

# Preface

A high priority for the U.S. Department of Homeland Security is the preparation of emergency responders to save lives and protect critical infrastructure in the emergency phase of a radiological or nuclear incident. Several publications by the National Council on Radiation Protection and Measurements (NCRP) have provided guidance on effective responses to terrorism incidents, including:

- Report No. 138, *Management of Terrorist Events Involving Radioactive Material* (2001);
- Commentary No. 19, *Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism* (2005);
- Report No. 161, *Management of Persons Contaminated with Radionuclides* (2008); and
- Report No. 165, *Responding to the Aftermath of Radiological and Nuclear Terrorism: A Guide for Decision Makers* (2010).

This Report addresses the critical lack of consistent guidance, standards and regulations for managing dosimetry issues in the early phase of a radiological emergency.

Radiological or nuclear terrorism incidents that can occur anywhere and without warning might force public safety agencies to compromise their mission to save and sustain life in order to satisfy dosimetry regulations. It is not practical, nor appropriate, for every responder and emergency worker in the nation to constantly wear an accredited dosimeter “just in case” such an unlikely event occurs, or for response agencies to stockpile dosimeters to issue as-needed.

This Report on *Guidance for Emergency Response Dosimetry* complements the previously mentioned reports. Further it addresses and bridges the dosimetry gaps that exist between trained and equipped emergency responders and the larger community of emergency workers who would be called upon to assist with the response, in particular during the early phase of the response when conditions are chaotic and dosimetry is minimal or nonexistent. It provides guidance on the accrual and control of radiation dose in the early phase of the response and focuses on answering the following key questions:

- With minimal dosimetry resources, how do responders make decisions to control the total dose and associated risk?
- How are doses assigned to responders when not every responder is issued a dosimeter before exposure occurs?
- What is the regulatory framework for responders who are not trained as radiation workers?

This Report discusses a scalable approach and provides options for optimizing and re-purposing existing equipment (such as equipment that was designed/purchased for the prevention mission), and provides tools that help emergency managers and other planners identify the best available equipment for the specific missions. This Report stresses the importance of following the Incident Command Structure and the need to be prepared to collect and communicate dosimetry and other incident information to a wide range of audiences.

This Report was prepared by NCRP Scientific Committee 3-1. Serving on the Committee were:

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It goes without saying that the Council could not address the radiation protection needs of the nation without such willingness from Council members and from agency partners to contribute time and resources.

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