

RADIOLOGICAL EMERGENCY PREPAREDNESS, RESPONSE AND RECOVERY

A radiological emergency, such as a radiological dispersal device (RDD) or a nuclear detonation, would pose tremendous challenges to the first responder community and the homeland security enterprise as well as result in severe public health and economic consequences. The presence of radiation during an emergency drastically increases the complexity of response operations, requiring advanced data collection and specialized capabilities to ensure the safety of the public and responders.

The Radiological/Nuclear Response and Recovery (RNRR) Research and Development (R&D) portfolio – managed by the National Urban Security Technology Laboratory (NUSTL) – funds development of research, software tools, training, and knowledge products (e.g., emergency response guidance) that improve the ability of state, local, tribal, and territorial (SLTT) responders to understand the hazards of radiological emergencies, respond effectively to save lives, and initiate longer term response and recovery activities including remediation, reestablishment of essential services, population monitoring, and the return of displaced residents.

RNRR'S IMPACT

The RNRR R&D portfolio improves SLTT radiological/nuclear response and recovery capabilities through investments focused on increasing and improving preparedness and understanding of the impacts and risks of an RDD. RNRR works with first responders, partner agencies, and federal interagency working groups to identify requirements and capability gaps, in the areas of radiological response management, incident characterization, initial response capabilities, medical care/triage, casualty and evacuee care, impacted area stabilization and control, and site cleanup and decontamination. Equipping planners and responders with science-based guidance and tools enables effective decision making that is critical to protecting the health and safety of responders and the public.



Products developed by the RNRR R&D portfolio include planning guidance for radiological emergencies and software-based tools to help execute the response. Final products are frequently embedded into existing tools to enhance their capabilities (e.g., advancements to plume modeling software) or provided to other federal agencies, including the Federal Emergency Management Agency (FEMA), that make them directly available to SLTT partners by publishing them in resource libraries as well as within response and planning tools accessible to public safety agencies.

ENGAGING WITH RNRR

The RNRR R&D portfolio routinely engages with first responders and emergency planners to understand their needs and knowledge gaps to inform R&D priorities. RNRR also collaborates with federal agencies with subject matter expertise in rad/nuc planning, response, and recovery, such as FEMA, the Centers for Disease Control and Prevention, the Department of Energy (DOE) National Nuclear Security Administration, and the Environmental Protection Agency, and partners with DOE national laboratories and other technical experts for execution of projects.

If first responders, other federal agencies and SLTT jurisdictions have identified needs or gaps and are interested in engaging with RNRR on rad/nuc response and recovery projects, they are encouraged to contact NUSTL at NUSTL@hq.dhs.gov. Past partners have provided valuable expertise, perspective, and feedback that has been incorporated into final products to better meet the needs of first responders and SLTT jurisdictions nationwide.