# Radiological/Nuclear Response and Recovery Research and Development



#### IMPROVING CAPABILITIES AND ADVANCING UNDERSTANDING

The National Urban Security Technology Laboratory (NUSTL) is a federal laboratory organized within the U.S. Department of Homeland Security Science and Technology Directorate. NUSTL manages the Radiological/Nuclear Response and Recovery (RNRR) Research and Development (R&D) Program with projects that work to improve radiological response capabilities at the local, state, and federal level while advancing the understanding of impacts and risks associated with radiological/nuclear incidents within first responder agencies nationwide. The RNRR R&D Program increases preparedness, enhances responder capabilities in advance of an incident, and minimizes the impact of a radiological or nuclear detonation.

### THE NEED

The detonation of a radiological dispersal device or a nuclear detonation would pose tremendous challenges to the first responder community and homeland security enterprise while also resulting in severe consequences to the economy and national security posture. The presence of radiation during an emergency drastically increases the complexity of response operations and requires advanced data collection and specialized capabilities to ensure the safety of the public and responders.



## THE RNRR R&D SOLUTION

By working with partner agencies, federal interagency working group and first responders to identify impactful R&D opportunities, the RNRR R&D Program addresses technology and capability needs in the areas of radiological response management, incident characterization, initial response capabilities, medical care/triage, casualty/evacuee care, impacted area stabilization/control, and site cleanup/decontamination.

## **CAPABILITY DOMAINS**

The program capability domains below represent broad operational categories of emergency response and denote areas where operational needs are consistently identified. The RNRR R&D Program develops projects that help fill these needs.



## **PROGRAM GOALS**

- Increase capability at all government levels to characterize complex and catastrophic incidents
- Improve responder ability to save lives during initial response operations of a radiological incident
- Minimize impacts to the community and economy through improved methods of incident stabilization, radiological clean-up and recovery
- Transition R&D information and integrate developed technology and knowledge products into preparedness and response activities

RNRR-FS-10c

