

Nuclear Preparedness and Response



The ability of the government and private organizations to convey complex information clearly and simply is critical during a nuclear incident. In the event of a public emergency, nuclear utilities and government agencies will lead many aspects of the country's response. RTI International—with its breadth and depth of expertise, scientific objectivity, and high standards for excellence—provides a comprehensive solution that integrates and analyzes multimedia data from numerous disparate sources to aid in crisis response decision makings.

Overview

Rapid, authoritative decision making and clear communication are necessary during a nuclear incident. Such communication can be challenging because the public may not receive, comprehend, or fully trust the message being disseminated. Nuclear utilities and government agencies need an efficient way to capture, validate, evaluate, apply, and communicate the significance of their combined data. They need a pre-positioned, comprehensive information management and analysis capability that stakeholders can rely on during a crisis.

In the wake of the Fukushima Daiichi crisis, RTI was called on by a private-sector stakeholder to quickly deploy a nuclear emergency response solution. This multinational industrial company engaged RTI to collect and consolidate myriad conflicting data across multiple points and times into accurate, reliable, and actionable information to inform decisions about public and employee safety.

RTI's nuclear preparedness and emergency response solution is proven; it is active today in Japan. The service is available in the United States and other countries. RTI is well positioned to support the nuclear industry

as it strengthens its focus on emergency preparedness in radiation monitoring, decision making, and public education.

Our Expertise

RTI's nuclear preparedness and emergency response solution provides near real-time data, rapid response interpretation, and dissemination capabilities in state-of-the-art text, graphics, and maps using traditional and new media sources. With an extensive background in environmental sciences, public health, risk communication, and survey research, RTI researchers have conducted some of the most critical data collection efforts in the United States. By engaging RTI, nuclear utilities will have the pre-positioned capability to respond rapidly to questions from the government and general public stakeholders, manage rumors, and create a foundation for assessing long-term impacts to people and property. More important, RTI's solution can help the utilities manage the safety of their employees and service providers. With this enhanced capability, nuclear utilities and the industry at large will be better prepared to take control of a crisis while it is unfolding and better positioned to contribute to post-incident assessments and regulatory reviews.



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RTI's solution enables nuclear utilities and government agencies with

- Business continuity for customers and other stakeholders
- Credibility during initial crisis management
- Accurate and defensible assessment of long-term consequences
- Sustainability of nuclear power plant operation
- Routine data management for use in emergency planning exercises and drills

Our Solution

RTI's nuclear preparedness and emergency response solution includes the following:

Data Integration

- Highly structured, normalized data warehouse built using MS SQL server
- Secure SSL access for encrypted data transmission
- Capability to analyze multimedia monitoring data (i.e., air, water, food, and soil, as well as any chemical constituent being monitored)
- Data provenance identification

Web-Based Front-End for Data Access, Mapping, and Analysis

- User management functions, such as account management, user role delineations and access, and standard data management functions, such as rollback, backup, archiving, disaster recovery (multi-storage locations), and other operational/system administration tasks
- Varying levels of data access implemented via user groups and roles to prevent unauthorized access to sensitive information or compromising data quality

Applications

- Integrated, dynamic, interactive mapping for visualizing and analyzing spatial data
- Exportable graphs and trend plots in a variety of formats
- Measurement and analysis capabilities on agricultural products
- A rapid-deployment health registry to collect near real-time exposure information

Support

- Subject matter experts discern necessary data inputs and outputs
- Rapid response, multidisciplinary technical support team
- Flexibility to expand and accommodate new types of data and customized decision support tools

RTI's nuclear preparedness and response service is offered as a pre-positioned solution that identifies data sources in advance for readiness in the event of an incident, as well as in planning exercises and drills. Once the initial standby infrastructure is developed, RTI's solution acts as a source document repository for hosting all applicable data sources and tracking their origination (e.g., federal, state, local, and nuclear utility data sources). RTI's experienced research staff will continue to respond during an incident with data acquisition, management, quality assurance, analysis, interpretation, and on-site support.

More Information

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