

Quarterly Update

March 2006



INTERSTATE TECHNOLOGY & REGULATORY COUNCIL

As we begin 2006 we are tempted to look back and reflect on the accomplishments and activities of 2005—increased participation in training activities, more documents produced, and the entry of Wyoming and Iowa into the fold. But rather than dwell on the past, we want to look at what lies in store for ITRC.

There is no question we will again face significant challenges. But we are united behind the strategic plan and are confident it will help ITRC address our coming challenges. Much effort was exerted in the preparation of the plan and we thank Board member Michael Smith for his coordinating efforts. The Strategic Plan provides a “road map” for ITRC and addresses some fairly specific concerns as well as establishing wide-ranging, long-term goals. The board will review the progress and activities, and we encourage ITRC members to hold us accountable for the plan’s implementation and to provide your thoughts.

COCHAIR UPDATE

The strategic planning process endorsed our purpose and validated our organizational structure, while pointing out areas in need of attention. The board held its annual retreat in February and addressed many of these areas, especially diversification of our funding sources, team/project formation, and possible expansion of teams (contingent on funding). We also examined ITRC’s critical outreach efforts and discussed how we can be more effective in “telling the ITRC story.”

We will report on the activities and plans made at the Board Retreat in the next Co-Chair Update. We again encourage all ITRC members to pass on your thoughts and concerns to us, to any board member, or to Tim. We are committed to making ITRC a household word in the environmental community, and we welcome, and need, your thoughts and ideas to accomplish this.

On behalf of the board, thank you for your continued and considerable efforts over the past year. Please let us know what the board can do to help make 2006 an even more successful year.

Joe and Bob

Kick-Off Meeting

Team Leaders, Program Advisors and the Board Co-chairs met in Salt Lake City, Utah in January to establish plans for 2006, review budgets, and discuss various topics concerning ITRC. The main purpose of this meeting was for team leaders to set the agenda for the year and outline the teams’ project plans. New this year is the team workplan to help teams schedule and track the progress of their projects from concept to completion. Each team has composed their initial workplans and will be updating these plans on a monthly basis. The workplans will be a valuable tool to track project status not only for teams but also for the entire organization. For example, now more precise information can be shared about when projects will be ready for review and when training will be available. This will allow ITRC to coordinate the announcement of product launches and new services that ITRC will be bringing to the environmental community.

In addition to working on schedules and budgets, the team leaders learned how to prepare and present an elevator speech about their team projects. The elevator speech is designed to briefly communicate the overall essence of the team’s projects.

The Kickoff Meeting provided a great opportunity to recognize and celebrate the work that was done in the previous year and to look forward to 2006.

Save the Dates!

ITRC’s Fall Meeting will be held in Scottsdale, Arizona, October 23–October 27. Specific team meeting schedules, logistics, and the complete agenda will be finalized in the coming months. Please visit the ITRC’s website for more information as details become available.

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2006 Teams

Alternative Landfill Technologies (ALT)
Team Leader: Charles Johnson, CO

Arsenic in Groundwater
Team Leader: Chuck Pippen, NC

Bioremediation of DNAPLs
Team Leader: Najji Akladiss, ME

Brownfields
Team Leader: Christine Costopoulos, NY

Diffusion Samplers
Team Leader: George Nicholas, NJ
and Kim Ward, NJ

Ecological Land Reuse
Team Leader: Charles Johnson, CO

**Enhanced Attenuation:
Chlorinated Organics**
Team Leaders: Judie Kean, FL
and Kimberly Wilson, SC

MTBE and Other Fuel Oxygenates
Team Leader: Fred McGarry, NH

Perchlorate
Team Leaders: Sara Arav-Piper, NV
and Laurie Racca, CA

Radionuclides
Team Leaders: Tom Schneider, OH
and Carl Spreng, CO

Remediation Process Optimization
Team Leaders: Sriram Madabhushi, SC
and Tom O'Neill, NJ

Risk Assessment Resources
Team Leader: Steve DiZio, CA

**Sampling, Characterization
and Monitoring (SCM)**
Team Leader: Stuart Nagourney, NJ

State Engagement
Team Leader: Mavis Kent, OR

Unexploded Ordinance (UXO)
Team Leaders: Gary Moulder, PA
and Jeff Swanson, CO

Vapor Intrusion
Team Leaders: John Boyer, NJ
and Bill Morris, KS

Team Leader Liaison
Team Leader: George Nicholas, NJ

Highlight of a Team Leader

Tom O'Neill began his involvement with ITRC by participating in ITRC's training opportunities. In 2001, his division director at the New Jersey Department of Environmental Protection saw the RPO team needed a leader and pointed out that the team's mission dovetailed nicely with the work Tom's group was doing at NJ DEP. Tom became the RPO team leader toward the end of 2001.

This official involvement with ITRC rekindled Tom's interest at a professional level, giving him a broad perspective on how work gets done elsewhere at the state and federal levels. He enjoys working with the range of agencies and corporations he would not have dealt with as part of his job. Working with such a large team was also new to Tom; he was accustomed to work groups of 4-6, but he has enjoyed managing a group of more than 20 and helping them focus on a common goal.

The RPO Team is currently wrapping up a fact sheet series on advanced topics in RPO as well as the related Internet-based training

component. Their survey on performance-based management is winding up, and the team is beginning work on two related products: a document to catalog the results of the survey and a training course.

Tom touts ITRC's strong network of experts and state regulators; if an ITRC member doesn't have the answer, he or she can quickly find someone who does. He also points out the free classroom training and especially the free Internet-based training available for state regulators and others.

Tom is Section Chief with New Jersey's Site Remediation Program. This publicly funded program handles underground storage tanks, state-led superfund projects, long-term operations maintenance, and monitoring for long-term site cleanups. At home, he stays busy with his son's Boy Scout troop and as a board of health member for his township. Tom and his wife, Marianne, who works in the publishing industry, have a daughter, who's a high-school sophomore, and a son in the sixth grade.

joined the RPO (Remediation Process Optimization) team when his director began recruiting ITRC members. Becoming Georgia's POC was a welcome next step for Chris.

Internet-based training (IBT) is the biggest benefit Georgia receives from ITRC, Chris says. Calling it a fantastic resource, he notes that Georgia has used IBT quite a bit both in his agency and throughout the state. It provides a means for people in his agency to see and understand that issues they face with new technologies are being faced by other states as well. It helps give them support in dealing

with new technology assessment and implementation.

Although Chris acknowledges that he didn't have a lot of knowledge of RPO beforehand, joining the RPO Team expanded his awareness considerably. Participating on the team turned out to be more work than Chris had envisioned, but he says that the gains made it worthwhile. He says it is a good team-building exercise and gives him a good feel for things such as DOD's stance, technology transfer, and other agency's situations. In particular, he has learned that federal

(See *Highlight of a POC*, page 4)

Highlight of a POC

In July
of 2005,
Georgia's

State Point of Contact (POC) stepped aside, and Chris Hurst stepped up. Chris had already been involved with ITRC's Remediation Process Optimization Team for one-and-a-half years; he was working in Georgia's Hazardous Waste Management Branch in 2002 and

New Documents

Teams have been busy wrapping up their work on documents. Several new documents are now available on the Web site and by hard copy. Below is a brief synopsis of the most recently published documents, RISK-1, ALT-3, BRNFLD-2, and RAD-4.

RISK-1

A new study from the Risk Team finds significant variability in how states derive and apply risk-based site screening criteria, and calls for developers to better document these criteria. The study, *Examination of Risk-Based Screening Values and Approaches of Selected States*, summarizes the results of a survey of thirteen states' practices for developing and applying risk-based screening values for five target compounds: arsenic, benzo(a)pyrene, lead, polychlorinated biphenyls, and trichloroethene. Risk-based screening values indicate the level at which contaminants pose a potential threat to human health and the environment. These values often determine whether cleanup will occur at a site as well as the cleanup end point. Consequently, the selection of these values can impact cleanup targets and costs by orders of magnitude. This study highlights the need for transparent methodologies to develop screening values and guide their application at contaminated sites.



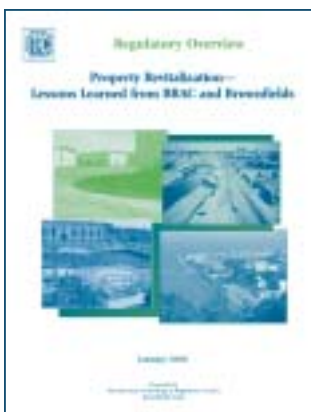
nities for contaminated properties and join in the planning for their reuse.

ALT-3

This document is primarily written for decision makers associated with the plan development, review, and implementation of bioreactor landfills. The decision makers include—at a minimum—regulators, owners/operators, and consultants. This document focuses on the decisions and facilitation of the decision-making processes as they relate to the design, evaluation, construction, and monitoring of bioreactor landfills. This document is most relevant to the people who work on solid waste issues.



BRNFLD-2



This document evaluates the processes used to cleanup, transfer, and revitalize properties affected by Base Realignment and Closure (BRAC) and contaminated properties commonly known as “brownfields,” including various financial, legal, technical, and administrative processes pertaining to both types of properties. The information

in this document is meant to inform federal, state, and local government agencies about how successful strategies conceptualized for either the BRAC or brownfield setting may be used to increase the efficiency of site cleanup and reuse. In addition, other interested stakeholders in the BRAC process, such as communities and local reuse or redevelopment authorities (LRAs), will also find this document useful. ITRC hopes that all parties involved in site cleanup and reuse will see the revitalization opportu-

RAD-4

This study, *Real-Time Measurement of Radionuclides in Soil: Technology and Case Studies*, will help regulators, engineers, consultants, and other stakeholders to better understand and apply real-time measurement technologies on radioactively contaminated sites and on other contaminated sites. While real-time radiological characterization techniques were developed to assist with site cleanups under environmental regulation, these technologies are equally applicable to radiological characterization activities in the aftermath of a radiological dispersion device (improvised nuclear device or “dirty bomb”). This guidance document compiles current research and background information on real-time radionuclides systems, provides detailed case studies of applications of this technology, and offers an analysis of the potential benefits and other issues associated with this emerging technology. This document is the fourth in ITRC’s series of technology overviews for radioactively contaminated sites.



Hard copies of these documents can be ordered on the ITRC website.

Agriculture and the Environment Conference August 7-9

The International Conference on “The Future of Agriculture: Science, Stewardship, and Sustainability” will be held August 7-9, 2006 in Sacramento, Ca.

The conference will explore the pressing environmental issues in agriculture and how they may be addressed through the integration of science, technology, and policy. The event is sponsored by U.S. EPA ORD Hazardous Substance Technical Liaisons Program, the National Institute of Environmental Health Sciences, the Midwest Hazardous Substance Research Center—Kansas State University, and Cal/EPA.

Conference participants will come together in group discussions and presentations to examine success stories in environmental stewardship, exchange best management practices information, share technical solutions, and to discuss how to encourage sustainable practices through planning, policy, and decision-making. Presenters will be linking promising research and

lessons learned from EPA’s Superfund Program with agricultural practices.

Presentation topics address policy, regulations, technology transfer, and research related to waste management and cleanup, as well as resource management, pest management, and nutrient management, and challenges to unique agriculture, such as biologically-integrated farming systems, the urban-agriculture interface, and possible roles of agriculture in enhancing wildlife and wetlands.

All conference activities will take place at the Hyatt Regency in downtown Sacramento, Calif.

Deadlines for the conference are:
Hotel Reservations—July 15

For more information or to request a brochure, contact Ellen Stauffer, Program Coordinator, at ellen@ksu.edu or 785-532-2562. Complete information can be found at <http://www.dce.ksu.edu/dce/conf/ag&environment/>.

2006 Restoring Greenspace Conference Focuses on Ecological Reuse

Ecological reuse and reclamation of contaminated properties will be highlighted at the Wildlife Habitat Council’s fourth Restoring Greenspace Conference May 3-4 in Seattle. The 2006 WHC conference aims to present a first-hand look at new initiatives and programs incorporating ecological reuse practices in site restoration. It will focus on EPA Region 10 (Pacific Northwest and Alaska).

Though case studies, field trips, and presentation-generated discussion,

the conference will offer many opportunities for dialogues among companies, landowners, government agencies, and conservation organizations about working toward WHC’s goal of maintaining sustainable wildlife habitat management programs on properties undergoing remediation. The conference will identify ecological remediation approaches, assess the costs and benefits of ecological reuse, determine regulatory challenges to using ecological methods of reclaiming contaminated lands, and evaluate

ways to obtain positive stakeholder involvement. This conference should prepare participants to make the next steps in addressing the issues surrounding the ecological reuse of contaminated properties in their region.

The Wildlife Habitat Council is a nonprofit, non-lobbying organization dedicated to increasing the quality and amount of wildlife habitat on corporate, private and public lands. WHC builds partner-
(See 2006 Restoring Greenspace, page 5)

Highlight of a POC *from page 2*

agencies really are interested in doing the right thing, and he believes they deserve more credit for this.

For Chris, the best part of being an RPO team member is developing a product with the team—an opportunity he would not have had in his job. He also enjoys networking and developing a better understanding of policies and technologies. Overall, Chris appreciates ITRC’s opportunity for professional growth.

Chris works in Georgia’s DOD remediation unit, overseeing remediation work at active and retired federal military installations in Georgia. In his free time, Chris has become involved in bicycling. Perhaps inspired by Lance Armstrong and encouraged by his wife, Chris now calls himself a “competitive amateur” and co-manages a local 18-member cycling team.

MtBE Team Wrapping Up Work

After the MtBE team completes their Source Area Technology Overview in May for publication in June, the team will no longer be funded. The funds saved will be used to balance the overall budget. ITRC has benefited greatly from the dedicated work of the MtBE team members and looks forward to their participation in new projects on other teams this year and in the future.

Success Continues in Chattanooga

Not so long ago, Chattanooga, Tenn., had such dirty air folks drove around with their headlights on at noon. Chattanooga Creek ran murky with chemicals, and school children got rashes after playing in flooded practice fields next to the creek. Homeless men were sometimes treated for chemical burns after bathing there.

But things have been changing in Chattanooga over the past dozen years. And ITRC and some local citizens are part of that change.

“My part started when I read an article in the New York Times about phytoremediation—about using plants to clean up toxic wastes,” says native John Chambliss. “I took it as my mission to do something about cleaning up the environment here.”

Phytotechnologies are a set of technologies using plants to remediate or contain contaminants in soil, groundwater, surface water, or sediments. Chambliss said town hall was skeptical when he mentioned phytoremediation, but agreed to let him hold a community workshop on the topic, if he could raise the funds. Elizabeth Guthrie Nichols, then of the University of Tennessee–Chattanooga, told him that EPA photoremediation expert Steve Rock would be have a small window of availability in six weeks, so Chambliss set about raising almost \$8,000 in a month. Bob Mueller, ITRC member from the N.J. Department of Environmental Protection, helped Chambliss organize the class. Mueller also recruited Chambliss into ITRC membership.

“‘You’ve just become an ITRC member’ is what he said,” Chambliss remembers.

As an ITRC stakeholder representative, John has served on Constructed Wetlands, Mitigated Wetlands, Alternative Landfill Technologies, and Ecological Enhancements teams and also helped fund a 2004 team meeting in Chattanooga. He’s recently been appointed to the Mayor’s Brownfields Task Force. But his greatest strengths are as a facilitator in his hometown.

2006 Restoring Greenspace *from page 4*

ships with corporations and conservation groups to create solutions that balance the demands of economic growth with the requirements of a healthy, bio-diverse, and sustainable environment. WHC has made significant progress in achieving these goals through its conferences and its Land Restoration Program. For more information about WHC, visit <http://www.wildlifehc.org>.

Exhibit space will be available for corporations, consulting firms, government agencies, and NGOs to

More than 80 people showed up for the ITRC Phytoremediation workshop, and the Committee to Clean and Beautify Chattanooga (CCBC) was born out of their interest immediately afterward. The group of local regulators, educators, and concerned citizens honed their concerns down to five priority sites and continued to publicize the potential for environmentally sound reuse and ecologically based technologies.

The group—and ITRC—were extremely instrumental in the Chattanooga community’s rapid acceptance of phytotechnology. Two years ago, the city and school students planted 300 willows to handle water problems at Boyd Buchanan School athletic facilities, and in 2001 a public/private venture lead by the City of Chattanooga restored the riparian zone along more than half a mile of Citico Creek to improve water quality.

Working in coordination with the CCBC, the University of Tennessee–Chattanooga (UTC) has initiated a number of graduate, undergraduate, and faculty research projects that support alternative clean-up technologies and CCBC’s educational outreach, especially at priority sites. Students under biology professor

(See Success Continues, page 6)

Do You Have a Success Story?

Success stories are a very important element of ITRC. The stories not only reflect the impact ITRC is making in the environmental community, but also help ITRC show funding entities how their financial support reaches far beyond the day-to-day work of ITRC. If you know of such a story, please share it with us so we can pass along the good news. Stories can be submitted online at the ITRC Web site by filling out the form on the Success Story page or by emailing itrc@wpi.biz.

present information demonstrating the use, values, and experiences in applying ecological enhancements in site remediation. NGOs may contact greenspace@wildlifehc.org for special consideration.

The May conference will be held at Seattle’s Red Lion Fifth Avenue. For more information, see <http://www.wildlifehc.org/events/restoringgreenspace.cfm>; to register, contact greenspace@wildlifehc.org.

Sean Richards have measured the levels and effects of the carcinogen poly aromatic hydrocarbons (PAH) in rodents and sediment along Chattanooga Creek, as well as doing other studies of Chattanooga contaminants. UTC student Katherine VanDeusen had good news when her study of Chattanooga Creek floodplain found soils there have the microbial capacity to reduce the concentration of PAHs by promoting the degradation of these compounds.

Goopy coal tar and creosote compounds are still surfacing in portions of Chattanooga Creek, which was placed on the National Priority List of federal Superfund sites in 1994. At a cost of roughly \$12 million, the EPA dredged up the most obvious contamination along a 2.5-mile portion of the creek, excavating some 25,500 cubic yards of coal-tar residue deposited from pits along the creek's banks.

The toxicants that remain in the floodplain are a concern for UTC biology professor Steve Halperin. He is attempting to determine whether tall fescue and zucchini, two plants known for reducing PAHs, would be effective along Chattanooga Creek. In a tightly controlled study, Halperin and several students are cultivating the plants in pots of the floodplain's acidic soils in a greenhouse to determine if the plants can remove PAH pyrene. They hope this research will generate data for a much larger federal grant.

"I became aware of ITRC through John Chambliss when he visited the university. We had an interesting discussion, and his idea of cleaning up Alton Park is appealing; I would like to see if plants can be used to remove pollutants from the soil in the Alton Park neighborhood," Halperin said.

"We're helping Chattanooga two ways," Chambliss said. "With ITRC's help, we're doing education here, and then we're moving on to do phytoremediation as an experiment which we can show to others around the world."

Joe Ferguson heads the Enterprise Center, which oversees many of the city's technology and entrepreneurial initiatives. He is interested in turning contaminated, unproductive areas of Chattanooga into productive areas, whether as real estate or green spaces.

"The Enterprise Center hosted one of ITRC's meetings as a result of John Chambliss' phytoremediation activities with them and his connection as a board member," he said. "We were in the process of forming a brownfields management program for Chattanooga, and ITRC was very helpful in sharing information and telling us what other cities had done," Ferguson said.

Since then, Chattanooga's mayor has formed a blue ribbon brownfields task force. Chambliss was one of about a dozen business people and public officials appointed in 2005 to the task force, which has already applied for \$200,000 in federal funds to assess brownfield sites that hold promise for redevelopment.

The Enterprise Center plans to send a staff member to visit cities with effective brownfields programs, including Jacksonville, Fla., a city where ITRC has been involved.

"I hope to have the opportunity to invite ITRC down again to show them what we have done," Ferguson said.

Recent successes have shown that ITRC, combined with community partnerships, can achieve goals and cleanup solutions. As people from a wide variety of backgrounds come together, they are planning a new kind of city. Chattanooga is growing from an industrial town choked in coal tar to a sustainable, forward-looking city where folks can breathe deeply and look forward to wading in the creek.

Quarterly Update changes format

In an ongoing effort to save on expenses, the *Quarterly Update* will no longer be printed, but will only be available via the website. This measure also provides ITRC the opportunity to be more environmentally friendly. All subscribers will receive an email when the newsletter is posted each quarter.

If you have an article or articles you would like to see in the newsletter, please email itrc@wpi.biz.