COVID-19 Takeaways for Radiological/Nuclear Incident Planning, Response, and R&D

NUSTL — NATIONAL URBAN SECURITY TECHNOLOGY LABORATORY

Homeland Security — Science and Technology

LESSONS FROM COVID-19 FOR RADIOLOGICAL & NUCLEAR EMERGENCIES

The COVID-19 pandemic offers a rare opportunity to conduct real-time research in support of identifying future incident planning and research and development (R&D) priorities for radiological or nuclear (R/N) emergency response. The U.S. Department of Homeland Security Science and Technology Directorate's National Urban Security Technology Laboratory (NUSTL) has partnered with the Federal Emergency Management Agency and the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) to document lessons from the COVID-19 pandemic that can be applied to an R/N incident. The work is being conducted by researchers within the DOE national laboratory network and in coordination with the Federal Radiological Preparedness Coordinating Committee (FRPCC).

This project will culminate in a white paper that identifies a roadmap for investment in tools, guidance, policy, and other areas to advance R/N emergency preparedness and response in support of state, local, tribal, and territorial partners.

PARALLELS BETWEEN COVID-19 AND RADIOLOGICAL/NUCLEAR INCIDENTS

The scope, scale, and duration of the COVID-19 pandemic is uniquely relevant to R/N emergency planning, for which some scenarios estimate a similarly long-term recovery period. Parallels between R/N incidents and the COVID-19 pandemic include, for example, suspension of federal and state laws or regulations to facilitate emergency response, changes in social behavior, supply-chain disruption, the need for wide-scale testing to determine impact on individuals, decontamination requirements, increased demand for personal protective equipment, and a prolonged (months-to-years) period of response and recovery. These similar response and recovery challenges – being planned for and addressed currently – provide federal, state, and local governments an opportunity to identify future priorities for R/N planning, response, and R&D.

COLLABORATING TO SUPPORT R/N PREPAREDNESS

As with all projects in NUSTL's R/N Response and Recovery R&D Program, this work relies on input from first responders and emergency managers as well as federal interagency partners, including DOE NNSA, FEMA, and the FRPCC.

The research associated with this project is being performed by DOE partners at:

- Brookhaven National Laboratory
- Nevada National Security Site Remote Sensing Laboratory
- Oak Ridge Institute for Science and Education
- Pacific Northwest National Laboratory
- Sandia National Laboratories

SEEKING TAKEAWAYS FROM THE HOMELAND SECURITY ENTERPRISE

As part of this effort, researchers from DOE national laboratories are aiming to identify key emergency response professionals across the United States who were or continue to be a part of the COVID-19 response. Researchers are seeking expertise on lessons learned from recent challenges and successes of the ongoing response as well as observations of parallels between the COVID-19 pandemic and R/N emergencies.