

## Message #61: March 2002

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Welcome to TechDirect. This issue kicks off our sixth year of providing information on new documents and events to remediation professionals. In that time, TechDirect has grown from an initial 1200 people to over 13,000 subscribers in more than 65 countries. It is hard to measure the impact of this service on the remediation community, but we do strive to be relevant and provide current technical information that will help you do your work.

Since the February 1 message, TechDirect gained 336 new subscribers for a total of 13,105. 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.

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.

### Upcoming Internet Seminars

**ITRC Permeable Reactive Barriers for Chlorinated Solvent, Inorganic, and Radionuclide Contamination - March 19.** The training focuses on the basic information one needs to determine and document the conditions necessary to effectively apply a permeable reactive barrier to a contaminated zone to be an effective part of remediating chlorinated solvents, radionuclides and other inorganic compounds in ground water. It provides a framework, that is, how to think about permeable reactive barriers based on science. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**ITRC Advanced Techniques on Installation of Iron Based Permeable Reactive Barriers and Non-Iron Based Barrier Treatment Material - March 21.** This ITRC seminar uses case studies to describe long-term performance of iron-based systems and details how to design them according to the heterogeneities of the subsurface. New construction techniques for excavation and wall emplacement have improved dramatically and the attention to barrier construction is as critical as is performance monitoring. It also describes non-iron barrier systems, the material most commonly

used and the mechanisms encouraging a reduction in contaminant concentrations within the systems. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**ITRC Passive Diffusion Samplers - March 26.** This seminar will present the technical and regulatory considerations associated with deployment of diffusion samplers, and summarize major points of the recently issued USGS document, Users Guide For Polyethylene-Based Passive Diffusion Bag Samplers To Obtain Volatile Organic Compound Concentrations In Wells. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**ITRC In Situ Chemical Oxidation - March 28.** This seminar presents materials covered in the recently released ITRC In Situ Chemical Oxidation Technical and Regulatory Guidance document. It provides technical and regulatory information to assist site managers in understanding, evaluating and making informed decisions on ISCO proposals. It includes descriptions of the various chemical oxidants, regulatory considerations, stakeholder concerns, case studies, and technical references. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/studio> .

**EPA Small Business Innovation Research Overview and Proposal Writing - April 9.** 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, the open 2002 solicitations and schedules, and helpful information on writing a competitive proposal and winning an SBIR award. For more information and to register, see <http://clu-in.org/studio> .

## ***New Documents***

**Groundwater Remedies Selected at Superfund Sites (EPA 542-R-01-022).** This document was produced by the U.S. EPA Technology Innovation Office. Over a 17-year period from 1982 through 1999, more than 2,200 Records of Decision (RODs) have been signed for 1,451 Superfund sites, including 989 RODs addressing the remediation of contaminated groundwater at 787 Superfund sites. This report documents the selection of groundwater treatment and Monitored Natural Attenuation (MNA) remedies at Superfund remedial action sites. It presents data on groundwater treatment and MNA remedy decisions and analyzes trends in these decisions over time. The focus of this report is on groundwater

treatment and MNA remedies that result in a reduction of contaminant concentrations or mobility. Groundwater containment and groundwater-other remedies are not addressed (January 2002, 38 pages). View or download at <http://clu-in.org/techpubs.htm> . Hard copies will be available in 2-3 weeks, contact (800) 490-9198 or (513) 489-8190 or fax to (513) 489-8695.

**Development of Recommendations and Methods to Support Assessment of Soil Venting Performance and Closure (EPA 600-R-01-070)**. This report was written by the U.S. EPA National Risk Management Research Laboratory. The overall purpose of the report is to improve the "state of the art" and "state of the science" of soil venting application. Results of field-based research and comprehensive and detailed literature reviews on gas flow and vapor transport are provided to form the basis and defense of recommendations to improve site characterization, design, and monitoring practices in support of venting application (September 2001, 435 pages). View or download at [http://www.epa.gov/ada/download/reports/epa\\_600\\_r01\\_070.pdf](http://www.epa.gov/ada/download/reports/epa_600_r01_070.pdf) . For hard copies, contact Kay Cooper at (580) 436-8651 or fax (580) 436-8503.

**Development of a Data Evaluation/Decision Support System for Remediation of Subsurface Contamination (EPA 600-R-01-044)**. This report was published and made available by EPA's Office of Research and Development. It addresses the feasibility of using dissolved concentration measurements to estimate the spatial distribution of each component of an immobile (or residual) NAPL mixture in a saturated field-scale system. Also, this report contains the results of the one-dimensional analysis as well as the development of the two dimensional state and estimation equations that are being used in ongoing research. Results from the two-dimensional analysis could be extended to a general three-dimensional problem and the application of the algorithm to field data (July 2001, 67 pages). View or download at [http://www.epa.gov/ada/download/reports/epa\\_600\\_r01\\_044.pdf](http://www.epa.gov/ada/download/reports/epa_600_r01_044.pdf) . For hard copies, contact Kay Cooper at (580) 436-8651 or fax (580) 436-8503.

**Field Demonstration of Lead-Based Paint Removal and Inorganic Stabilization Technologies (EPA 600-R-01-055)**. This report was published by the U.S. EPA National Risk Management Research Laboratory. The publication reports on a study conducted to demonstrate the effectiveness of a wet abrasive blasting technology to remove lead-based paint from exterior wood siding and brick substrates, and the effectiveness of two Best Demonstrated Available Technologies (BDAT) to stabilize the resultant blasting media (coal slag and mineral sand) paint debris to

reduce the leachable lead content (December 2001, 82 pages). View or download at

<http://www.epa.gov/ORD/NRMRL/Pubs/2001/600R01055.pdf> .

**Long Term Stewardship Technology Analysis of the Office of Science and Technology Profile** (INEEL/EXT-01-01248). The DOE Idaho National Engineering and Environmental Laboratory (INEEL) is tasked to support the development of the framework and management systems necessary to ensure safe and effective execution of DOE's Long Term Stewardship (LTS) activities. A major element of this program is the development and implementation of improvements to LTS operation and decision making through advances in science and technology (S&T). INEEL is responsible for developing LTS S&T Roadmap, which will describe the strategic direction needed for DOE to develop the infrastructure and capabilities necessary to meet its LTS commitments in an efficient manner. This report profiles DOE's funded Science and Technology activities that are applicable or could potentially be applicable to Long Term Stewardship (September 2001, 246 pages). View or download at <http://lts.inel.gov/st-roadmap/pdfs/LTS-Tech-Profile-Sep01.pdf> .

**Public Policies and Private Decisions Affecting the Redevelopment of Brownfields: An Analysis of Critical Factors, Relative Weights and Areal Differentials.** This report, prepared by the George Washington University (GWU) under cooperative agreement with EPA, examines the relationship between reusing brownfields and preserving greenfields, using information from brownfields projects underway across the nation. The questions addressed were: Extent of pressure reduction on greenfields, Economic benefits, and Effects of federal, state and local statutes and regulations (September 2001). View at

[http://www.gwu.edu/~eem/Brownfields/project\\_report/report.htm](http://www.gwu.edu/~eem/Brownfields/project_report/report.htm) .

**Actualizaciones de las Guías para Ciudadanos para el 2002.** EPA emplea muchos métodos para eliminar la contaminación en los sitios del programa Superfund y otros sitios contaminados. Si usted vive, trabaja o asiste a la escuela cerca de un sitio contaminado, es posible que usted tenga interés en conocer más a fondo los métodos de eliminación de la contaminación. Puede que en su sitio ya se estén empleando o se haya propuesto su empleo tecnologías de tratamiento. ¿Cómo funcionan estas tecnologías y métodos de tratamiento? ¿Entrañan peligros? Las Guías del Ciudadano son una serie de monografías sobre las tecnologías de tratamiento de uso mas frecuente que contribuirá a aclarar sus dudas. Descárguelas en

<http://clu.in.org/products/citguide> .

## **Destruction Technologies for Polychlorinated Biphenyls (PCBs)**

This document was produced by the International Centre for Science and High Technology United Nations Industrial Development Organization (ICS-UNIDO). The purpose of this paper is to review the existing technologies to treat PCBs, presenting their limitations and some technical, environmental, social and economic criteria to choose the most proper technique (November 2000, 55 pages).

View or download at <http://clu-in.org/techpubs.htm> .

## **Waste Testing and Quality Assurance (WTQA) Symposium**

**Proceedings 1997-2001.** As part of its efforts to increase the role of the scientific community in implementation of monitoring under the RCRA and CERCLA programs, EPA joined the Waste Policy Institute (WPI) to annually sponsor the WTQA symposium. The WTQA proceedings from each year (1997 - 2001) are now available on-line, see <http://www.epa.gov/epaoswer/hazwaste/test/proceedings/proceedings.htm> .

## **The proceedings of the 2001 International Containment & Remediation Technology Conference and Exhibition held 10-13 June 2001.**

This web site contains manuscripts associated with the papers and posters presented at the Conference and Exhibition. The purpose of the conference was to advance containment and remediation technologies by providing a forum through which participants from related disciplines could meet to exchange ideas and information on recent developments. View the proceedings website at <http://www.containment.fsu.edu/proceedings.cfm> .

## ***Conferences and Symposia.***

### **ITRC Phytotechnologies Mechanisms and Applications, San Diego, March 20-21.**

The two-day ITRC Phytotechnologies training brings regulators to learn, alongside environmental consultants, the latest applications of phytotechnologies in remediation and waste management. The curriculum focuses on application and teaches systems design using hands-on team problem solving, case studies, and evening homework. All lecture topics are based on a series of case studies. For more information on these ITRC courses, see

<http://www.itrcweb.org> .

### **ITRC UXO Basic Training, Charleston, March 26-27.**

This is a two-day, entry-level course designed to provide a solid overview of key environmental issues associated with ordnance and explosives cleanup. Participants will be introduced to basic terminology, OE/UXO identification, safety concerns, regulatory requirements, conventional and innovative technology, site characterization, and remediation. Instructors will use a variety of teaching methods

including lecture, handouts, classroom exercises and case studies. Attendees will receive a course handbook including overheads and references used during the training. It is not intended as a substitute for more comprehensive technical training required to handle and dispose of ordnance and explosives. For more information on these ITRC courses, see <http://www.itrcweb.org> .

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 <http://clu-in.org/techdrct> at any time night or day.