TechDirect, February 1, 2012

Welcome to TechDirect! Since the January 1 message, TechDirect gained 412 new subscribers for a total of 36,454. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing may do so on CLU-IN at http://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 s sediments and ground water.

Mention of non-EPA documents or presentations does not constitute a U.S. EPA endorsement of their contents, only an acknowledgment tha they exist and may be relevant to the TechDirect audience.

> Open Solicitation

ESTCP FY2013 Environmental Technologies Solicitation. The Department of Defense (DoD), through the Environmental Security Techno Certification Program (ESTCP), supports the demonstration of technologies that address priority DoD environmental requirements. The goal ESTCP is to promote the transfer of innovative environmental technologies through demonstrations that collect the data needed for regulatory and DoD end-user acceptance. Projects conduct formal demonstrations at DoD facilities and sites in operational settings to document and validate improved performance and cost savings. ESTCP is seeking proposals for innovative environmental technology demonstrations as candidates for funding beginning in FY2013. This solicitation requests pre-proposals via Calls for Proposals to Federal organizations and via a Broad Agency Announcement (BAA) for Private Sector organizations. Pre-proposals are due by Thursday, March 15, 2012. More information and detailed instructions for DoD, Non-DoD Federal, and BAA proposers at http://www.serdp-estcp.org/Funding-Opportunities/ESTCP-Solicitations .

> Upcoming Live Internet Seminars

Incremental-Composite Sampling Designs for Surface Soil Analyses - February 16, 21, 24, 27. This is a four part seminar series based a 1-day classroom course on incremental-composite sampling (ICS). The topics covered in four modules will include: fundamental concepts underlying ICS practices, terminology and existing guidance, incremental averaging, composite searching, limitations, caveats and quality cor (QC) and case studies. For more information and to register, see http://clu-in.org/live .

Early-life Exposures - Long-term Health Consequences: Part 1 Brominated Flame Retardants - February 3, 2012, 1:00PM-3:00PM ES (18:00-20:00 GMT).
This series "Early-life Exposures - Long-term Health Consequences" features SRP research in revealing the vulnerability of a developing chil identifying how biological systems are disturbed in this early period of life. The series will showcase cutting edge research findings that illumir the consequences of early life exposures to metals and organic contaminants of emerging concern. The first session "Early-life Exposures - Long-term Health Consequences: Part 1 Brominated Flame Retardants" features Dr. Linda Birnbaum (Director, National Institute of Environmental Health Sciences), Dr. Heather Stapleton (Duke University) and Dr. Prasada Kodavanti (US EPA). The seminar will feature wor with brominated flame retardants, compounds that are frequently added to consumer products (such as furniture and electronics) to improve f safety. Polybrominated flame retardants (PBDEs) can cross the placental barrier from mother to fetus and influence childhood development y later. PBDEs have been associated with alterations in thyroid hormone levels, reduced fertility, and neurodevelopmental deficits. Dr. Stapleto will present a recent study exploring the association between PBDEs exposure measured in serum levels and thyroid hormone levels among cohort of pregnant women. Additionally, she will highlight new research insights into possible mechanisms of thyroid hormone dysregulation. Kodavanti will discuss a study evaluating the neurobehavioral, hormonal, and reproductive effects of perinatal exposure to a commercial PBD mixture, DE-71, in a population of rats. PBDE was demonstrated to cross the blood-placenta and blood-brain barriers, resulting in subtle chan in some parameters of neurobehavior, dramatic changes in thyroid hormone levels, and alterations in both male and female reproductive endpoints. The seminar will be moderated by Dr. William A. Suk, Director of the Superfund Research Program at NIEHS. For more informatio and to register, see http://clu-in.org/live .

Decision Trees for Screening Potentially Contaminated or Underutilized Site for Solar and Wind Potential - February 7, 2012 1:00PM-2:30PM EST (18:00-19:30 GMT). This webinar will give an overview of two draft decision trees that the Environmental Protection Agency (EPA) and National Renewable Energy Laboratory (NREL) created to screen potentially contaminated and underutilized sites for sola and wind potential. These decision trees were created to guide state and local governments and other stakeholders through a process for screening sites for their suitability for solar photovoltaic (PV) and wind energy. Targeted sites include underutilized "greyfields", commercial/industrial rooftops, brownfields, Superfund sites, RCRA sites, publicly owned facilities, abandoned parcels, and landfills. EPA encourages the development of these targeted sites, instead of green space.
For more information and to register, see http://clu-in.org/live .

ITRC Green & Sustainable Remediation - February 14, 2012, 2:00PM-4:15PM EST (19:00-21:15 GMT). Many state and federal agencies just beginning to assess and apply green and sustainable remediation into their regulatory programs. This training provides background on G and Sustainable Remediation (GSR) concepts, a scalable and flexible framework and metrics, tools and resources to conduct GSR evaluatior on remedial projects. The training is based on the ITRC's Technical & Regulatory Guidance Document: Green and Sustainable Remediation: Practical Framework (GSR-2, 2011) as well as ITRC's Overview Document, Green and Sustainable Remediation: State of the Science and Practice (GSR-1, 2011). Beyond basic GSR principles and definitions, participants will learn the potential benefits of incorporating GSR into th projects; when and how to incorporate GSR within a project's life cycle; and how to perform a GSR evaluation using appropriate tools. In addition, a variety of case studies will demonstrate the application of GSR and the results. The training course provides an important primer fo

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both organizations initiating GSR programs as well as those organizations seeking to incorporate GSR considerations into existing regulatory guidance. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

ITRC Use and Measurement of Mass Flux and Mass Discharge - February 16, 2012, 11:00AM-1:15PM EST (16:00-18:15 GMT). The ITR technology overview, Use and Measurement of Mass Flux and Mass Discharge (MASSFLUX-1, 2010), and associated Internet-based training provide a description of the underlying concepts, potential applications, description of methods for measuring and calculating, and case studie of the uses of mass flux and mass discharge. This Technology Overview, and associated Internet-based training are intended to foster the appropriate understanding and application of mass flux and mass discharge estimates, and provide examples of use and analysis. The docur and training assumes the participant has a general understanding of hydrogeology, the movement of chemicals in porous media, remediation technologies, and the overall remedial process. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

ITRC A Decision Framework for Applying Attenuation Processes to Metals and Radionuclides - February 23, 2012 11:00AM-1:15PM (16:00-18:15 GMT). This training and the associated ITRC Technical and Regulatory Guidance document, A Decision Framework for Applyin Attenuation Processes to Metals and Radionuclides (APMR-1, 2010), is intended for anyone involved with evaluating, investigating, remediati or managing a site that involves metal and radionuclide contaminants in groundwater. This training and document provides: introduction to ke attenuation processes for metals and radionuclides, information on incorporating Monitored Natural Attenuation (MNA) into remedial alternati for metals/rads, and an overview of the decision framework on MNA for metals and radionuclides in groundwater within the larger evaluation framework of a contaminated site. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

ITRC Phytotechnologies - February 28, 2012, 2:00PM-4:15PM EST (19:00-21:15 GMT). This training familiarizes participants with ITRC's Phytotechnology Technical and Regulatory Guidance and Decision Trees, Revised (Phyto-3, 2009). This document provides guidance for regulators who evaluate and make informed decisions on phytotechnology work plans and practitioners who have to evaluate any number of remedial alternatives at a given site. This document updates and replaces Phytoremediation Decision Tree (Phyto-1, 1999) and Phytotechnol Technical and Regulatory Guidance Document (Phyto-2, 2001). It has merged the concepts of both documents into a single document. This guidance includes new, and more importantly, practical information on the process and protocol for selecting and applying various phytotechnologies as remedial alternatives. For more information and to register, see http://www.itrcweb.org or http://clu-in.org/live .

The "US and EU Perspectives on Green and Sustainable Remediation, Part 4" internet seminar will be held on March 6, 2012, from 10:00 am to 12:00 pm (Eastern US). This seminar is a continuation in the series on international green and sustainable remediation efforts (additional information on prior internet seminars can be found at http://cluin.org/consoil/). This two-hour seminar will: (1) present a US case study c the Renewable Energy Pre-Feasibility Analysis at the Apache Powder Superfund Site; (2) present a case study on how green and sustainable remediation efforts are being implemented in Central Europe; (3) discuss Austrias new tool for performing a cost-effectiveness analysis whic integrates the environmental and socio-economic dimension of sustainability; (4) provide an update on EPAs draft environmental footprint methodology for estimating or quantifying a remediation sites footprint (www.clu-in.org/greenremediation/methodology/index.cfm) and on the ASTM International effort to develop a voluntary consensus-based standard for greener cleanups (www.clu-in.org/greenremediation/subtab_b5.cfm); (5) present updates on international green and sustainable remediation efforts; and (6) provide information on 2012 green and sustainable remediation internet seminars and conferences. An open forum will be held throughout the seminar to respond to participant questions. For more informat and to register, see http://clu-in.org/live .

CWA211W: CWA-NPDES National Technical Inspector Workshop (Live Webinar of Classroom delivery) March 13-16, 2012. The agen for this National Pollutant Discharge Elimination System (NPDES) Technical Inspector's Workshop was developed by a committee of senior inspectors from the 10 U.S. EPA Regions and the Headquarters Office of Compliance (OC) in Washington, D.C. It was developed for the exp purpose of increasing the inspector's knowledge of NPDES permits and regulations, field inspection capabilities, knowledge of wastewater processes and environmental management systems, and to improve the exchange of information between the inspectors in the 10 Regions a Washington, D.C.. For more information and to register, see https://www.netionline.com/course/DelivDetails.asp?DeliveryNumber=0000003435&CourseNumber=CWA2

> New Documents and Web Resources

New CLU-IN Mass Flux Focus Area. Most decisions regarding contaminated groundwater sites are driven by contaminant concentrations. These decisions can be improved by also considering contaminant mass discharge and mass flux. Mass discharge and flux estimates quantif source or plume strength at a given time and location. Consideration of the strength of a source or solute plume (i.e., the contaminant mass moving in the groundwater per unit of time) improves evaluation of natural attenuation and assessment of risks posed by contamination to downgradient receptors, such as supply wells or surface water bodies. View and use at http://clu-in.org/massflux .

Green Remediation Best Management Practices: Landfill Cover Systems & Energy Production (EPA 542-F-11-024). The U.S. Environmental Protection Agency (EPA) Principles for Greener Cleanups outline the Agency's policy for evaluating and minimizing the environmental footprint of activities undertaken when cleaning up a contaminated site. Use of the best management practices (BMPs) recommended in EPAs series of green remediation fact sheets can help project managers and other stakeholders apply the principles on a routine basis while maintaining the cleanup objectives, ensuring protectiveness of a remedy, and improving its environmental outcome. Remediation at thousands of sites across the United States involves hazardous waste from former industrial landfills or waste piles, aged municipal landfills, or illegal dumps. A cover system is commonly installed at these areas as part of proper closure to serve as a surface barri that contains the source material, reduces contaminant exposure or migration, and manages associated risk. The environmental footprint of activities needed to install and maintain a cover system can be reduced by adhering to EPA's Principles for Greener Cleanups (December 20 6 pages). View or download at http://clu-in.org/techpubs.htm .

Optimization Evaluation: Lee Chemical Superfund Site, City Of Liberty, Clay County, Missouri (EPA 542-R-11-013). The Lee Chemical Superfund Site (site) is located along Missouri Highway 210 in Liberty, Missouri, approximately 15 miles east of Kansas City, Missouri. Curren the site is a vacant lot of approximately 2.5 acres in a flat alluvial plain. The City of Liberty (City) has a municipal well field located approximat 0.40 miles southeast of the site. There are nine municipal water wells situated in a north-south line in the alluvial aquifer at an approximately perpendicular angle to the site. Historically, the City leased the land to the Lee Chemical Company, but then filed suit against Lee Chemical Company in 1975 for nonpayment of rent. The City then found and removed approximately 300 abandoned 55-gallon drums containing chemi and wastes. In 1979, low levels of trichloroethene (TCE) were detected in the public water supply wells. Subsequent EPA and State

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investigations revealed contaminated groundwater and soil, and in 1982 the City and State identified the site as a source of TCE contaminatic the public water supply. The current remedy in place for the Lee Chemical Superfund Site consists of the operation of an in situ aqueous soil washing system, the extraction of groundwater from extraction wells (EX) EX-1 and PW-2, and the discharge of the extracted groundwater fro both extraction wells to a single, permitted outfall to Town Branch Creek. This Remedial Action (RA) is continually monitored and reported on through monthly and quarterly progress reports. The site remedy was considered Operational and Functional (O&F) on March 26, 1994. Recommendations are provided to improve remedy effectiveness, provide technical improvement, and gain site closure (December 2011, 69 pages). View or download at http://clu-in.org/techpubs.htm .

Optimization Review: Palermo Wellfield Superfund Site, City of Tumwater, Thurston County, Washington (EPA 542-R-11-010). The Palermo Wellfield Superfund Site (Site) is located near Interstate Highway 5 and Trosper Road in Tumwater, Washington. The Site includes a City-operated water-supply wellfield and an adjacent residential neighborhood in the Deschutes River Valley (sometimes referenced in site documents as the Palermo Valley), as well as upland source areas including the current Washington State Department of Transportation (WSDOT) Materials Testing Laboratory (MTL), a former WSDOT MTL, and the Southgate Dry Cleaners business. Trichloroethene (TCE) was detected in the City water supply at the wellfield in 1993. Subsequent investigations identified a TCE groundwater plume over 3,000 feet (ft) lc and 600 ft wide, and a smaller tetrachloroethene (PCE) plume near the Southgate Dry Cleaners site. USEPA Region 10 nominated the Site f an optimization review due an interest in updating the conceptual site model (CSM) and concerns regarding plume migration control and the potential for vapor intrusion (VI) (January 2012, 152 pages). View or download at http://clu-in.org/techpubs.htm .

Technology News and Trends: Let Us Know If You Would Like to Go Paperless! In the interest of minimizing the resources required print and distribute the Technology News and Trends newsletter (http://www.clu-in.org/products/newsltrs/tnandt/), EPA is going paperless and will be distributing the newsletter electronically. If you are a subscriber, please let us know if you would like to continue your subscription semi-monthly email notifications. Please send an email message with your mailing address and email address to TNTeditor@emsus.com. Put "Paperless" in the subject line so we can make the switch.

Draft Solar and Wind Decision Trees. As part of EPA's RE-Powering America's Land Initiative, EPA and DOE's National Renewable Energy Lab (NREL) have worked together to create a tool that could be used nationally to screen sites for solar and wind production. While the decis trees focus on potentially contaminated sites, this tool also provides information on rooftop and other applications in order to support complimentary evaluations. These decision trees can be used to screen individual sites for their solar or wind potential or for a community-sc evaluation of multiple sites. These trees are not intended to replace or substitute the need for a detailed site-specific assessment that would follow an initial screening based on criteria contained in the tree. Tips on how users can obtain information relevant to various parameters in t tree are provided. EPA is seeking your feedback on these draft decision trees by February 16, 2012. View or download at http://www.epa.gov/renewableenergyland/develop_potential_fs.htm .

Cultivating Green Energy on Brownfields: A Nuts and Bolts Primer for Local Governments. This primer offers local governments a star point for considering whether (and what) renewable energy facilities may be appropriate for local brownfield sites. It includes an overview of renewable energy options, tools for navigating the economic issues that determine project feasibility, information on the permitting, zoning, liability and other regulatory issues that affect the development of renewable energy projects on these sites, and suggestions for ways to promote the development of renewable energy on brownfield sites. Case examples, presented throughout the primer, demonstrate the succe of existing policies and renewable energy projects operating on brownfields. The primer's appendix provides a list of resources for more information on developing a renewable energy project on a brownfield. This primer was developed by the National Association of Local Government Environmental Professionals (NALGEP) under a grant awarded by the U.S. EPA Office of Solid Waste and Emergency Respons (January 2012, 40 pages). View or download at http://www.nalgep.org/publications/PublicationsDetail.cfm?LinkAdvID=103058 .

Site Characterization for Munitions Constituents: EPA Federal Facilities Forum Issue Paper (EPA 505-S-11-001). This issue paper was developed by the Federal Facilities Forum of EPA's Technical Support Project to provide personnel working on hazardous waste sites with the technical information they need to decide how to investigate sites contaminated with chemicals associated with military explosives and propellants. The paper addresses the nature of energetic residues on Defense training ranges and other munitions sites, sampling strategies provide representative samples, and analytical methods developed to characterize these samples. Munitions safety issues do not fall within th scope of the issue paper (January 2012, 167 pages). View or download at http://www.epa.gov/fedfac/pdf/site_characterization_for_munitions_constituents.pdf

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 technolc development. Recent issues, complete archives, and subscription information is available at http://clu-in.org/products/tins/ . The following resources were included in recent issues:

- Tailored Granular Activated Carbon Treatment of Perchlorate in Drinking Water: ESTCP Cost and Performance Report
- Evaluation of Alternative Causes of Widespread, Low Concentration Perchlorate Impacts to Groundwater: Phase II Report
- Probability of Detecting Perchlorate Under Natural Conditions in Deep Groundwater in California and the Southwestern United States
- The 10th International Conference on Mercury as a Global Pollutant (ICMGP), Halifax, Nova Scotia, July 24-29, 2011
- Permeable Reactive Barriers & Reactive Zones - PRB/RZ 2010: Proceedings of the 4th International Symposium, Antwerp, July 6-8, 2
- Green and Sustainable Remediation: A Practical Framework
- Environmental Molecular Diagnostics Fact Sheets
- Superfund Site Assessment Program: Benefits Beyond NPL Listing
- The Superfund Innovative Technology Evaluation Program: Summary and Closure Report

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 12 resources, events, projects and news items were added to EUGRIS in January. 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

National Training Conference on the Toxics Release Inventory and Environmental Conditions in Communities
04/11/2012 - 04/13/2012

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This year's theme is "Understanding the Past and Promoting a Sustainable Future. " This conference will feature presentations on topics ranging from environmental conditions on Tribal lands, to industry achievements in pollution prevention, to what the TRI might look like in 2020. To check out the draft agenda and register, please visit:
http://www.chemicalright2know.org/tri-conference/2012-tri-national-conference/2012-national-training-conference-on-the-toxics-release-inventory-tri-and-environmental-conditions-in-commu
. For questions or more information, please contact Caitlin Briere at briere.caitlin@epa.gov or 202-566-1646.

Facility Decommissioning Training Course
03/12/2012 - 03/15/2012 - Las Vegas, NV.
Addresses the process of facility decommissioning from final shutdown through facility/site release. For more information, please vis
http://www.dd.anl.gov/ddtraining/

Basic Hands-On CAMEO Training
03/12/2012 - 03/14/2012 - Boston, MA.
Over the years, chemical emergency planning has become more complicated by an increase in man-made and natural disasters. Th EPA's CAMEO software suite has successfully adapted to global changes with updated versions that allow for one comprehensive emergenc plan for your organization. This program, with a 1:1 computer/participant ratio, provides participants with an overview of the latest versions of CAMEO, ALOHA, and MARPLOT. Chemical emergency planners, responders, and others will obtain the hands-on training needed to accura efficiently, and confidently respond to chemical emergencies. For more information, please visit https://ccpe.sph.harvard.edu/CAMEO

NOTE: For TechDirect, we prefer to concentrate mainly on new documents and the Internet live events. However, we do support an a on CLU-IN where announcement of conferences and courses can be regularly posted. Currently there are 16 conferences and courses featu We invite sponsors to input information on their events at http://clu-in.org/courses . Likewise, readers may visit this area for news of upcoming even 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. Remember, you may subscribe, unsubscribe or change your subscription address at http://clu-in.org/techdirect at any time night or day.

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