



Laboratory Support for Responses to Emergencies

U.S. EPA | SCIENCE AT THE EPA NEW ENGLAND REGIONAL LABORATORY

SCIENCE lies at the heart of the mission of the U.S. Environmental Protection Agency (EPA). The Agency must rely on cutting edge research, accurate measurements and effective technology to implement its programs to protect the environment and human health. Without sound science and credible data, EPA can not wisely set environmental and health standards, clean up contaminated sites, measure ambient air and water quality conditions, or identify the new technologies or practices that will reduce releases to the environment. These fact sheets share with you some of our EPA New England's laboratory capabilities and exemplify some of the very best science we do to meet our agency mission.

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GOAL:

The terrorist attacks of September 11, 2001 have caused EPA to reevaluate the types of events which might result in environmental emergencies and require laboratory support. EPA is designated as the lead federal agency for the remediation (or cleanup) of areas contaminated by the intentional or accidental release of hazardous materials. At a national level, EPA has been working to enhance the laboratory resources available to support responses to such incidents. In New England, EPA's regional laboratory is developing the capability to analyze environmental samples for chemical warfare agents, piloting approaches to enhance the safety of laboratory workers, and building a coordinated network of laboratories to support emergency responses.

SCIENCE:

To enhance EPA's ability to respond to emergencies, whether from natural causes or terrorist activity, the regional laboratory is working on the following three projects:

Chemical Warfare Agent Analytical Capability:

In 2006, EPA and the Department of Homeland Security (DHS) launched an effort to substantially increase the laboratory capacity for analysis of chemical warfare agents in environmental samples. The EPA New England Regional Laboratory was selected as one of the initial pilot sites to establish the capability to analyze for both chemical warfare agents and their degradation agents. This capability will allow the regional laboratory to analyze environmental samples, such as soil, debris, and water samples, associated with the cleanup of sites contaminated from a terrorist incident.

All Hazard Receipt Facility:

Working with DHS and other federal agencies, the regional laboratory also piloted a specialized laboratory, known as the All Hazard Receipt Facility, and an associated sample testing protocol, designed to assess explosive, chemical and radiological hazards that might be associated with unknown or suspicious samples. The screening of such samples, before they are brought into the main laboratory areas, will allow safe and appropriate decisions to be made before further

laboratory analysis is attempted. The development of this prototype facility was a federal response to requests for a standardized safe approach to sample receipt from the public health and environmental laboratory community following the anthrax incidents of the early 2000s.

New England Network of Laboratories:

The regional laboratory is also working with public health and environmental laboratories in New England to ensure that, in the event of a major incident, the laboratories work together in a coordinated and efficient fashion, drawing on their different strengths and capabilities. Representatives from the public health and environmental laboratories have developed, and conducted mock exercises of a joint plan for response to actual or suspected water contamination incidents.

BENEFITS:

Collectively, these projects have strengthened the capability of the regional laboratory and its state counterparts to assist emergency responders in protecting public health and cleaning up releases of hazardous materials into the environment. The laboratory's piloting of approaches to receipt of suspicious samples verified the effectiveness of a federal prototype, resulted in a published protocol on safe sample receipt and screening, and serves as a model for laboratories throughout the country.



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EPA-901-F-09-014
April 2009