President's Message

The year 2002 was marked by continued productivity and a renewed optimism for a financially secure future. Several major reports were published; a number of long-term report activities made significant progress toward publication; and new sponsors and activities of importance for homeland security, the cleanup and disposition of nuclear waste materials, and radiological health protection for members of the public were undertaken. NCRP reports published in 2002 were the following.

NCRP Report No. 139, *Risk-Based Classification of Radioactive and Hazardous Chemical Wastes*, prepared under the chairmanship of Dr. Allen G. Croff, is an important contribution towards the development of a generally applicable classification system for any waste materials that contain radionuclides, hazardous chemicals, or mixtures of the two. A risk index is proposed that can be evaluated for all types of waste and used as a basis for classifying the level of risk posed by disposal of a given waste material, as well as the type of disposal system that would be appropriate for that material. The adoption of the proposed risk-based classification system could resolve many of the inconsistencies that currently exist in waste classification and disposal policies.

NCRP Report No. 140, *Exposure Criteria for Medical Diagnostic Ultrasound: II. Criteria Based on All Known Mechanisms*, prepared under the chairmanship of Dr. Wesley L. Nyborg, is the third comprehensive NCRP report that provides the scientific basis for safety analysis in diagnostic medical ultrasound. An important feature of Report No. 140 is the extensive evaluation of nonthermal mechanisms of tissue interactions with ultrasound, including acoustic cavitation and other mechanical processes. This NCRP Report provides a wealth of new information and analyses of potential mechanisms of ultrasound-induced changes in cells and tissues, and is essential reading for medical practitioners of ultrasound diagnostic and therapeutic technologies.

NCRP Report No. 141, *Managing Potentially Radioactive Scrap Metal*, prepared under the chairmanship of Dr. Shih-Yew Chen, discusses the available options for either recycling or disposing of the large amount of potentially radioactive scrap metals generated as a result of the decommissioning and dismantling of nuclear power plants, nuclear weapons production facilities, and other nuclear facilities such as research reactors, test reactors, and accelerators. The focus is not only on providing an in-depth discussion of possible options for clearing and recycling these metals, but also on the need to design new nuclear facilities in a manner that reduces the extent of metal contamination. Report No. 141 also emphasizes the need to evaluate health and environmental impacts as a basis for developing standards on the clearance of these materials for recycling or release into the public domain.

NCRP Report No. 142, *Operational Radiation Safety Program for Astronauts in Low-Earth Orbit: A Basic Framework*, chaired by Dr. Richard J. Vetter, provides a comprehensive description of all elements of an operational radiation safety program for astronauts in low-Earth orbit missions. Report No. 142 describes the methods to be used for implementing the radiation exposure guidelines for

Mettler, who chaired the Program Committee; and to Mr. Otha Linton, who played a key role in organizing the Symposium and in preparing the Symposium summary for publication.

The year 2003 promises to be equally eventful, with several NCRP reports and other publications nearing completion. Of special note are the following activities. The following four NCRP reports will be published: (1) *Management Techniques for Laboratories and Other Small Institutional Generators to Minimize Off-Site Disposal of Low-Level Radioactive Waste*, prepared by Scientific Committee 87-1 under the chairmanship of Mr. William P. Dornsife; (2) *Radiation Protection in Dentistry*, prepared by Scientific Committee 91-2 under the co-chairmanship of Dr. John W. Brand and Dr. S. Julian Gibbs; (3) *Radiation Protection in Veterinary Medicine*, prepared by Scientific Committee 46-16 under the chairmanship of Dr. Kenneth R. Kase; and (4) *Structural Shielding Design for Diagnostic and Interventional Medical X-Ray Facilities*, prepared by Scientific Committee 9 under the co-chairmanship of Dr. Benjamin R. Archer and Dr. Joel E. Gray. In addition, *Biological Effects and Exposure Recommendations for Modulated Radiofrequency Fields*, an NCRP commentary prepared by Scientific Committee 89-4 under the chairmanship of Dr. Om P. Gandhi, will be published in 2003. Several other NCRP reports are in an advanced stage of preparation and are expected to be published either in late 2003 or the early part of 2004.

Three presidential reports related to the use of ionizing radiation for security surveillance screening will be published in 2003. Two of these presidential reports are the work of Scientific Committee 1-11, chaired by Dr. Leslie A. Braby, and are entitled *Radiation Protection Advice for the Pulsed Fast Neutron Analysis System Used in Security Surveillance: Part II. The ALARA Principle and Related Issues* and *Recommended Methods and Instrumentation for Measuring and Determining Individual Radiation Dose from the Pulsed Fast Neutron Analysis System.* The third presidential report to be published in 2003 is *Radiation Protection Advice: Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems*, prepared by Scientific Committee 1-12 under the chairmanship of Mr. Kenneth L. Miller. A journal article prepared by Scientific Committee 1-10 under the chairmanship of Dr. Clark W. Heath on the subject *Residential Radon Exposure and Lung Cancer Risk: Commentary on Cohen's County-Based Study* is expected to be published in 2003. Finally, the proceedings of the 38th Annual Meeting, held on April 10-11, 2002 on the topic *Where the New Biology Meets Epidemiology: Impact on Radiation Risk Estimates*, will be published in Health Physics during 2003. NCRP is very grateful to the program committee for the 2002 annual meeting, chaired by Dr. Eric J. Hall, for organizing this outstanding meeting. The 39th Annual Meeting, which has been planned by a Program Committee chaired by Dr. John E. Till, will be held on April 9-10, 2003 on the topic *Radiation Protection at the Beginning of the 21st Century—A Look Forward.*

From the perspective of NCRP's operations and financial stability, it should be noted that the income from grants, contracts and contributions increased relative to 2001. On a cost basis the income from sponsors and contributors essentially offset the operating costs associated with conferences and the preparation and publication of reports. Other financial gains were achieved through the reduction of NCRP's office space by 1,100 square feet and the increased use of teleconferencing and e-mail correspondence by the scientific committees.

NCRP

Basic Criteria, Epidemiology, Radiobiology, and Risk

Vice President, R. Julian Preston

Key Functions of Scientific Committee 1

- Evaluate and approve all NCRP committee draft recommendations on exposure limits.
- Evaluate new epidemiological and radiobiological data and determine their potential effect on human risk coefficients for radiation protection.

Members of Scientific Committee 1

R. Julian Preston, *Chairman, 2002–*
S. James Adelstein, *Chairman, 1992–2002*
Bruce B. Boecker
R.J. Michael Fry
Raymond A. Guilmette
Eric J. Hall
Kenneth R. Kase
James C. Lin
John B. Little
Henry D. Royal
Roy E. Shore
F. Ward Whicker
Susan D. Wiltshire
Warren K. Sinclair, *Advisor*
Laura J. Atwell, *NCRP Contact*

Authorized but Unfunded Activities

- Lung cancer risks from inhaled radionuclides