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Protecting Citizens and Responders – Best Practices to Minimize Exposure to Radiological Contaminants

Using R&D Funding to Fill Critical Gaps in the Interagency Rad/Nuc Response and Recovery Architecture

The White House Office of Science and Technology Policy's (OSTP) Nuclear Defense Research and Development Roadmap for Fiscal Years 2013-2017 identified the difficulties involved in decontaminating an area impacted by a radiological incident as one of the "grand challenges" associated with response and recovery. The Roadmap lists as one of its R&D program priorities: "developing tools, technologies and guidance to perform cleanup operations for both critical infrastructure and the surrounding contaminated areas." This project will develop an electronic application that will provide first responders with guidance on containment and gross decontamination.

Partnering with the Environmental Protection Agency to Provide Guidance for First Responders

Radiation exposure at a response site from radiological contamination is a major threat facing responders and one that requires technology development. DHS S&T has initiated a partnership with the Environmental Protection Agency's (EPA) National Homeland Security Research Center to provide first responders with information, techniques, and best practices using equipment and materials readily available to state and local response agencies in conducting radiological particle containment, initial gross-decontamination and early-phase waste management.

Focusing R&D Efforts to Minimize the Public Health Impacts of Radiation through Comprehensive Contaminant Management

To best protect responders and the public following a radiological incident, DHS S&T and EPA will focus their efforts on researching and developing scientifically defensible technologies and protocols for: wide area containment of radiological articles, radiological gross decontamination, and early phase waste management.

Building Actionable Guidance and Relevant Tools for First Responders

While this project is primarily a research endeavor, it is important that the critical information gathered be available in an actionable format for first responders. Following the compilation of research tasks, all guidance and best practices will be packaged together into an electronic application for field deployment to put essential information at their fingertips of first responders when it is needed the most.

Efficient decontamination and radiological waste management will improve recovery timelines and protect citizens and responders from hazardous exposure. (ENVIRONMENTAL PROTECTION AGENCY – LIBERTY RAD EX)

Building Critical Relationships and Partnerships to Support Rad/Nuc Preparedness

In addition to seeking national input from hazardous materials responders and response agencies on what type of guidance products are most helpful for field operations, this project also seeks to build and foster critical relationships between agencies in advance of a radiological incident. The research and testing associated with this project is being conducting by the following DHS S&T partners:

- EPA National Homeland Security Research Center
- Public Health England
- Lawrence Livermore National Laboratory
- Argonne National Laboratory
- Idaho National Laboratory

Homeland Security
Science and Technology

To learn more about DHS S&T's Radiological/Nuclear Response and Recovery R&D Portfolio please contact Ben Stevenson, NUSTL Program Analyst, at benjamin.stevenson@hq.dhs.gov.

2015-06-18