



Quarterly Update

March 2001

❖ Good news from USEPA once again

In a December 2000 letter to ITRC, the director of USEPA's Office of Solid Waste reiterated and expanded upon the agency's position on the applicability of RCRA Section 3020 to in situ groundwater remediation. And, like the original response from Deputy Director Matthew Hale in December 1999, the news is good.

In Elizabeth A. Cotsworth's letter to ITRC's Board of Directors Cochair Roger Kennett and Brian Sogorka, she included a copy of an USEPA guidance memorandum, which was developed "partially in response to your study, *Regulatory and Technical Guidance for In Situ Bioremediation of Chlorinated Solvents in Groundwater*, and your letter to me of September 9, 1999."

In Cotsworth's summary response, she addressed each of the questions that ITRC posed in its September 1999 letter to USEPA:

"Question: Is injection of contaminated groundwater back into a contaminant plume without substantially reducing the concentrations in the injected fluid covered by the RCRA Section 3020(b) exemption for cleanup sites? Answer: EPA interprets Section 3020(b)(2) to require that the treatment be intended to 'substantially reduce' hazardous constituents in groundwater..., either before or after reinjection.

"Question: If injection of contaminated groundwater is covered by RCRA Section 3020(b), does the injection extend to state programs? Answer: RCRA Sections 3020(b)(1)(A) and 3020(b)(1)(B) limit the Section 3020(b) exemption to 'response actions' taken under CERCLA Section 104 or 106,... including actions for which federal agencies other than EPA are the lead agency. The exemption also applies to actions taken at RCRA treatment, storage, or disposal facilities under RCRA 'corrective action' authorities. It would also apply to injections that occur as part of a remedy under an authorized state corrective action program.

"Question: Is injection of amendments alone prohibited under RCRA? Answer: RCRA Subtitle C, including Section 3020, does not prohibit the injection of amendments alone into groundwater during in situ treatments if the amendments are not hazardous waste."

The ITRC initiative to obtain an EPA clarification of RCRA 3020(b) is one example of how an organization, led by state regulators, can use its technical understanding to address potential stumbling blocks to the deployment of innovative environmental technologies. To read the complete EPA guidance memorandum, including Cotsworth's letter to Roger and Brian, see the ITRC Web site at www.itrcweb.org. Click on "Guidance Documents" and look toward the bottom of the page to find the appropriate link.

❖ Team kick-off meetings held in Baltimore

ITRC team leads received training in early February to help prepare them for their leadership roles in 2001 and 2002. Team leads met on February 6 in Baltimore to review policies and procedures, learn tips for motivating team members, and find out how to reach out to ITRC's customers and use the ITRC Web site to organize and share information among their team members.

Following the training day, team members for most 2001 and some 2002 teams met on February 7 and 8. The teams worked on finishing documents started in 2000 and developed plans for 2001 and 2002. Some teams that do not officially begin until 2002 will begin limited work in 2001. The teams planned for this year and next year are listed below.

2001 Teams

- ▼ Bioremediation Training
- ▼ Chemical Oxidation
- ▼ Dense Nonaqueous Phase Liquids
- ▼ Diffusion Sampler Protocol
- ▼ DOE Gate 6 Technologies
- ▼ In Situ Bioremediation (Nitrates, Carbon Tetrachloride, Perchlorate)
- ▼ Permeable Reactive Barriers
- ▼ Phytoremediation (combined with Constructed Wetlands for 2001)
- ▼ Radionuclides
- ▼ Small Arms Firing Range
- ▼ Unexploded Ordnance

2002 Teams

- ▼ Carbon Tetrachloride
- ▼ Constructed Wetlands
- ▼ Contaminated Sediments
- ▼ MTBE-Contaminated Groundwater

- ▼ Perchlorate in Groundwater
- ▼ Sampling, Characterization, and Monitoring

The meeting concluded with a POC session on the morning of February 9. POCs reviewed ways technical teams will work toward better integrating document and training development with the State Engagement Team—the “sales” side of ITRC. POCs also discussed ways to continue collecting success stories that provide a record of how ITRC products are making a difference.

❖ **Web site continues to evolve**

ITRC’s Web site (at www.itrcweb.org) underwent reconstructive surgery in February to help streamline pages for the active teams and to better organize information about the organization’s plans. The “Project Areas—FYPP” button provides a summary of all technical areas in which ITRC currently has a team or may have a team in the future. There are also links to the Five-Year Program Plan and specific proposals and presentations that provide more detail about each of the project areas.

Team pages, which remain password-protected, have been limited to just those teams that are currently active. Within the team pages, options and features have been reduced to just those that are most commonly used.

A “Success Stories” button has been added to provide information about how ITRC products and services are being used to make a difference in states. The links on the page highlight successes in specific states and with the Department of Defense. There are links to documents related to ITRC’s concurrence process and a list of successes already gathered by the State Engagement Team. In an effort to add to the success stories being collected, there is also a link to the online “Document and Training Feedback Form.”

The ITRC Web site currently houses a vast amount of information about ITRC and its accomplishments, activities, and plans. If you’re having difficulty finding what you’re looking for, try the “Search” feature to locate all files related to your topic of interest.

Further enhancements of the Web site are in the works to help ITRC’s customers more easily find information about ITRC products and services and help ITRC team members more easily locate information related to their activities.

❖ **Mark your calendar**

The ITRC Fall Conference is currently planned for November 5–9, 2001 in Long Beach, California. A draft brochure is posted on the ITRC Web site under “Conferences.” As plans become more definite, additional information will be posted on the Web site. Registration opens August 1, 2001.

❖ **\$1000 reward for feedback**

An online “Document and Training Feedback Form” has been added to ITRC’s Web site to collect comments and opinions about ITRC’s products and services. Every electronic submission that includes a contact name will be entered into a \$1000 drawing to be made at the end of 2001. Feedback, both positive and negative, is essential to help ITRC market as well as improve its offerings. The drawing serves as an incentive to increase the number of document users and training participants to close this important loop. If you have suggestions or thoughts that you’d like to share about an ITRC training course or document, you can access the form on the ITRC Web site under the “Feedback” button.

❖ **ITRC speakers’ bureau**

Under the leadership of Paul Hadley (CA), ITRC is establishing a more formal speakers’ bureau in 2001. In the past, ITRC’s team leads, members of the Board of Directors, and program advisors have been called on to help spread the word about ITRC. By expanding the group that can speak on behalf of the organization, ITRC hopes to reach more people at more events, while keeping travel costs to a minimum by taking advantage of more “local” speakers.

The people who have already volunteered to be part of the speakers’ bureau are:

- ▼ Marybeth Brenner (NJ)
- ▼ Jim Harrington (NY)
- ▼ Chuck Killebrew (LA)
- ▼ Ralph Martin (NE)
- ▼ Mihir Mehta (SC)

Paul Hadley is currently the POC for California, the leader of the Bioremediation Training and State Engagement teams, and a member of the Board of Directors. Understandably, Paul hopes that after getting the speakers’ bureau off to a strong start in 2001, someone else will take over leadership in 2002. If you are aware of an event that would benefit from having an ITRC speaker, please contact Paul at (916) 324-3823 or phadley@dtsc.ca.gov with the details about the event.

STATE ENGAGEMENT UPDATE

The ITRC State Engagement Team is currently focusing on coordinating over 20 upcoming Internet-based training events, obtaining state concurrence on ITRC documents, and building and reporting of success stories. Each of these areas entails working closely with ITRC's technical teams. The State Engagement strategy is to build strong connections with technical teams in order to meld product development with activities for promoting product use. The team aims to help technical teams in building successes specific to their products.

Among the successes that the State Engagement Team and technical teams have documented are:

- ▼ A regulator saved 20% of his time in approving New Jersey's first permeable reactive barrier.
- ▼ A regulator in Kansas saved 50% of the time it would normally have taken to research a proposal for the state's first-time use of natural attenuation.
- ▼ Dupont saved \$10 million for a permeable reactive barrier, as compared to pump and treat, at a Fairfield, New Jersey installation.
- ▼ Recognizing the value of ITRC, states have increased their in-kind support to approximately \$1.7 million.
- ▼ Using ITRC guidance, Massachusetts has issued two requests for proposals to install permeable reactive barriers.
- ▼ New York has used ITRC guidance on thermal desorption to help environmental cleanup firms structure bids on state-financed projects.

❖ Tracking course development progress

The State Engagement Team has developed an online form to help technical teams in developing their Internet-based training courses. The Development Matrix lists the essential steps as well as provides a recommended timeline for accomplishing the steps. Teams update the online matrix to ensure that all team members are apprised of progress. The form is available at www.itrcweb.org. Go to the "ITRC Teams" page and click on the "Team Resources" link. Clicking on "Internet-Based Training Guide" will take you to "Development Matrix Template."

❖ QA/QC for ITRC documents

The State Engagement Team and technical teams are joining forces to help improve the quality and usability of ITRC's documents. The committee, under the leadership of Gary Baughman (CO) and Paul Hadley (CA), will identify qualities and characteristics of ITRC documents that promote usability; give guidance to teams

about the elements that are desirable in an ITRC document; and provide examples of how teams might best identify, refine, and present issues that are deemed significant barriers to deployment of an innovative technology. The committee plans to conclude in mid-2001, in time for teams to incorporate the findings and recommendations into documents that will be completed at the end of 2001.

The leader of the State Engagement Team is Paul Hadley (CA), who is assisted by program advisors Mary Yelken (WGA) and Cain Diehl (SSEB). Paul can be reached at (916) 324-3823, phadley@dtsc.ca.gov. You'll find Mary at (402) 325-9615, myelken@westgov.org, and Cain at (770) 242-7712, diehl@sseb.org.

TECHNICAL TEAM UPDATES

❖ Chemical Oxidation (CO)

Having completed 95% of its technical/regulatory document in 2000, the Chemical Oxidation Team will, in 2001, wrap up *Technical and Regulatory Guidance for Using In Situ Chemical Oxidation to Remediate Contaminated Soil and Groundwater* (CO-1). The CO Team is now focusing on developing training materials based on its technical/regulatory document. Internet-based training events are tentatively planned for July 10 and 12 and for September 25 and 27. Tom Stafford (LA) leads the CO Team. He can be reached at (225) 765-0462, t_stafford@deq.state.la.us.

❖ Dense Nonaqueous Phase Liquids (DNAPLs)

The DNAPLs Team has planned a busy and productive year. In addition to completing a document that specifies guiding principles for DNAPL source reduction, team members will also actively participate in DOE Gate 6 and other technology demonstrations, begin development of a technical/regulatory guidance document on using thermal technologies and chemical flushing technologies to treat DNAPLs, and begin development of a training module. Most recently, team members are working to develop case studies. Jim Harrington (NY) has been joined by Eric Hausmann (NY) in leading the DNAPLs Team in 2001. Jim can be reached at (518) 457-0337, jbharrin@gw.dec.state.ny.us; Eric is at (518) 457-0327, eghausam@gw.dec.state.ny.us.

❖ Diffusion Sampler Protocol (DSP)

In 2001, the DSP Team plans to expand its partnership with the Navy, Air Force, and Army to identify sites where diffusion samplers may be appropriately deployed and develop an open line of communication and information exchange between base environmental managers and state/federal regulators to enhance approval and deployment of this innovative sampling technology.

George Nicholas (NJ) is joined by Paul Bergstrand (SC) in leading the DSP Team in 2001. George is at (609) 984-6565, gnichola@dep.state.nj.us; Paul's at (803) 896-4016, bergstpm@columb34.dhec.state.sc.us.

❖ DOE Gate 6 Technologies

Unique for ITRC is the establishment in 2001 of ad hoc teams to participate with the U.S. Department of Energy in designing, conducting, and evaluating demonstrations and deployments of technologies that have reached DOE's Gate 6 level of maturity. Having early regulator involvement in DOE's demonstrations and deployments will help ensure broader acceptance by states of DOE-supported technologies. DOE will provide an annual schedule of key technology demonstrations or deployments for assignment to relevant ITRC teams. These teams will consider how these demonstrations and deployments should be structured to ensure that information important to states is generated. Roger Kennett (NM), cochair of ITRC's Board of Directors, will coordinate the DOE Gate 6 teams. Roger can be reached at (505) 845-5933, roger_kennett@nmenv.state.nm.us.

❖ In Situ Bioremediation

In 2001, the Bioremediation of Nitrates Team has broadened its scope to begin an effort to investigate the use of in situ bioremediation to address not only nitrates, but also carbon tetrachloride and perchlorate. The newly-named In Situ Bioremediation Team will evaluate technologies and begin developing a document entitled *Systematic Approaches to In Situ Bioremediation*, which will present a flow path for identifying criteria and decision points for deploying in situ bioremediation to address particular contaminants. In 2001, the ISB Team will incorporate these elements into the flow path for nitrate, carbon tetrachloride, and perchlorate. The team will continue to serve as deployment facilitators for enhanced in situ bioremediation. Bart Faris (NM) and Kris Roberts (ND) lead the In Situ Bioremediation Team. Reach Bart at (505) 841-9466, bart_faris@nmenv.state.nm.us; Kris can be reached at (701) 328-5236, kroberts@state.nd.us.

❖ Permeable Reactive Barriers (PRB)

In 1999 and 2000, the PRB Team and its partners offered its classroom course, *In Situ Permeable Reactive Barriers: Application and Deployment*, 12 times plus two dry runs. This course trained 1,330 students. Its Internet-based training, *Permeable Reactive Barriers for Chlorinated Solvent, Inorganic, and Radionuclide Contamination*, was presented four times in 2000, and 850 students were trained. The team plans to continue to offer its Internet-based training course four times in 2001. Training offered on April 11 and 12 will be based on last year's training materials, while training on September 11 and 13 will focus on an advanced course that is being developed. Check the ITRC Web page at www.itrcweb.org and click on "Internet Training" to keep abreast of this opportunity to use the Internet to learn about regulatory guidelines for installing permeable reactive barriers to remediate inorganics and radionuclides.

The PRB Team is also continuing its involvement in a Department of Defense Long-Term Performance Monitoring Project for PRBs. The project is focused on the evaluation of monitoring data collected at a number of PRB installations to better understand hydraulic capture and longevity issues for PRBs. Matthew Turner (NJ) leads the PRB Team and can be reached at (609) 984-1742, mturner@dep.state.nj.us.

❖ Phytoremediation/Constructed Wetlands

The Phytoremediation Team continues to work on two technical/regulatory documents. The phytoremediation document will soon be ready for printing, while a section of that document on constructed wetlands is being spun off into a separate document that will be printed later in 2001. The team also plans to begin classroom training on phytoremediation in 2001 and has been working with the Air Force on alternative covers for landfills. Dib Goswami (WA) and Bob Mueller (NJ) lead the Phytoremediation Team. Dib can be reached at (509) 736-3015, dgos461@ecy.wa.gov; Bob can be reached at (609) 984-3910, bmueller@dep.state.nj.us.

❖ Radionuclides (Rads)

The Rads Team has two new products in development: *Case Study: Determining Cleanup Goals at Radiologically Contaminated Sites*, which is being finalized, and *Stewardship and Technology: Challenges for Future Management of Radiologically Contaminated Sites and Associated Case Studies*, which the team is in the process of preparing. Team leaders Tom Schneider

(OH) and Carl Spreng (CO) will present papers related to these two Rads products at the June annual meeting of the Association of Air and Waste Management in Orlando.

The Rads Team had a very well attended session at the spring meeting with presentations from technology vendors and DOE HQ. Members of the Rads Team will be participating in and presenting papers at the ITRC-cosponsored meeting "Developing Effective Strategies to Accelerate Cleanup in the Federal Complex" in Salt Lake City on April 23-26. Tom Schneider can be reached at (937) 285-6466, tom.schneider@epa.state.oh.us. You'll find Carl Spreng at (303) 692-3358, carl.spreng@state.co.us.

❖ **Small Arms Firing Range (SAFR)**

Due to contamination, primarily lead, from small arms firing ranges, there is a need to have a suite of technologies available for implementation at sites and a set of tools to assist decision makers in choosing the most appropriate technology for cleanup. This new-in-2001 team held its first meeting in November 2000, developed an outline for a technical/regulatory guidance document, and assigned writing responsibilities. The SAFR Team, led by Dib Goswami (WA) and Bob Mueller (NJ), met in late March at Ft. Ord, California. Dib can be reached at (509) 736-3015, dgos461@ecy.wa.gov; Bob can be reached at (609) 984-3910, bmueller@dep.state.nj.us.

❖ **Unexploded Ordnance (UXO)**

The UXO Team has produced its first document. *Breaking Barriers to the Use of Innovative Technologies: State Regulatory Role in Unexploded Ordnance Detection and Characterization Technology Selection* (UXO-1) is an analysis of case studies from states having experience in remediating UXO-contaminated sites. The report offers recommendations to ensure the appropriate participation of states in the selection of technologies for characterization and remediation of UXO-contaminated sites. In 2001, the UXO Team will develop a training program for state and federal regulators, DOD, and stakeholders to educate them on relevant UXO technologies, their capabilities, and limitations. After implementing the UXO basic training course, the team will focus efforts on developing technical/regulatory guidance documents for specific segments to characterize UXO contamination. In 2001, Stephen Nussbaum (IL) is replacing Jim Austreng (CA) as a UXO Team colead. Jennifer Roberts (AK) will remain a colead. Reach Stephen at (217) 782-9803, epa4129@epa.state.il.us. Jennifer is at (907) 269-7553, jennifer_roberts@environ.state.ak.us.

CONTACTS

For questions or comments regarding ITRC, please contact Rick Tomlinson, ITRC program director, Environmental Council of States, (202) 624-3660, rickt@sso.org.

To provide comments, suggestions, or input for ITRC's *Quarterly Update*, please contact Elaine Specht, WPI, (540) 557-6071, elaine_specht@wpi.org.

***CALENDAR**

Event	Location	Date	Contact
Internet Course: Permeable Reactive Barriers for Chlorinated Solvent, Inorganic, and Radionuclide Contamination		April 11 and 12	Register at www.itrcweb.org Click on "Internet Training" Mary Yelken, (402) 325-9615, myelken@westgov.org
Internet Course: Natural Attenuation of Chlorinated Solvents in Groundwater: Principles and Practices		April 17 and 19	Register at www.itrcweb.org Click on "Internet Training" Mary Yelken, (402) 325-9615, myelken@westgov.org
Conference: Developing Effective Strategies to Accelerate Cleanup in the Federal Complex	Salt Lake City, UT	April 24–26	Roger Kennett, (505) 845-5933, roger_kennett@nmenv.state.nm.us (for agenda items); Andrea Caldas, (202) 296, 2814, ext. 26 (for conference logistics)
Internet Course: Phytotechnologies		May 15 and 17	Register at www.itrcweb.org Click on "Internet Training" Mary Yelken, (402) 325-9615, myelken@westgov.org
Internet Course: Using Diffusion Samplers to Obtain Volatile Organic Compound Concentrations in Wells		June 12 and 14	Register at www.itrcweb.org Click on "Internet Training" Mary Yelken, (402) 325-9615, myelken@westgov.org
ITRC Fall Conference	Long Beach, CA	November 5–9	Marty Kushner, (202) 624-3501 mkushner@sso.org

* All course dates and times are subject to change. Check the ITRC Web site at www.itrcweb.org for updates and registration. Registration opens four to six weeks prior to events.

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