



OFFICE OF RESEARCH AND DEVELOPMENT SUPERFUND AND TECHNOLOGY LIAISON (STL) REGION 9 NEWSLETTER

Spring 2009, Edition 47

Welcome to the Spring 2009 edition of the STL Newsletter! Things are certainly changing quickly here at EPA since the new Administration took charge on January 20th, including the addition of stimulus funding for some "shovel ready" Superfund cleanups. The sites targeted to take advantage of this funding have had their remedies selected and ready to go for some time, and now funding is available. If you are still working towards a remedy for your site, technical support is available to help you get there with plenty of engineering expertise and "scientific defensibility". I can assist you with support from the Tech Support Centers (TSCs) at some of the ORD labs. Please take advantage of it! If you are an EPA project manager and need assistance accessing the TSCs, please don't hesitate to call me.

This quarterly newsletter provides you with a calendar of updated events, a list of new documents, and stories on the following waste related topics: newly recognized lead paint test kits, a framework for green cleanup standards and the latest from the Superfund Basic Research Program.

Here's looking forward to the new baseball season and movement towards more shovel ready remediation projects! Hope you enjoy this quarter's newsletter.

Mike Gill
EPA Region 9
ORD Superfund and Technology Liaison
415-972-3054

Spring 2009 Edition of the Region 9 STL Newsletter:

National News

- New Tools and Technologies
EPA Recognizes Lead Paint Test Kits
- Framework for Green Cleanup Standards at Contaminated Sites
- Gauging the Effectiveness of Riparian Buffers

- Superfund Basic Research Program (SBRP) Research Articles
- People-Power Research: Ideas for Earth Day

Datebook - Upcoming Events

Web Pages

Recent Documents, Databases, etc.

Serious Scientists Gather 'Round...

NATIONAL NEWS

New Tools and Technologies

EPA Recognizes Lead Paint Test Kits

From ET Voice Newsletter (Feb 13, 2009)

The EPA Lead Renovation, Repair and Painting (RRP) rule (see <http://www.epa.gov/fedrgstr/EPA-TOX/2008/April/Day-22/t8141.pdf>) includes a two phase process for evaluating and recognizing test kits that can be used to determine the presence of regulated levels of lead in lead-based paint surfaces. In the first phase of testing, the EPA Office of Pollution Prevention and Toxics has recognized two currently available lead test kits, with limitations: the LeadCheck lead test kit, manufactured by Hybrivet Systems, and the State of Massachusetts lead test kit, developed by the state government of Massachusetts and available to certified Massachusetts state lead inspectors and risk assessors. For additional information, visit <http://www.epa.gov/lead/pubs/kits.htm>. EPA will continue to update information on recognized spot test kits as it becomes available. For questions pertaining to recognition of these kits, contact Sam Brown, EPA, at (202) 566-0490 or brown.sam@epa.gov.

The RRP rule identifies the ETV Program for obtaining independent laboratory validation of test kit performance. ETV will verify test kits based on criteria established for the second phase evaluation process. ETV expects to begin soliciting vendors for Phase 2 testing in April 2009. For more information on ETV Phase 2 testing of lead test kits, visit <http://www.epa.gov/etv/este.html#pcqstklp>, or contact Julius Enriquez, EPA, at (513) 569-7285 or enriquez.julius@epa.gov.

Framework for Green Cleanup Standards at Contaminated Sites

(From TechDirect of April 1, 2009)



EPA's cleanup programs plan to collaborate with ASTM International to develop a green cleanup standard through a consensus process. EPA worked with its state partners to develop a draft framework that outlines desired outcomes for a green cleanup standard and will serve as a starting point for the consensus-based process. The standard will establish a uniform approach, implemented voluntarily, to encourage property owners, responsible parties, developers, and communities to use green cleanup practices during project planning and implementation. EPA is now requesting input from all stakeholders to enhance the draft framework. The draft framework is available for review and input through April 30 at http://clu-in.org/greenremediation/subtab_b5.cfm . EPA plans to finalize the framework and post it in June 2009. ASTM International established a subcommittee and will use EPA's proposed framework to kick off the effort. To learn more, go to <http://www.astm.org/DATABASE.CART/WORKITEMS/WK23495.htm> . Please help us distribute this to other interested stakeholders working on the cleanup of contaminated property.

Gauging the Effectiveness of Riparian Buffers

(From NRMRL News, 3/5/09)



Riparian Buffer, Putnam County, OH (Courtesy of USDA)

Heavy loads of nutrients, sediments, pesticides, and other materials can be harmful to delicate aquatic ecosystems. Riparian buffers - vegetated regions adjacent to streams and wetlands - are a common means of intercepting and controlling these pollutants as they enter water bodies. EPA considers nitrogen one of the top stressors to aquatic ecosystem health. To determine how to better protect these environments from excess nitrogen, National Risk Management Research Laboratory's (NRMRL's) Ground Water and Ecosystems Restoration Division (GWERD) conducted a comprehensive review of riparian buffer practices. Researchers evaluated the importance of riparian buffer width on nitrogen control and surveyed the effectiveness of current state and federal regulations.

Background

Although nitrogen is an important nutrient to living organisms, surplus nitrogen from fertilizers, animal wastes, leaky sewer lines, highway runoff and other sources is a hazardous pollutant to both surface and subsurface water systems. For instance, excess nitrogen levels in surface water often cause toxic algal blooms, oxygen depletion, fish deaths, and a loss of biodiversity. In groundwater, the nitrate form of nitrogen often contaminates drinking water sources and poses a threat to human health, especially in infants.

Riparian buffers are considered an effective, sustainable method of protecting against these dangerous effects of excess nitrogen. Buffers reduce nitrogen levels through plant uptake, microbial immobilization and denitrification, soil storage, and groundwater mixing. To better identify the relationship between buffer width and nitrogen removal capacity, EPA researchers reviewed data from 60 riparian buffer studies including comprehensive and regional studies and peer-reviewed research papers. Researchers employed linear and non-linear models to combine and analyze the data, identifying patterns in nitrogen removal related to buffer width. Current regulatory policies were also surveyed by researching state and federal regulation codes, peer reviews of government guidelines, and recommendations by state and federal agencies.

Conclusions

Though riparian buffer efficiency varied widely among individual studies, EPA meta-analysis found important trends. While some narrow buffers (up to 25 meters) proved effective, buffers wider than 50 meters more consistently removed significant amounts of nitrogen. Buffers of various vegetation types were equally effective at removing nitrogen, but buffers with grassy vegetation were more effective when wider. Another strong trend in the data showed that subsurface removal of nitrogen was far more efficient than removal at or near the soil surface. Important patterns observed among the studies reviewed indicated that nitrogen control peaks when:

- buffers extend along both stream banks, allowing greater opportunity for plant uptake
- buffers are maintained at stream headwaters

- water flow (overland and subsurface) is evenly distributed and soil infiltration rates are high
- anaerobic conditions persist in the subsurface
- sufficient organic carbon is present.

However, due to the limited capacity of streams and other watersheds to process nitrogen, watershed managers must control point and non-point sources of nitrogen in addition to maintaining buffers. For best results, buffer integrity must be protected against soil compaction, loss of vegetation, and stream incision.

On average, state guidelines were found to correspond with the minimum effective buffer width necessary to improve water quality only if conditions are conducive to denitrification. Federal recommendations for buffer width vary from 7-100 meters, encompassing the range expected to remove significant amounts of nitrogen.

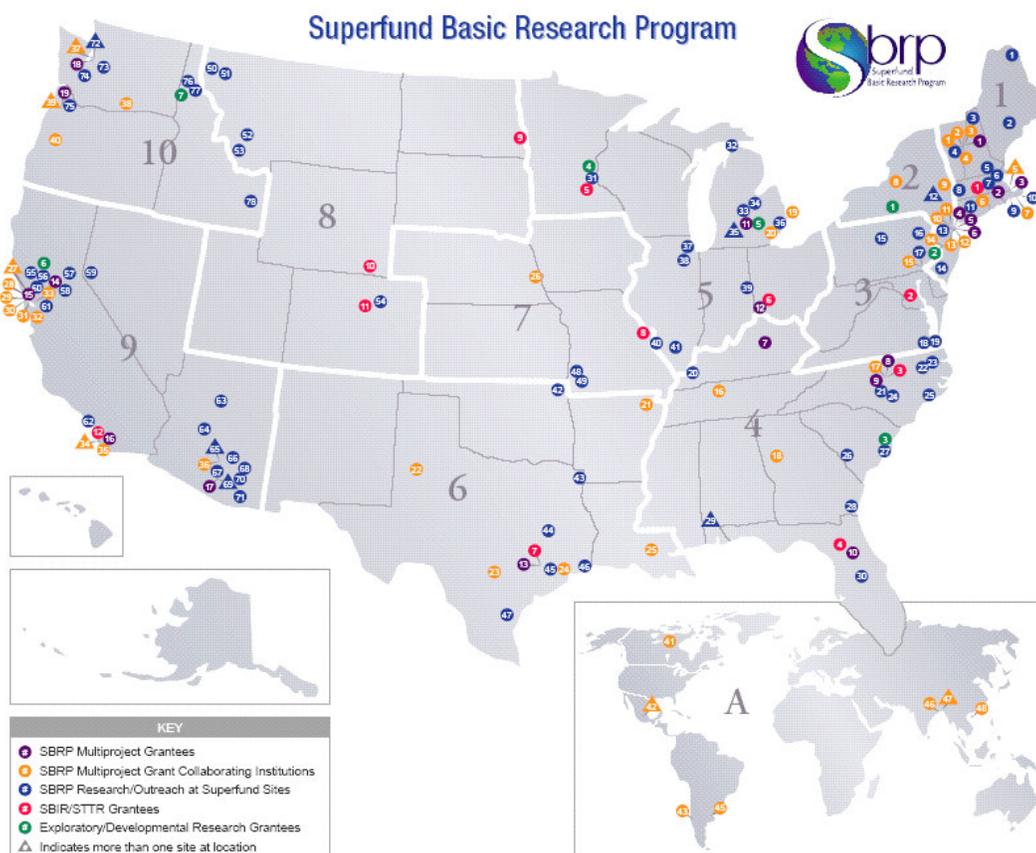
EPA's research effort is the most current, comprehensive review of nitrogen removal in riparian buffers. Since its publication, the data has been accessed more than 50,000 times by resource managers, policy makers, and local governments as a guide for developing effective management plans.

For further information, the full report can be found here: Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness: A Review of Current Science and Regulations (<http://www.epa.gov/ada/download/reports/600R05118/600R05118.pdf>). A related article, "Meta-Analysis of Nitrogen Removal in Riparian Buffers (<http://jeq.scijournals.org/cgi/reprint/36/4/1172.pdf>)," published in the Journal of Environmental Quality is also available on the web site.

Contact: Jane Ice, NRMRL Office of Public Affairs (513) 569-7311

Superfund Basic Research Program (SBRP) Research Articles

As many of you know, the Superfund Basic Research Program (SBRP) has funded research/outreach activities at over 100 hazardous waste sites. It falls under the National Institute of Environmental Health Sciences (NIEHS). This research is described in detail on their webpage (<http://www.niehs.nih.gov/sbrp/>) and the locations are shown on the map below.



Each month, SBRP provides an update of one of their research projects. Below is a list of that research that has been released over the past year (since early 2008). For more details on all research briefs by year, go to: <http://tools.niehs.nih.gov/sbrp/researchbriefs/>.

Also, be on the lookout for an upcoming online seminar series of their applied research conducted at a number of universities in the western US. This series should start this summer (2009).

1. PCB77 Promotes Obesity-associated Atherosclerosis
2. Toxicogenomics Studies Focus on Largemouth Bass
3. The Role of Soil Bacteria in Phytostabilization of Mine Tailings
4. New Nanomaterials to Capture Mercury Vapor Released from Compact Fluorescent Lamps

5. PON1 as a Potential Treatment for Organophosphate Poisoning
6. Understanding Dermal Exposure - a Critical Step in Exposure Assessment
7. SBRP Researcher Finds Previously Unidentified PCB in Urban Airshed
8. Zero Valent Iron for Passive Treatment of Acid Rock Drainage
9. First Glimpse of the Human Fetal Proteome Signals Early Effects from in utero Toxic Exposures
10. Biomarkers to Investigate the Toxicity and Carcinogenicity of PHAHs
11. An Integrated Approach to Assess Sediment Toxicity
12. New Understandings of Benzene Metabolism and Implications for Risk Assessments

People-Power Research: Ideas for Earth Day

(From NRMRL News, 4/8/09)



Research Highlights presents many innovative National Risk Management Research Laboratory (NRMRL) research projects that directly involve homeowners and other stakeholders in real-world applications. In connection with Earth Day 2009, we offer a sampling of these technologies to illustrate how individuals and communities can benefit from their application.

Stormwater Runoff

Storm water runoff is a perennial problem for heavily urbanized areas. When surplus storm water sweeps over impervious surfaces, instead of filtering naturally into the ground, it damages landscapes and carries pollutants directly into nearby streams and even into entire watersheds. Researchers have shown that rooftops and driveways alone make up 50-72 percent of total impervious surfaces in residential neighborhoods. Heavy rainwater pouring off these surfaces may contain lawn chemicals, animal wastes, trace metals from vehicles, and other pollutants. Here are a few NRMRL research projects designed to enhance nature's own recycling and filtration systems through community participation.

- Rain Barrels: Rain barrels or cisterns are familiar techniques, with scientifically demonstrated effectiveness, that allow homeowners to capture storm water runoff and permit its slow infiltration into ground surfaces. Stored rainwater can also be recycled for

watering lawns and gardens, and trees during dry spells. Rain barrels are inexpensive, easy to install and to maintain, and in spite of their simplicity, can have a significant impact on both water quality and quantity. More information on creating a rain barrel system can be found here - <http://www.epa.gov/region3/p2/make-rainbarrel.pdf> .

- Rain Gardens: Rain gardens are planted depressions, often at low points in the landscape, designed to capture rainwater runoff and release it slowly to the subsoil, eventually contributing to groundwater recharge. Native plants are best for rain gardens because they rarely require fertilizer and are tolerant of local climate and soils. Wildflowers, sedges, ferns, shrubs and small trees are ideal for rain gardens. NRMRL researchers continue to study the ability of rain gardens to remove other pollutants besides the heavy metals and phosphorus which they are now known to remove. More planting suggestions can be found here:
http://www.epa.gov/nps/toolbox/other/cwc_raingardenbrochure.pdf .

- Swales: Swales are engineered ditches of varying lengths designed to provide green, low-cost drainage options, typically along property boundaries that have a natural grade. NRMRL test swales are about 150 feet long and several feet wide, with a 1-to-5 percent grade. Since swales provide stable routing for heavy rainfall runoff, some communities are requiring developers to incorporate swales into new residential construction as a more eco-friendly alternative to extensive curbs and gutter installations. More information about swales design and location can be found at this address:
<http://www.epa.gov/owm/mtb/vegswale.pdf> .

- Green Roofs: Green roofs are vegetative covers applied to building roofs to slow or totally absorb rainfall runoff during storms. The goal is to replace the absorptive capacity of the land on which the building stands. Plantings of about 4-6 inches deep are applied over waterproof roofs of wood, metal or concrete. Plant size and selection depend on local climate and depth of the growing medium. Early research on this increasingly popular technology indicates that rainfalls of up to one inch can be completely absorbed by green-roof plantings. They are also helpful in reducing roof-top temperatures and, thus, energy costs. For an interesting discussion of green roof history and advantages, see this: http://epa.gov/region8/greenroof/pdf/design_guidelines_for_green_roofs.pdf .

- Porous Pavements: Another approach to rainfall runoff is to make urban surfaces more permeable. Porous pavements that reduce runoff and filter some pollutants are especially attractive to developers because of their potential to reduce the need for storm sewers, curbs, retention ponds and other controls to meet runoff regulations for new construction. Pervious concrete mixes water and cement to a thick paste that coats aggregate particles without sand. This mixture drains about five gallons per square foot per minute, allowing rainwater to seep slowly into the ground. Porous asphalt has a similar structure. Both types are laid over gravels that act as a storage reservoir.

Interlocking concrete paving stone, for low-impact areas, is made of standard concrete pavers backfilled with crushed stones to allow runoff to infiltrate. Ongoing NRMRL testing for high-traffic areas like parking lots is analyzing runoff quality and quantity

while evaluating the use of permeable textile filters underlying the stone layers. Try this Research Highlights web page for more information:
<http://www.epa.gov/nrmrl/news/news102008.html> .

Brownfields

Brownfields--so named to distinguish them from suburban greenfields--are abandoned community properties whose redevelopment may be hampered by the presence of hazardous substances, hidden legal costs and other barriers. To help individuals and communities effectively transform brownfields into attractive and viable properties, NRMRL researchers developed an interactive decision tool called SMARTe. This free internet-based program allows users to input local information in order to analyze problems of land use, ecological risk, financing, sustainability and other issues. SMARTe is used worldwide and is available at the SMARTe web site, which is located here:
<http://www.smarte.org/smart/home/index.xml> .

The Sustainable Community

Combining many individual and community do-it-yourself ideas, the town of Stella, Missouri, a three-hour drive from Kansas City, agreed to become a living laboratory to test its sustainability over the next decade. Determined to turn around a history of economic decay and declining quality of life, Stella adopted a NRMRL-guided master plan that attempts to meet community objectives while keeping environmental, social and economic systems intact.

Environmental actions include stream and wetlands restoration, rain gardens and water recycling programs, and creation of a forested green belt around the community. Social actions center on expanded park and riverside activities, creation of streetscapes for foot traffic rather than auto traffic, and clustered housing with common green spaces. Economic action is directed toward providing local goods, services and activities using local labor and resources, and a new town center building with library, post office, town hall, emergency shelter and café. A farmer's market to strengthen ties with local farmers is another economic activity with social benefits adopted by residents. Stella's story is online at this page: <http://www.epa.gov/nrmrl/news/news072008.html>.

Earth Day is an excellent time to review these cooperative approaches, at both the homeowner and the community level, to understand the human potential for enhancing nature's own restorative systems to create a more attractive and sustainable urban environment.

Contact: Jane Ice, NRMRL Office of Public Affairs (513) 569-7311

DATEBOOK - UPCOMING EVENTS

This section of the newsletter is an attempt to present both EPA and non-EPA sponsored environmental technology related courses and conferences. But being a quarterly publication, it is impossible for this newsletter to always be up-to-date. For the most pertinent information on upcoming EPA courses, see <http://www.trainex.org>. These events are listed chronologically.

Many of the entries in these newsletters are from TIO's "TechDirect" emails (thank you Jeff Heimerman!). TechDirect is also tied to the clu-in webpage, which lists many training opportunities, including the following:

Announcement of Courses: <http://clu-in.org/courses>
Archive of Courses: <http://clu-in.org/live/archive.cfm>
Internet Training <http://www.cluin.org/training>

IIRC Internet Based Training

These are typically 1-2 hour online courses where the participant follows a webpage presentation, while listening on the phone. Check - <http://www.iircweb.org> or <http://www.clu-in.org/studio/seminar.cfm> to verify times and registration, unless other websites are mentioned below.

April 14 - Real-Time Measurement of Radionuclides in Soil
2:00 p.m. - 4:15 p.m. EASTERN TIME

April 28 - Perchlorate Remediation Technologies
2:00 p.m. - 4:15 p.m. EASTERN TIME

April 30 - Decontamination and Decommissioning of Radiologically-Contaminated Facilities
11:00 a.m. - 1:15 p.m. EASTERN TIME

May 7 - Risk Assessment and Risk Management: Determination and Application of Risk-Based Values
11:00 a.m. - 1:15 p.m. EASTERN TIME

May 12 - Use of Risk Assessment in Management of Contaminated Sites
2:00 p.m. - 4:15 p.m. EASTERN TIME

May 14 - Phytotechnologies
11:00 a.m. - 1:15 p.m. EASTERN TIME

EPA Online Web Seminar Series: Superfund Redevelopment Initiative (SRI) 10th Anniversary: Celebrating Success



The new Maywood Riverfront Park at the Pemaco Superfund site in Maywood, CA

April 29

May 21

June 18

July 16

September 17

October 22

<http://clu-in.org/sri>

2009 Working Conference on Nanotech Regulatory Policy

University of California, Los Angeles

April 17, 2009

<http://www.cnsi.ucla.edu/NanoRegulatoryPolicy/>

2009 Ground Water Summit

April 19-23, 2009

Tucson, AZ

<http://ngwa.org/2009summit/index.aspx>

Advanced Design Application and Data Analysis for Field XRF Instrumentation in Soil Matrices

Atlanta, GA

April 22, 2009

<http://www.trainex.org/classdetails.cfm?classid=3992&courseid=521>

Environmental Public Health Consequences of Clandestine Methamphetamine Laboratories

April 22, 2009

Fallon, NV

<http://www.trainex.org/classdetails.cfm?classid=4204&courseid=538>

2009 Toxicology And Risk Assessment Conference (TRAC)

April 27-30, 2009

Cincinnati, OH

<http://www.team-psa.com/trac2009>

Introductory Risk Assessment Guidance for Superfund

April 28-30, 2009

New York, NY

<http://www.trainex.org/offeringslist.cfm?courseid=24&all=yes>

Introduction to Groundwater Investigations

April 28-30, 2009

Boise, ID

<http://www.trainex.org/classdetails.cfm?classid=3948&courseid=6>

Advanced Groundwater Investigations

May 1, 2009

Boise, ID

<http://www.trainex.org/classdetails.cfm?classid=3949&courseid=33>

The National Environment, Energy, and Sustainability Symposium and Exhibition (E2S2)

May 4-7, 2009

Denver, CO

<http://www.ndiae2s2.com>

Remedial Process

May 4-8, 2009

San Francisco, CA

<http://www.trainex.org/classdetails.cfm?classid=4033&courseid=52>

Preliminary Assessment/Site Inspection

May 5-7, 2009

San Francisco (Region 9 office)

<http://www.trainex.org/classdetails.cfm?classid=3976&courseid=457>

In Situ and On-Site Bioremediation - The 10th International Symposium

May 5-9, 2009

Baltimore, MD

<http://www.battelle.org/conferences/bioremediation/>

Health & Safety 40 Hour

May 18-22, 2009

Boulevard, CA (outside of San Diego)

<http://www.trainex.org/classdetails.cfm?courseid=23&classid=3809>

International Conference on Remediation of Land Contaminated by Radioactive Material/Residues

May 18-22, 2009

Astana, Kazakstan

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=35422>

Water Quality Conference: Emerging Issues and Technology for Managing Water Quality and Supply in the 21st Century

May 20-22, 2009

San Antonio, Texas

http://nwetc.org/hyd-550_05-09_san_antonio_save_the_date.htm

The World Environmental and Water Resources Congress

May 17-21, 2009

Kansas City, MO

<http://content.asce.org/conferences/ewri2009/>

11th International Congress on Combustion By-Products and Their Health Impacts

May 31 - June 3, 2009

Research Triangle Park, NC

<http://www.lsu.edu/piccongress/>

SWANA's 14th Annual Landfill Symposium

June 1-4, 2009

Savannah, GA

<http://lfswm.swana.org/>

EPA NARPM Conference / Tech Support Project Meeting

June 1-5, 2009

Atlanta, GA

<http://www.epanarpm.org>

2009 Federal Environmental Symposium West

June 2-4, 2009

Seattle, WA

<http://www.fedcenter.gov/calendar/conferences/symposia2009/>

Cal/EPA Vapor Intrusion Workshop

June 3-4, 2009

Sacramento, CA

http://www.dtsc.ca.gov/SiteCleanup/Vapor_Intrusion.cfm#JUNE_2009_VAPOR_INTRUSION_WORKSHOPS

Micropol and Ecohazard 2009 - 6th IWA/GRA Specialized Conference on Assessment and Control of Micropollutants/Hazardous Substances in Water

June 8-10, 2009

San Francisco, CA

<http://www.grac.org/micropol.asp>

Cal/EPA Vapor Intrusion Workshop

June 9-10, 2009

Los Angeles, CA

http://www.dtsc.ca.gov/SiteCleanup/Vapor_Intrusion.cfm#JUNE_2009_VAPOR_INTRUSION_WORKSHOPS

International Conference on the Environmental Implications and Applications of Nanotechnology

June 9-11, 2009

University of Massachusetts, Amherst, MA

<http://www.umass.edu/tei/conferences/NanoConference/index.html>

Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Training

June 9-11, 2009

Las Vegas, NV

<http://www.trainex.org/classdetails.cfm?classid=4205&courseid=292>

The Air & Waste Management Association's 101st Annual Conference & Exhibition (ACE)

June 16-19, 2009

Detroit, MI

<http://www.awma.org/ACE2009/>

2-DAY ITRC CLASSROOM TRAINING ON VAPOR INTRUSION

Vapor Intrusion Pathway: A Practical Guideline

June 22-23, 2009

Sacramento, CA

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

Hazard Ranking System

June 23-26, 2009

San Francisco, CA

<http://www.trainex.org/classdetails.cfm?classid=3977&courseid=38>

H&S 8-Hr Refresher

June 23-26, 2009 (repeated each day)

San Francisco (Region 9 office)

Register on START database

2-DAY ITRC CLASSROOM TRAINING ON VAPOR INTRUSION

Vapor Intrusion Pathway: A Practical Guideline

June 25-26, 2009

Long Beach, CA

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

15th International Interdisciplinary Conference on the Environment

July 8-11, 2009

Daytona Beach, FL

<http://www.ieaonline.org/conference.htm>

Advanced Triad Training for Practitioners

July 14-15, 2009

Kansas City, KS

<http://www.trainex.org/classdetails.cfm?classid=3898&courseid=796>

Environmental Success In Treatment Objectives: Best Practices in Sustainable Soil, Sediment, and Groundwater Remediation: An Industry and Regulatory Perspective

June 18-19, 2009

Stresa, Italy

<http://www.aehs.com/conferences/stresa/index.htm>

Next Generation Superfund Contaminants

August 12-14, 2009

Tucson, AZ

Contact Wendell Ela for more information - wela@enr.arizona.edu

EPA Community Involvement Training Conference

August 18-20, 2009

Seattle, WA

Contact: Freya Margand (703) 603-8889

Association of Environmental & Engineering Geologists 52nd Annual Meeting

September 21-26, 2009

Stateline, NV

<http://www.aegweb.org>

Contaminated Site Management

Niagara Falls, New York

October 5-7, 2009

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

Remediation Technologies Symposium 2009 (RemTech 2009)

October 14-16, 2009

Banff, Alberta

<http://www.esaa-events.com/remtech/>

Superfund 101

October 19-23, 2009

San Francisco, CA

<http://www.trainex.org/classdetails.cfm?classid=4032&courseid=254>

2009 US EPA Western U.S. Sustainability and Pollution Prevention Conference

October 28-29, 2009

San Diego, California

25th Annual International Conference on Soils, Sediments and Water

Analysis, Site Assessment, Fate, Environmental and Human Risk Assessment, Remediation and Regulation

University of Massachusetts, Amherst

October 19-22, 2009

<http://www.umasssoils.com/index.htm>

Superfund Basic Research Program Annual Meeting

November 3-4, 2009

Columbia University, NYC

<http://www.niehs.nih.gov/>

2009 Petroleum Hydrocarbons Conference and Exposition

November 2-3, 2009

Costa Mesa, California

<https://info.ngwa.org/servicecenter/Meetings/MeetingDetail.cfm?meetingid=824&feecatuid=2756&datecatuid=1254>

National Brownfields 2009 Conference

November 16-18, 2009

New Orleans, LA

<http://www.brownfields2009.org/en/index.aspx>

Munitions Response and Operational Range Sustainability Conference

July 19-22, 2010

Reno, NV

<http://www.battelle.org/conferences/range/>

W E B P A G E S

ORD's Community Based Risk Assessment Webpage

(Courtesy of ORD)

ORD's National Center for Environmental Research (NCER) has launched a new science topics page about Community Based Risk Assessment (CBRA). These pages define CBRA, the evaluation of multiple chemical and non-chemical stressors (e.g., psychosocial stress, violence, poverty, poor nutritional status) faced by a community, and discuss the goals and research needs of this evolving program area.

A new research competition

(http://epa.gov/ncer/rfa/2009/2009_star_cumulative_risk.html) is currently open on research needs that limit the ability to conduct cumulative risk assessments. This RFA and ultimately the research projects that will be awarded, as well as future CBRA research opportunities will be housed within the CBRA site.

The CBRA site discusses past and ongoing related research and information resources. This research includes Environmental Justice projects that attempt to address questions related to the influence of economic and social factors on the health status of individuals exposed to environmental toxicants, and Lifestyle and Cultural Practices of Tribal populations projects to develop methods to assess subsistence-based exposures.

The site has compiled an array of information resources about cumulative risk assessment such as EPA's Concepts, Methods and Data Sources for Cumulative Health Risk Assessment of Multiple Chemicals, Exposures and Effects: A Resource Document.

Site visitors can stay abreast of CBRA developments by joining the CBRA list serve and by following the CBRA bulletin, a monthly newsletter which summarizes CBRA research news, developments, opportunities, and featured research articles.

For more information on CBRA see: <http://www.epa.gov/ncer/cbra>

Superfund Radiation Intranet Webpage

(Courtesy of EPA's Stuart Walker and Molly Rosett)

This email is to announce EPA's new Superfund Radiation **Intranet** webpage which contains hotlinks to Federal Register notices and regulatory support documents (e.g., TBD, EIS, etc) for proposed and final rules that are potential ARARs, correspondence between EPA and other agencies regarding policy issues, policy studies, presentations for previous Superfund Radiation Meetings, and training courses. Please let me know what you think about our new website and suggestions for additional material to add. The URL for the new Intranet website is at:

<http://intranet.epa.gov/osrti/ard/spb/radiation/related.html>

The new Intranet webpage is linked to from OSRTI's main intranet webpage.

<http://intranet.epa.gov/osrti/index.htm>

The new Intranet website complements material (e.g., guidance, risk calculators, public video, and archived online training courses) on the *existing* Superfund Radiation **Internet** website which may be found at this URL:

<http://www.epa.gov/superfund/health/contaminants/radiation/index.htm>

FootPrint

(From TechDirect of February 1, 2009)

FootPrint is a simple and user-friendly screening model used to estimate the length and surface area of benzene, toluene, ethylbenzene, and xylene (BTEX) plumes in ground water, produced from a spill of gasoline that contains ethanol. Ethanol has a potential negative impact on the natural biodegradation of BTEX compounds in ground water. The primary objective of the software is to predict the increase in surface area of the plume of BTEX compounds or any other chemical of concern (COC) due to the presence of ethanol in ground water. FootPrint estimates the area of a plume of particular BTEX compounds that are contained within two biodegradation zones: 1) a zone that is immediately adjacent to the source, where ethanol is present in high concentration and no biodegradation of the BTEX compounds (or other COC) is allowed, and 2) a second zone, where the ethanol concentration is negligible due to the natural biodegradation of ethanol in the first zone and biodegradation of the BTEX compound (or other COC) contributes to attenuation in concentration of the BTEX compounds. FootPrint is based on the modified version of the Domenico model (1987) published by Martin-Hayden and Robbins (1997).

Download at <http://www.epa.gov/ada/csmos/models/footprint.html> .

RECENT DOCUMENTS, DATABASES, ETC.

These entries are arranged alphabetically. Thanks to TechDirect, Tech Trends, NRMRL News, the ETV Program, DOE, DoD and others for posting their latest documents. And remember, many of these are available in paper format in the Region 9 library. Recently, troubled or closed libraries at EPA seem to have gotten a reprieve, so please use them!

Abandoned Mines and the Water Environment

(August 2008, 40 pages)

<http://publications.environment-agency.gov.uk/pdf/SCHO0508BNZS-e-e.pdf>

Arsenic Removal from Drinking Water by Adsorptive Media

U.S. EPA Demonstration Project at Brown City, MI: Final Performance Evaluation Report

EPA/600/R-08/142

<http://www.epa.gov/nrmrl/pubs/600r08142/600r08142.pdf>

Arsenic Removal from Drinking Water by Absorptive Media

U.S. EPA Demonstration Project at Desert Sands MDWCA, NM: Final Performance Evaluation Report

EPA/600/R-08/140

<http://www.epa.gov/ORD/NRMRL/pubs/600r08140/600r08140.pdf>

Arsenic Removal from Drinking Water by Adsorptive Media

U.S. EPA Demonstration Project at Queen Anne's County, MD: Final Performance Evaluation Report

EPA/600/R-08/141

<http://www.epa.gov/nrmrl/pubs/600r08141/600r08141.pdf>

Assessment of Metal Mining-Contaminated River Sediments in England and Wales

(November 2008, 64 pages)

<http://publications.environment-agency.gov.uk/pdf/SCHO1108BOZD-e-e.pdf>

Background Information Document for Updating AP42 Section 2.4 for Estimating Emissions from Municipal Solid Waste Landfills

EPA/600/R-08/116

<http://www.epa.gov/nrmrl/pubs/600r08116/600r08116.pdf>

Ecological Revitalization: Turning Contaminated Properties Into Community Assets

EPA 542-R-08-003

(February 2009, 83 pages)

<http://www.clu->

[in.org/download/issues/ecotools/Ecological_Revitalization_Turning_Contaminated_Properties_Into_Community_Assets.pdf](http://www.clu-in.org/download/issues/ecotools/Ecological_Revitalization_Turning_Contaminated_Properties_Into_Community_Assets.pdf)

EUGRIS Corner. New Documents are always being added to EUGRIS, the platform for European contaminated soil and water information. These can be viewed at <http://www.eugris.info/whatsnew.asp>. Here a few recent examples:

Abandoned Mines and the Water Environment

SC030136/SR41

(August 2008, 40 pages)

<http://publications.environment-agency.gov.uk/pdf/SCHO0508BNZS-e-e.pdf>

Assessment of Metal Mining-Contaminated River Sediments in England and Wales

SC030136/SR4

(November 2008, 64 pages)

<http://publications.environment-agency.gov.uk/pdf/SCHO1108BOZD-e-e.pdf>

Using Organic Wastes and Composts to Remediate and Restore Land

(2007, 92 pages)

<http://ies.bangor.ac.uk/TWIRLS/Web%20version%20Manual.pdf>

Field Application of a Permeable Reactive Barrier for Treatment of Arsenic in Ground Water

EPA 600-R-08-093

(September 2008, 81 pages)

<http://www.epa.gov/nrmrl/pubs/600r08093/600r08093.pdf>

Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use

EPA 540-R-08-005

(January 2009, 29 pages)

<http://www.epa.gov/superfund/policy/pdfs/EPA-540-R-08-005.pdf>

Guidance for the Sampling and Analysis of Lead in Indoor Residential Dust for use in the Integrated Exposure Uptake Biokinetic (IEUBK) Model

OSWER 9285.7-81

(December 2008, 23 pages)

<http://www.epa.gov/superfund/lead/guidance.htm#dustsam>

A Guide for Assessing Biodegradation and Source Identification of Organic Ground Water Contaminants using Compound Specific Isotope Analysis (CSIA)

EPA 600/R-08/148

December 2008

<http://www.epa.gov/ada/pubs/reports/600r08148/600r08148.pdf>

In Situ Chemical Oxidation for Remediation of Contaminated Groundwater: Summary Proceedings of an ISCO Technology Practices Workshop

(June 2008, 74 pages)

<http://www.estcp.org/Technology/upload/ER-0623%20Summary%20Proceedings-2.pdf>

ITRC: In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones

http://www.itrcweb.org/Documents/bioDNPL_Docs/BioDNAPL3.pdf

Natural Attenuation of the Lead Scavengers 1,2-Dibromoethane (EDB) and 1,2-Dichloroethane (1,2-DCA) at Motor Fuel Release Sites and Implications for Risk Management

EPA 600-R-08-107

(September 2008, 74 pages)

<http://www.epa.gov/ada/download/reports/600R08107/600r08107.pdf>

Phytotechnology Technical and Regulatory Guidance and Decision Trees, Revised

(February 2009, 187 pages)

<http://www.itrcweb.org/Documents/PHYTO-3.pdf>

Preliminary Remediation Goals for Radionuclides in Outside Surfaces (SPRG)

OSWER 9355.5-26

(January 2009, 3 pages)

<http://www.epa.gov/superfund/health/contaminants/radiation/radrisk.htm>

Remediating and Monitoring White Phosphorus Contamination at Eagle River Flats (Operable Unit C), Fort Richardson, Alaska: FY07 Data Report

(May 2008, 132 pages)

<http://www.crrel.usace.army.mil/erf/remediationdata/ERF-RemediationReport-FY2007.pdf>

Risk Assessment Guidance for Superfund (RAGS), Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment) Final

EPA 540-R-070-002

(January 2009, 68 pages)

<http://www.epa.gov/oswer/riskassessment/ragsf/>

Site Characterization to Support Use of Monitored Natural Attenuation For Remediation Of Inorganic Contaminants In Groundwater

EPA/600/R-08/114

<http://www.epa.gov/nrmrl/pubs/600r08114/600r08114.pdf>

Technology News and Trends

EPA 542-N-09-001

(January 2009, 6 pages)

<http://www.cluin.org/download/newsletters/tnandt0109.pdf>

Technology News and Trends

EPA 542-N-09-002

(March 2009, 6 pages)

<http://www.cluin.org/download/newsletters/tnandt0309.pdf>

Journal Articles:

Agostini, P. and A. M. Vega (2009) "**Decision Support Systems (DSSs) For Contaminated Land Management - Gaps And Challenges** (<http://www.springer.com/environment/environmental+management/book/978-0-387-09721-3?detailsPage=toc>).\" In Decision Support Systems for Risk Based Management of Contaminated Sites. Springer Science + Business Media, LLC, New York, NY, (Section 2):275-280.

Boyd, G. R., K. M. Dewis, G. V. Korshin, S. H. Reiber, M. R. Schock, A. M. Sandvig, and R. Giani. (2008). "**Effects of Changing Disinfectants on Lead and Copper Release--A Review** (<http://www.awwa.org/publications/AWWAJournalArticle.cfm?itemnumber=42399>).\" Journal of the American Water Works Association. American Water Works Association, Denver, CO, 100,11.

Choi, H., S. Agarwal, and S. R. Al-Abed. (2009) "**Adsorption and Simultaneous Dechlorination of PCBs on GAC/Fe/Pd: Mechanistic Aspects and Reactive Capping Barrier Concept** (<http://pubs.acs.org/doi/abs/10.1021/es8015815?journalCode=esthag&quickLinkVolume=43&quickLinkPage=488&volume=43>).\" Environmental Science & Technology. American Chemical Society, Washington, DC, 43(2):488-493.

Nadagouda, M. N. and R. S. Varma. (2008) "**Green Synthesis of Ag and Pd Nanospheres, Nanowires, and Nanorods Using Vitamin B2: Catalytic Polymerisation of Aniline and Pyrrole** (<http://www.hindawi.com/GetArticle.aspx?doi=10.1155/2008/782358>).\" doi:10.1155/2008/782 Journal of Nanomaterials. Hindawi Publishing Corporation, New York, NY.

Rastogi, A., S. R. Al-Abed, and D. D. Dionysiou. (2009) "**Effect Of Inorganic, Synthetic and Naturally Occurring Chelating Agents on Fe(II) Mediated Advanced Oxidation of Chlorophenols.** (<http://www.sciencedirect.com/science/journal/00431354>)\" Water Research. IWA Publishing, London, Uk, 43(3):684-694.

Rastogi, A., S. R. Al-Abed, and D. D. Dionysiou. (2009) "**Sulfate Radical-Based Ferrous-Peroxymonosulfate Oxidative System for PCBs Degradation in Aqueous and Sediment Systems** (<http://www.sciencedirect.com/science/journal/09263373>).\" Applied Catalysis B: Environmental. Elsevier BV, Amsterdam, Netherlands, 85, 3-4:171-179

Sahle-DeMessie, E. and V. G. Devulappeli. (2008). "**Vapor Phase Oxidation of Dimethyl Sulfide with Ozone Over V2O5/TiO2 Catalyst** (doi:10.1016/j.apcatb.2008.04.025)." Applied Catalysis B: Environmental. Elsevier Science Ltd, New York, NY, 84(3-4):408-419.

Vega, A., R. Argus, T. Stockton, P. Black, K. Black, and N. Stiber. (2009) "**SMARTE: An MCDA Approach to Revitalize Communities and Restore the Environment** (<http://www.springerlink.com/content/r42770w15k59m144/>)." In Decision Support Systems for Risk-Based Management of Contaminated Sites. Springer Science + Business Media, LLC, New York, NY, (Section 2):179-204.

Williamson, J. M. and H. W. Thurston. (2008) "**Valuing Acid Mine Drainage Remediation in West Virginia: A Hedonic Modeling Approach** (<http://www.springerlink.com/content/1303492683w12712/?p=8e4256dcf22f4d8282c73e10bb6dd9c4&pi=13>)." 10.1007/s00168-007-0 The Annals of Regional Science. Springer Science+Business Media B.V, Dordrecht, Netherlands, 42(4):987-999.

Serious Scientists Gather 'Round...

TI: Environmental, Social, and Economic Implications of Global Reuse and Recycling of Personal Computers

AU: Williams, E; Kahhat, R; Allenby, B; Kavazanjian, E; Kim, J; Xu, M

JN: Environmental Science and Technology

PD: 2008

VO: 42

NO: 17

PG: 6446-6454

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: SEP 01

URL: <http://pubs.acs.org/doi/abs/10.1021/es702255z>

Click on the URL to access the article or to link to other issues of the publication.

TI: Happy Birthday, Love Canal

AU: Engelhaupt, E

JN: Environmental Science and Technology

PD: 2008

VO: 42

NO: 22

PG: 8179-8186

PB: ACS AMERICAN CHEMICAL SOCIETY

IS: 0013-936X

PE: NOV 15

URL: <http://pubs.acs.org/doi/abs/10.1021/es802376z>

Click on the URL to access the article or to link to other issues of the publication.



Disclaimer

This quarterly newsletter publication is meant to be used for information only. It does not represent the opinion of the management of the regional or national offices of EPA, only that of the author. The accuracy of the information contained herein is not guaranteed, only desired. If corrections are necessary, please contact the author. Thanks again to all of my information resources, which include EPA's OSRTI (formerly TIO), ORD (including ETV and NRMRL News) and Region 1's CEIT.

Thanks for reading it! Comments and suggestions are appreciated. If you wish to be added to or deleted from this list, please send me an email. (gill.michael@epa.gov)

Newsletter archives can be found on the EPA intranet site.....<http://www.epa.gov/osp/hstl/hstlnewsletter.htm>

A number of environmental technology web resources can be found here.....<http://www.epa.gov/region09/waste/techlinks/>

And don't forget the "STL" website..... <http://www.epa.gov/osp/hstl.htm>

Mike Gill
ORD Superfund and Technology Liaison
US EPA Region 9 / SFD-84
75 Hawthorne Street
San Francisco, CA 94105
415-972-3054
415-947-3520 (Fax)
Gill.Michael@epa.gov
