

Preface

The National Council on Radiation Protection and Measurements (NCRP) was chartered as a private corporation by an Act of the U.S. Congress in 1964 to “collect, analyze, develop and disseminate in the public interest information and recommendations about (a) protection against radiation...” It is the mission of NCRP to make recommendations pertaining to health and safety related to radiation exposure, independent of existing laws and regulations of federal/state government. The U.S. Congress has clearly mandated that there exist entities, outside and inside government, to make health and safety recommendations, entirely independent of the Occupational Safety and Health Administration rules and regulations. Thus, the observations and recommendations presented in this Commentary are in line with the NCRP Charter to advise U.S. government entities.

NCRP provides advice, recommendations and guidance for decision and policy makers, but it is up to the individual agencies and organizations to choose whether to accept them. National and international regulatory bodies, including the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission, are consistent with the U.S. Environmental Protection Agency and International Atomic Energy Agency in their guidance to control dose in an emergency.

This Commentary, *Implementation Guidance for Emergency Response Dosimetry*, is a companion to NCRP Report No. 179, *Guidance for Emergency Response Dosimetry* (2017). That report complemented two previous NCRP publications: Report No. 165, *Responding to a Radiological or Nuclear Terrorism Incident: A Guide for Decision Makers* (2010) and NCRP Commentary No. 19, *Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism* (2005). These reports provide guidance and recommendations for planning responses to radiological or nuclear terrorism incidents.¹

The intent of this Commentary is (1) to recommend practical operational guidance to help facilitate the tenets of Report No. 179 in response planning for or during a crisis or for the purposes of training and exercises and (2) to help emergency managers, planners and responders develop a plan to implement the dose tracking recommendations in Report No. 179 during a radiological or nuclear incident. This Commentary provides specific guidance and tools for tracking radiation doses early in a response with limited dosimetry resources. A basic assumption is that those who are users of Report No. 179 incorporate its tenets into a response plan and procedures to create an operational framework for emergency response dosimetry and recordkeeping. The Commentary further presumes adherence to the National Incident Management System and use of the Incident Command System, the standard for emergency response at all levels of government and on which both Report No. 179 and this Commentary are predicated (Federal Emergency Management Agency, Interagency Modeling and Atmospheric Assessment Center). The Commentary is not intended to be used in isolation as a shortcut to implementation of Report No. 179 or any other applicable guidance and presumes a working knowledge of Reports No. 165, No. 179, and Commentary No. 19.

¹While the Commentary is based on the scientific foundations in these previous publications, it is harmonized with the tenets of NCRP Report No. 180, *Management of Exposure to Ionizing Radiation: Radiation Protection Guidance for the United States* (2018) (2018).

NCRP Report No. 179 (2017) bridges the operational dosimetry gaps between trained and equipped radiation workers and all other categories of responders who are considered emergency workers during a response to a radiological or nuclear incident. It provides guidance on the control of radiation dose and focuses on answering three 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 Commentary provides actionable guidance and tools for both planning and response to help emergency responders, managers and planners identify the best methods for tracking radiation dose early in a response, when dosimetry resources may be limited but when response activities are crucial to save lives and alleviate human suffering.

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NCRP could not continue to address the radiation protection needs of the nation without the willingness of Council members to serve, review and advise and without the partnership of agencies to work together for the good of the people and the well-being of the nation.

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