

BOOK REVIEW

Management of Terrorist Events Involving Radioactive Material. Report No. 138, National Council on Radiation Protection and Measurements, Bethesda, MD, 2001, 232 pp., \$50.00 (U.S.).

This review considers the report of National Council on Radiation Protection and Measurements (NCRP) Scientific Committee 46-14 on radiation protection issues related to terrorist activities that result in the dispersal of radioactive material. With commendable foresight, the NCRP initiated the committee some years ago with support from the U.S. Department of Energy, and its work was concluded prior to the terrorist attacks of September 11, 2001.

The report is directed particularly to expert groups and public authorities who will be responsible for coping with actual, potential and rumored releases of radiation. Much of the information in it was derived from a variety of federal and other official agency sources and work plans, but it focuses on the basic principles underlying effective planning and response for this particular kind of event in the U.S.

The three broad areas covered include the definition of the problem, management of the disaster, and preparation for a major radiation incident. The first area considers the potential radiation sources and the consequent health effects of such an incident, including the psychosocial ones, and their care. The next area covers command and control issues at the federal, state and local levels, as well as the crucial aspects of communication and information flow to the public. Also provided are cleanup recommendations and guidance on dose limitations for the impacted public as well as the responders. The third section addresses emergency planning, response resources and personnel training for radiation events. Needed research and training activities to improve response capabilities are identified. Eight Appendices provide many sources of additional details and relevant examples. Finally the report gives a glossary, acronym identification list, conversion tables and references.

The Report has met its objectives well despite its completion before the terrorist attack of September 11, 2001. It clearly recognizes that the widespread fear associated with radiation will make any event that results in real or perceived contamination of the public a successful terrorist activity, and that the easier it is to carry out, the more likely that it will be used. Thus, although nuclear devices and even those that “fizzle” with some nuclear yield are considered, there is emphasis on radiation dispersal devices

(RDDs) and management of their psychosocial results. In addition, crisis management and consequence management are dealt with in some detail, including medical care and follow-up. The training qualifications for the personnel needed to provide support in a radiological disaster are reviewed, and the availability of and deficiencies in present academic and other training activities are identified.

The eight Appendices contain very useful information in outline form, including sample pre-prepared public information statements, listings of relevant federal and state resources, and details of currently available federally sponsored courses in domestic preparedness.

It should be noted that insight after the events of September 11 suggests that a review of one of the report's implicit underlying assumptions that terrorists would give consideration to their own safety and survival in planning and carrying out attacks might be warranted. Thus modification is probably now indicated for the statement on page 15 that “the most likely scenarios involve the use of a solid radioactive material that would be of low enough activity that the construction and delivery of the RDD (radiation dispersal device) will not seriously inhibit the terrorist from carrying out the attack. Large sources of penetrating radiation are difficult to handle safely. . . . Shielding materials that are adequate to protect both the individuals who construct these devices and those who deploy them complicate the design and fabrication of effective weapons. Although not insurmountable, these challenges can only be overcome with considerable technical expertise and sophisticated resources.” The removal of concern for survival by the perpetrators only makes this scenario even more likely, however, and with larger sources.

For those of us for whom radiation has been familiar only as a subject or tool in research, or as a clinical or experimental therapeutic modality, the reality must be recognized that the likelihood of our being called upon to assist in the event of an accidental or deliberate radiation incident is increasing. NCRP has already supplied us with NCRP Report 65, a patient-oriented monograph on *Management of Persons Accidentally Contaminated with Radionuclides*. It has now added to our armamentarium the basic public health information with which to anticipate, prepare for, recognize and deal with a deliberate public assault involving radionuclides.

I would second the recommendation of the NCRP, the publisher, that the information and resources listed in this report make it useful for every “responder” and medical

organization to have a reference copy at each site where such information might be needed on an emergency basis. In the interest of public information, libraries may want to make this report available for reference as well.

Because of its sense of urgency, the NCRP is offering sizable reductions from the sale price of \$50 for single copies for those in a position to purchase in quantities. The

offering is as follows: 10–24 copies, \$45 each; 25–49 copies, \$42.50 each; 50–99 copies, \$37.50 each; 100–249 copies, \$35 each; 250–999 copies, \$25 each and 1,000 copies and over, \$12.50 each.

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