



ITRC TEAM PROJECT SUMMARY STATEMENT PRE-IMPLEMENTATION

ITRC Risk Assessment Resources Team
Risk and Cleanup
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December 2008

TECHNOLOGY/METHODOLOGY SUMMARY

State of the Technology/Methodology

Risk assessment principles and practices are an integral part of most decisions made by state and federal agencies implementing cleanups. State and federal regulatory programs are the primary implementers of the risk assessment process in evaluating cleanups. Variations in the applications of risk assessment principles and practices lead to variations in management of contaminated sites, thus undermining the stakeholders' confidence. However, the use of risk-based decision making will expand for the foreseeable future as new contaminants of concern are discovered, new problems are uncovered at existing sites, and new environmental challenges emerge.

The Risk Assessment Resources Team addressed this issue in two interrelated documents, *Examination of Risk-Based Screening Values and Approaches of Selected States* (December 2005) and *Use of Risk Assessment in Management of Contaminated Sites* (August 2008). The team evaluated similarities and variations in the risk assessment process, examined the use of risk assessment in risk management, and suggested an improved process.

In addition, the team published an Electronic Resource Guide and two Internet-based training courses related to the published documents. The team also contributed to two major initiatives: the Department of Energy's Risk-Based End-State Vision and the Environmental Protection Agency Region 6 Corrective Action Strategy. The team sponsored the Probabilistic Risk Assessment Workshop with the Society of Risk Analysis and a conference with Midwestern Risk Assessment Meeting. Other outreach activities included presentations at conferences and symposiums related to risk assessment and risk management.

Conclusion: Risk assessment is a valuable tool in decision making at contaminated sites. The contributions of the Risk Assessment Resources Team have advanced the use of risk assessment in risk management by state and federal agencies by bringing clarity, transparency, and recommended improvements to the practice of risk assessment.

The Future

The current international effort to conduct risk assessment at contaminated sites will continue. It is likely that, as the science of risk assessment and the tools are advanced, more

sophisticated analyses will be undertaken. The use of risk assessment will continue to expand to inform risk management decisions at and beyond the arena of contaminated sites.

TEAM SUMMARY

ITRC Team Process Attributes

The Risk Assessment Resources Team made several contributions to the portfolio of techniques and approaches common throughout the ITRC:

- Created and maintained the ITRC's first electronic fact sheet.
- Conducted in-depth surveys and inquiries of state and federal risk assessors to develop the information that composed both the screening values (2005) and use of risk assessment (2008) documents. These surveys and inquiries were far more useful and valuable for the development of the documents than traditional multiple-choice surveys.
- Conducted numerous outreach efforts throughout the team's lifetime, attending the Society for Risk Analysis, the Battelle Conference, EPA Regional Risk Assessment Training Conferences, and the SERD/ESTCP Conference.
- Internet-Based Trainings.
- Created a new format for ITRC by conducting a two-day, hands-on, technology and transfer workshop for presenting the SADA and ARAMS computer packages. The workshop was highly successful and drew participants from Europe and Africa, as well as many individuals from across the United States.

Key Learning

The cleanup of contaminated sites is quite often an expensive, contentious, and litigious matter. The Risk Assessment Resources Team made significant contributions by revealing sources of variations underlying some of these difficult issues and making suggestions for improving risk management decisions. Such progress was possible due to the personal commitment, willingness to contribute, and open-mindedness of all members of the team. Throughout the team's life, several key issues outside the immediate scope of the team's documents were resolved through collaborations among members, guidance documents were issued by several participating states who benefitted from team members' input, and new methods—notably a new sampling strategy known as Multi-Increment Sampling—received a positive reception in several members' states in large measure due to the collaborative and collegial interactions of the team's state members.

ITRC Team Next Steps

The Risk Assessment Resources Team expects to continue to deliver its Internet-based training courses at through 2010. Several members of the team have joined the ITRC Incremental Sampling Methodology Team, largely as a result of their introduction to the subject through this team. Team members will continue to use and refer to the team's two documents through daily activities as well as through outreach opportunities such as public speaking and professional publications. Based on the success of the two-day workshop for the ARAMS and SADA computer systems, additional sessions of the technology and transfer workshop may be requested by federal sponsors.