Message #57: November 2001

Welcome to TechDirect. Since the October 1 message, TechDirect gained 258 new subscribers for a total of 11,915. If you feel the service is valuable, please share TechDirect with your colleagues. Anyone interested in subscribing to TechDirect may do so on CLU-IN at http://clu-in.org/techdirect . All previous TechDirect messages are archived there.

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Special Announcements

Reminder!! EPA Fall 2002 Fellowships. The U.S. Environmental Protection Agency (EPA) is offering three fall 2002 fellowship programs to encourage students to pursue careers in environmentally related fields. These programs include STAR Graduate Fellowships, Minority Academic Institutions Graduate Fellowships, and Minority Academic Institutions Undergraduate Fellowships. The deadline for pre-applications for all three fellowships is November 19, 2001. More information is available at http://es.epa.gov/ncerqa/rfa/#2002 Environmental Research Grant .

Live Internet Seminars

Modernizing Site Cleanup: Managing Decision Uncertainties Using the Triad Approach - November 6. This two-hour session is being broadcast live from the Fall ITRC conference in Long Beach, California.. This seminar, sponsored by the U.S. Army Corps of Engineers and U.S. EPA, Technology Innovation Office. It is designed to introduce state and federal project managers and technical staff, environmental consultants, site owners, and community stakeholders to the importance of using systematic planning to implement dynamic data collection strategies using innovative field measurement technologies. For more information and to register, see or http://clu-in.org/studio .

EPA Small Business Innovation Research Overview and Proposal Writing - November 14. This seminar will describe the EPA Small Business Innovation Research (SBIR) program which

provides financial support to help small technology based firms develop new environmental technologies and ready them for commercialization. The presentation will cover the basics of the SBIR program, upcoming solicitations and schedules, and helpful information on writing a competitive proposal and winning an SBIR award. For more information and to register, see or http://clu-in.org/studio .

Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action, November 15. This seminar will provide an overview of the recently finalized Handbook that contains EPA's latest interpretations of policies on topics such as, cleanup goals, groundwater use, point of compliance, source control, and completing groundwater remedies. The Handbook ties 15 different topics together with an overall Groundwater Protection and Cleanup Strategy that emphasizes a phased, results-based approach to cleaning up contaminated groundwater. Although the Handbook focuses on RCRA Corrective Action, EPA believes the plain language of the policy descriptions, and the Internet links to over 50 more detailed resources will be helpful to anyone involved with groundwater protection and cleanup. For more information and to register, see or http://clu-in.org/studio .

Field Analytical Methods for Detecting Explosives Compounds - November 28. The presentation discusses the physical and chemical properties of secondary explosives that make analytical determination of these compounds challenging. It reviews fixed-laboratory-based methods for this suite of compounds, and the quantitative requirements for various compounds within this group. Sampling considerations are discussed, with particular emphasis on the problem of obtaining representative soil samples in areas of extreme spatial heterogeneity in analyte distribution. Finally there will be a discussion of the advantages and disadvantages of the most commonly employed on-site methods for these compounds. To register - see http://clu-in.org/studio .

New Documents

Managing Uncertainty in Environmental Decisions
(Environmental Science and Technology). This article was developed in collaboration with staff at the US EPA, the US Army Corps of Engineers, and other professionals. It argues that using field analytical technologies in the context of a dynamic work plan with careful management of sampling, analytical, and decision uncertainties can significantly bring down the costs of contaminated site investigations and cleanups, while improving confidence in

project decisions. Rather than considering "data quality" to be solely a function of the analytical method used (as is very common in the environmental field), the article suggests that "data quality" be evaluated according to whether all features of the data, especially the representativeness of the sampling procedures, are sufficient to support the intended decisions. Through the months of October and November, the article is viewable on the ES&T website (in the Magazine section) at http://pubs.acs.org/journals/esthag/index_magazine.html

Applying the Concept of Effective Data to Environmental Analyses for Contaminated Sites (EPA 542-R-01-013). This paper was produced by the U.S. EPA Technology Innovation Office. It provides detailed discussion to supplement the article, Managing Uncertainty in Environmental Decisions: Applying the Concept of Effective Data at Contaminated Sites Could Reduce Costs and Improve Cleanups, that appeared in the October 1, 2001, issue of Environmental Science & Technology. This paper addresses issues that revolve around the generation and use of contaminant data as produced by analytical chemistry methods (October 2001, 17 pages). View or download at http://clu-in.org/techpubs.htm .

Clarifying DQO Terminology Usage to Support Modernization of Site Cleanup Practice (EPA 542-R-01-014). This paper was produced by the U.S. EPA Technology Innovation Office. It is intended to provide, as briefly yet unambiguously as possible, a basic conceptual understanding of DQO-related terms in a way that facilitates systematic project planning in the context of site cleanups. A list of descriptions for DQO-related terms and concepts appears first in this paper, followed by a more intensive discussion of the working interrelationships between these concepts (October 2001, 11 pages). View or download at http://clu-in.org/techpubs.htm .

The Relationship between SW-846, Performance Based Measurement Systems (PBMS), and Innovative Analytical Technologies (EPA 542-R-01-015). This paper was produced by the U.S. EPA Technology Innovation Office and the Office of Solid Waste. It summarizes EPA's position regarding testing methods used within waste programs, documentation of EPA's position, the reasoning behind EPA's position, and the relationship between analytical method regulatory flexibility and the use of on-site measurements (also termed field analytical methods) to improve the cost-effectiveness of contaminated site cleanups (October 2001, 8 pages). View or download at http://clu-in.org/techpubs.htm .

Using the Triad Approach to Improve the Cost-effectiveness of Hazardous Waste Site Cleanups (EPA 542-R-01-016). This paper was produced by the U.S. EPA Technology Innovation Office. It

discusses the Triad approach to site decision making, i.e., use of systematic planning, dynamic work plans, and real-time analysis as the foundation upon which cost-effective, defensible site decisions and actions are built. A central theme of the triad approach is a clear focus on overall decision quality as the overarching goal of project quality assurance, requiring careful identification and management of potential causes for errors in decision-making (October 2001, 8 pages). View or download at http://clu-in.org/techpubs.htm .

Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action (EPA 530-R-01-015). This Final Handbook was published by the U.S. EPA Office of Solid Waste. It contains the Environmental Protection Agency's (EPA's) latest interpretation of policies on such topics as cleanup goals, the role of groundwater use, point of compliance, source control, and monitored natural attenuation. This Handbook ties 15 different topics together with an overall Groundwater Protection and Cleanup Strategy that emphasizes a phased, results-based approach to cleaning up contaminated groundwater (September 2001, 100 pages). View or download at http://www.epa.gov/correctiveaction/resource/guidance/gw/gwhandbk/gwhndbk.htm .

Waste Testing and Quality Assurance (WTQA) Symposia Proceedings. EPA sponsors the annual WTQA Symposium (1) to serve as a forum for all interested parties to work together to solve RCRA and CERCLA environmental monitoring and waste characterization problems in a cost-effective manner, (2) to give state regulatory agencies and the public timely information about EPA activities that might affect their programs, and (3) to permit the members of the analytical services community an opportunity to exchange information and experiences in using existing and emerging testing methods and approaches. Proceedings are now available on-line for years 1997 through 2001. To access them, see http://www.epa.gov/epaoswer/hazwaste/test/proceedings/proceedings.htm

Innovative Technology Summary Report: Adaptive Sampling and Analysis Program (Tech ID 2946). This report was produced by the U.S. DOE Subsurface Contamination Focus Area and the Characterization, Monitoring and Sensor Technology Cross-Cutting Program. It covers several demonstrations and deployments of ASAPs that were conducted between 1992 and 1999. ASAPs have been used to delineate and quantify subsurface hazardous and mixed waste, and Naturally Occurring Radioactive Material (NORM) contamination, identify buried waste pits, and provide remediation support for precise excavations (August 2001, 29 pages). View or download at http://apps.em.doe.gov/ost/pubs/itsrs/itsr2946.pdf .

Methods for Determining Inputs to Environmental Petroleum

Hydrocarbon Mobility and Recovery Models (API 4711). This report was produced by the American Petroleum Institute. Important fluid and soil property parameters are explained. Methods to measure each parameter are presented in order of relevance for use in environmental free-product mobility/recovery assessments. Fluid property parameters covered include density, viscosity, surface tension and interfacial tension. Laboratory-scale soil property parameters include: capillary pressure vs. saturation, relative permeability vs. saturation, water and non-aqueous phase liquid (NAPL) saturation, Brooks-Corey and van Genuchten model parameters. Field-scale bail-down and production tests are explained and cited. Sample collection and handling procedures are summarized. A listing and abstract of relevant ASTM methods is provided in the appendix (July 2001, 72 pages). View or download at http://api-ep.api.org/filelibrary/4711.pdf .

Conferences and Symposia

Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 27-29. The Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) will hold their annual technical symposium & workshop. Topic areas include the following: compliance technologies to reduce the environmental impact of current activities; pollution prevention technologies to reduce or eliminate environmental impacts in defense manufacturing through substitution, recycling, and resource conservation; cleanup technologies to mitigate the current and future liability of past activities through remediation; and conservation technologies to preserve natural resources while sustaining military operations. For additional information including agenda, registration and logistics, see http://www.serdp.org or http://www.estcp.org or call (703) 736-4548.

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