor and co-regulator" issues, and identify emerging response program issues that are of interest to States. The maximum amount for the cooperative agreement is \$1,000,000. The proposal deadline is January 31, 2017. For more information and guidelines, see

<https://www.epa.gov/brownfields/apply-brownfields-grant-funding>.

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## > Upcoming Live Internet Seminars

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**ITRC Soil Sampling and Decision Making Using Incremental Sampling Methodology Parts 1 and 2 - January 5 and 12, 2017.** This 2-part training course along with ITRC's Web-based Incremental Sampling Methodology Technical and Regulatory Guidance Document (ISM-1, 2012) is intended to assist regulators and practitioners with understanding the fundamental concepts of soil/contaminant heterogeneity, representative sampling, sampling/laboratory error and how ISM addresses these concepts. Through this training course the participant should learn: basic principles to improve soil sampling results, systematic planning steps important to ISM, how to determine ISM Decision Units (DU), the answers to common questions about ISM sampling design and data analysis, methods to collect and analyze ISM soil samples, the impact of laboratory processing on soil samples, and how to evaluate ISM data and make decisions. In addition this ISM training and guidance provides insight on when and how to apply ISM at a contaminated site, and will aid in developing or reviewing project documents incorporating ISM (e.g., work plans, sampling plans, reports). For more information and to register, see <http://www.itrcweb.org> or <https://clu-in.org/live>.

Webinar on Proposed Financial Responsibility Requirements under CERCLA ♦ 108(b) for Classes of Facilities in the Hardrock Mining Industry - January 10, 2017, 2:00PM-3:00PM EST (19:00-20:00 GMT). EPA plans to host an informational public webinar to present an overview of the proposed financial responsibility requirements under CERCLA ♦ 108(b) for classes of facilities in the hardrock mining industry. EPA intends to cover the structure of the proposed rule and outline key background documents that accompany the rule. EPA also expects to discuss the public comment process on the proposed rule. EPA has set up an electronic mailbox for participants to submit questions prior to the webinar, and EPA will seek to respond during the webinar. However, due to the volume of questions anticipated, EPA may not be able to respond to all questions. Please submit any advance questions to: [108bwebinarquestions@epa.gov](mailto:108bwebinarquestions@epa.gov) with the subject line "108(b) webinar". The deadline for submitting advance questions is January 3, 2017. EPA also expects to accept questions during the webinar. Do not submit comments on the rule to this mailbox. The comment period will begin after publication of the proposed rule in the Federal Register. To ensure EPA considers them, comments on the proposed rule must be submitted in accordance with the instructions provided with the published version of the proposed rule in the Federal Register. For more information and to register, see <https://clu-in.org/live>.

**ITRC Groundwater Statistics for Environmental Project Managers - January 24, 2017, 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>.

**ITRC Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management - January 26, 2017, 1:00PM-3:15PM EST (18:00-20:15 GMT).** Chemical contaminants in soil and groundwater can volatilize into soil gas and migrate through unsaturated soils of the vadose zone. Vapor intrusion (VI) occurs when these vapors migrate upward into overlying buildings through cracks and gaps in the building floors, foundations, and utility conduits, and contaminate indoor air. If present at sufficiently high concentrations, these vapors may present a threat to the health and safety of building occupants. Petroleum vapor intrusion (PVI) is a subset of VI and is the process by which volatile petroleum hydrocarbons (PHCs) released as vapors from light nonaqueous phase liquids (LNAPL), petroleum-contaminated soils, or petroleum-contaminated groundwater migrate through the vadose zone and into overlying buildings. The ITRC Technical and Regulatory Guidance Web-Based Document, Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management (PVI-1, 2014) and this associated Internet-based training provides regulators and practitioners with consensus information based on empirical data and recent research to support PVI decision making under different regulatory frameworks. The PVI assessment strategy described in this guidance document enables confident decision making that protects human health for various types of petroleum sites and multiple PHC compounds. This guidance provides a comprehensive methodology for screening, investigating, and managing potential PVI sites and is intended to promote the efficient use of resources and increase confidence in decision making when evaluating the potential for vapor intrusion at petroleum-contaminated sites. By using the ITRC guidance document, the vapor intrusion pathway can be eliminated from further investigation at many sites where soil or groundwater is contaminated with petroleum hydrocarbons or where LNAPL is present. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.

**Webinar on the CERCLA 108(b) Financial Responsibility Formula - January 30, 2017, 2:00PM-3:00PM EST (19:00-20:00 GMT).** EPA plans to host an informational public webinar to describe key aspects of the financial responsibility formula included in the proposed financial responsibility requirements under CERCLA 108(b) for classes of facilities in the hardrock mining industry. EPA has set up an electronic mailbox for participants to submit questions prior to the webinar, and EPA will seek to respond during the webinar. However, due to the volume of questions anticipated, EPA may not be able to respond to all questions. Please submit any advance questions relating to the financial responsibility formula to: [108bwebinarquestions@epa.gov](mailto:108bwebinarquestions@epa.gov) with the subject line "Formula". The deadline for submitting advance questions is January 23, 2017. EPA also expects to accept questions during the webinar. Do not submit comments on the rule to this mailbox. The comment period will begin after publication of the proposed rule in the Federal Register. To ensure EPA considers them, comments on the proposed rule must be submitted in accordance with the instructions provided with the published version of the proposed rule in the Federal Register. For more information and to register, see <http://clu-in.org/live>.

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## > New Documents and Web Resources

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### **Revisions to EPA's Preliminary Remediation Goals for Radionuclides (PRG)**

**Electronic Calculator.** EPA has finished making revisions to its online risk assessment tool the PRG calculator. The +D and +E isotopes have been removed from the selection list. Now, a user may select the 'Include daughters' checkbox to see PRG output for the entire chain. In the resident, farmer, and indoor worker soil external exposure equations, a new variable has been added (GSFb) to account for the gamma shielding provided by clean soil cover under a building. It is combined with GSF<sub>i</sub>, the shielding provided by the building, to reduce exposures to receptors inside a building which is on top of clean soil over contaminated soil. Previously, produce intake rates were based on general fruit and vegetable consumption rates. Now, the produce intake rates are derived from 22 individual produce items, found in the 2011 Exposure Factors Handbook, that contribute to the overall produce ingestion PRG. Mass loading factors (MLFs) were also improved, from a single MLF that was applied to all produce, to 22 individual MLFs that correspond with the 22 individual produce items that make up the new produce intake rates. In site-specific mode, users will now be able to select additional animal products including Goat Milk, Sheep Milk, Goat Meat, and Sheep Meat, which are not included in the default animal product PRGs. Users will also be able to select Rice and Grains, which are not included in the default produce PRG. Formerly, the transfer factors used in this risk assessment tool were specific to element only. Now, the transfer factors are element, climate zone, soil type, and produce specific. For more detailed information, "Biota Modeling in EPA's Preliminary Remediation Goal and Dose Compliance Concentration Calculators" explains where these new intake rates, MLFs, and transfer factors were sourced and how they will be applied to the PRG calculator. The paper "Biota Modeling in EPA's Preliminary Remediation Goal and Dose Compliance Concentration Calculators" may be found at

[https://epa-prqs.ornl.gov/radionuclides/20161130\\_Biota\\_TM\\_KLM\\_Final.pdf](https://epa-prqs.ornl.gov/radionuclides/20161130_Biota_TM_KLM_Final.pdf). The revised version of the PRG calculator is available at: <https://epa-prqs.ornl.gov/radionuclides/>.

**EPA Adds Subsurface Intrusion to the Superfund Hazard Ranking System.** EPA has finalized a proposal to expand the hazards that qualify sites for the Superfund National Priorities List (NPL). EPA assesses sites using the Hazard Ranking System (HRS), which quantifies negative impacts to air, groundwater, surface water and soil. Sites receiving HRS scores above a specific threshold can be proposed for placement on the NPL. Subsurface intrusion is the migration of hazardous substances, pollutants or contaminants from contaminated groundwater or soil into an overlying building. Subsurface intrusion can result in people being exposed to harmful levels of hazardous substances, which can raise the lifetime risk of cancer or chronic disease. This regulatory change does not affect the status of sites currently on or proposed to be added to the NPL. This modification only augments criteria for applying the HRS to sites being evaluated in the future. For more information on the rulemaking, see

<https://www.epa.gov/superfund/hrs-subsurface-intrusion>.

**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:

- Direct Push Optical Screening Tool for High-Resolution, Real-Time Mapping of Chlorinated Solvent DNAPL Architecture [plus the ESTCP Cost and Performance Report]
- A Portable Burn Pan for the Disposal of Excess Propellants

- Development of an In Situ Passive Sampler for the Detection and Remediation of Explosive Compounds
- In Situ Bioremediation of 1,4-Dioxane by Methane Oxidizing Bacteria in Coupled Anaerobic-Aerobic Zones
- Framework Guidance Manual for In Situ Wetland Restoration Demonstration
- Conference Proceedings: International Conference -- Contaminated Sites 2016
- 2016 Top Markets Report: Environmental Technologies -- A Market Assessment Tool for U.S. Exporters
- Passive Biobarrier for Treating Co-Mingled Perchlorate and RDX in Groundwater at an Active Range
- Field Demonstration of Propane Biosparging for In Situ Remediation of N-Nitrosodimethylamine (NDMA) in Groundwater: ESTCP Cost and Performance Report
- Bioaugmentation for Aerobic Bioremediation of RDX-Contaminated Groundwater
- Nanofiber-Enabled, Multi-Target Passive Sampling Device for Determination of the Freely-Dissolved Sediment Pore Water Concentrations of Organic Contaminants
- Bioaugmentation with Vaults: Novel In Situ Remediation Strategy for Transformation of Perfluoroalkyl Compounds
- Third-Generation (3G) Site Characterization: Cryogenic Core Collection and High-Throughput Core Analysis, an Addendum to Basic Research Addressing Contaminants in Low Permeability Zones: A State of the Science Review

**EUGRIS Corner.** New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 3 resources, events, projects and news items were added to EUGRIS in December 2016. 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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### **Superfund Radiation Risk Assessment Course, Bethesda, MD, January 21, 2017.**

On January 21, 2017 EPA and Department of Energy Oak Ridge National Laboratory/University of Tennessee will be conducting a full day class on how to conduct Superfund Radiation Risk Assessments. This offering will be a full-day advanced course that focuses on specific technical and regulatory issues that Remedial Project Managers (RPMs), On-Scene Coordinators (OSCs), and risk assessors address when managing Superfund sites that have a risk assessment conducted for radioactive contaminants. This class is being offered as part of the Health Physics Society (HPS) Winter meeting in Bethesda Maryland. For more information, see

[http://hps.org/documents/2017\\_midyear\\_aahp\\_courses.pdf](http://hps.org/documents/2017_midyear_aahp_courses.pdf).

### **RemTEC, Denver, Colorado, March 7-9, 2017.**

The Remediation Summit (RemTEC) delivers a truly unique platform focused on advancing environmental science and the remediation industry. At this event, participants will hear essential sources of information on technology, application, and policy affecting the restoration of contaminated sites. This year, U.S. EPA staff will present on a variety of topics including technology transfer. For more information and to register, see

<http://www.remtecsummit.com/>.

**Call for Abstracts! Innovative New Technology Showcase at 2017 Environmental Measurement Symposium, Washington, DC, August 8, 2017.** Organized jointly by the U.S. EPA and The NELAC Institute (TNI), the 2017 Environmental Measurement

Symposium, a combined meeting of the 32nd Annual National Environmental Monitoring Conference (NEMC) and the Forum on Environmental Accreditation, is the largest conference focused on environmental measurements in North America. For the fourth year in a row, we are pleased to offer an exclusive opportunity for up to twelve organizations to showcase innovative new technologies - sensors, apps, personal monitoring devices, among others - and network with several hundred managers and senior staff from commercial laboratories; the regulated community; the Agency's regulatory program offices, regional and headquarters compliance staff; state compliance officials; tribal nations; the international community; the exhibitor community; and others involved in or affected by the Agency's policies and procedures.

The NEMC Steering Committee is inviting organizations to apply for this limited opportunity by submitting a one-page abstract that includes a description of your innovative product or service, how it is used, any demonstrated results, among other key facts or details. Abstracts are due by April 1, 2017. For more information and to submit an abstract, see <http://www.nemc.us/meeting/2017/newtech.php>.

**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 Jeff Heimerman at (703) 603-7191 or [heimerman.jeff@epa.gov](mailto:heimerman.jeff@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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