

NEWS RELEASE
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*The National Council on Radiation Protection and Measurements (NCRP)
Releases NCRP Report No. 138, Management of Terrorist Events
Involving Radioactive Material*

The possibility that terrorists may try to use radioactive materials against the United States or other countries requires that public officials, emergency services, and medical facilities be prepared to identify and cope with a potentially wide range of problems, a new scientific report from the National Council on Radiation Protection and Measurements (NCRP Report No. 138) asserts.

"The new report provides a consensus of existing and proposed recommendations from federal agencies and scientific bodies and is intended as a guide for planning for various kinds of radiation-related events. It was drafted by an expert committee of NCRP scientists, consulting federal and state officials, and academic representatives prior to the September 11 terrorist attacks," said Charles Meinhold, President of the NCRP.

"Having studied the effects of the nuclear blasts in Japan in World War II and having examined the effects of subsequent nuclear weapons testing and the accidental release of radiation from disasters such as Chernobyl, we have a strong body of knowledge about radiation effects and how to minimize them. Our problems, if a terrorist group attempts to spread radioactivity, are to assess the actual extent of the release and to implement immediate and appropriate control activities," he continued.

"This report will be a timely resource for public agencies and should be helpful to the rest of us in understanding what might happen if some amount of radiation is released deliberately," Professor Meinhold said. "Short of the use of a nuclear weapon, the spread, or threat of a spread, of some amount of radioactive material probably will cause public concern far in excess of the actual or potential damage to a community or its people."

The most immediate problem for federal agencies relative to a possible radiation incident is to upgrade plans for prevention and response, train emergency personnel in detecting radiation, and to obtain necessary equipment for measuring the level of radiation exposure, the report declares. The report offers concrete suggestions about how to plan for these tasks. Various sections of the report cover: Considerations impacting response, Characteristics and consequences of terrorist incidents that involve radioactive materials, Medical management of radiation casualties, Psychosocial effects of radiological terrorist incidents, Public communication, Radiological consequence management considerations, Training and qualifications for personnel, and Appendices that provide sources of assistance and guidance.

The report suggests that a terrorist organization is more likely to release a small amount of radioactivity, possibly with an explosion, than it is to obtain and use a nuclear weapon. With the release of small amounts of radioactive material, the necessary containment and cleanup may be well within the capability of public agencies. Such an event could be "catastrophic but manageable," the report warrants.

"When an explosive device is used to disperse radioactive materials, treatment of casualties is more difficult because of the contamination and the complications associated with other trauma. The debris from the event and other normally harmless materials will be contaminated. The affected area may be much larger than the immediate

scene of the crime. The radiological hazard, invisible and uncertain in terms of long-term health impacts, will engender public fear and concern.”

“At the most basic level is the fact that one of the terrorist’s chief aims is to cause psychological effects; to induce fear in a population. Such fear is further compounded when invisible toxins, such as radiation or radioactivity, are involved. People can neither see nor sense the presence of radiation, but they know that it is potentially hazardous,” the NCRP report continues.

“It must be noted emphatically that radioactive contamination, whether internal or external, is never immediately life threatening and therefore, a radiological assessment or decontamination should never take precedence over dealing immediately with life-threatening initial injuries such as shock, compound fractures and bleeding wounds,” the report stresses.

For limited releases of radioactive material, people in the area can reduce their exposure by taking shelter in homes or other buildings for hours or a few days until the radiation levels fall. Ventilation systems using outside air should be shut off and eating contaminated foods should be avoided. Radioactive dust can be washed off of the skin and contaminated clothing should be abandoned to reduce external exposures.

The report places emphasis on the need for public authorities and for scientists to be attentive to the psychosocial effects of terrorism involving the dispersal of radioactive material. The report also says that the release of a tentative “worst case” assessment may unduly alarm the public. However, delays in releasing such information are likely to create even greater public speculation and alarm. In addition, the public’s perception of the radiation risks, radiation levels and areas affected could be worse than the responsible official’s worst case assessment.

NCRP recommends that emergency teams and vehicles be equipped with radiation monitors which would allow detection of radiation at an explosion scene. Levels of radiation so detected would govern how public agencies respond in putting out fires, rescuing wounded, defining the area of concern, and informing the public about possibly needed actions, such as taking shelter or even evacuation of the area.

The first people likely to respond to a radiation emergency are the same firemen, hazardous material teams, emergency medical technicians, and law enforcement personnel who respond to other emergencies. They should be trained in coping with radiation and training should be extended to emergency physicians and other hospital personnel, to primary care physicians, to mental health experts, social service and disaster relief agencies, to civil affairs personnel and to local government officials.

The NCRP’s committee was led by Professor John W. Poston, Sr., of the Texas A&M University in College Station, Texas. In addition, the other members of the committee were Cheri Abdelnour and Robert W. Brittigan (Defense Threat Reduction Agency, Washington), E. John Ainsworth (AFRRI, Bethesda, MD, Retired) Steven M. Becker (Univ. of Alabama at Birmingham), Ian Scott Hamilton (Texas A&M), Eva E. Hickey (Battelle – Richland, Washington), David A. Kelm (Illinois Dept. of Nuclear Safety), Fred A. Mettler (Univ. of New Mexico), Jay M. Thompson (Westinghouse – S. Carolina), Mark Wrobel (Bolling AFB, Washington) and Eric E. Kearsley (Staff Consultant, NCRP). Contributors to the report included scientists from the Department of Energy, Department of Defense, Federal Bureau of Investigation, Federal Emergency Management Agency, National Domestic Preparedness Office, and the Los Alamos National Laboratory. The draft report was reviewed by the 93 members of the NCRP and by committees of its sponsoring scientific and medical societies. Financial support for NCRP Report No. 138 was provided by the U.S. Department of Energy.

NCRP is a nonprofit corporation chartered by Congress in 1964 to collect, analyze, develop and disseminate in the public interest information and recommendations about (a) protection against radiation and (b) radiation measurements, quantities and units, particularly those concerned with radiation protection.

The NCRP believes that a copy of this report belongs in every hospital and with every emergency response organization at all levels of government in the nation. In addition, in the interest of public awareness, a copy of this report should be in every library in the nation.

Information on NCRP publications can be obtained at <http://www.ncrp.com/ncrprpts.html>. Also of interest may be NCRP Report No. 65, *Management of Persons Accidentally Contaminated with Radionuclides*.