



# Health Physics News

Volume XXXVI Number 9 For Specialists in Radiation Safety September 2008

The Official Newsletter of the Health Physics Society

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## The Status of NCRP

A Dialogue with President Tenforde

Mary Walchuk

Under the presidency of Health Physics Society (HPS) member Thomas Tenforde, PhD, the National Council on Radiation Protection & Measurements (NCRP) has been quite busy over the last six years performing its mission to formulate and widely disseminate information, guidance, and recommendations on radiation protection and measurements that represent the consensus of leading scientific thinking. NCRP's mission also includes the facilitation and stimulation of cooperation among organizations concerned with the scientific and related aspects of radiation protection and measurements.

Tenforde's experience in the NCRP includes being elected as a member of the NCRP Council in 1988 and serving two consecutive six-year terms, acting as scientific vice president and chair of the Nonionizing Radiation Program area from 1995 to 2000, and serving on the NCRP Board of Directors from 1991 to 1996. Tenforde was elected in April 2002 as the fourth president of the NCRP, which was chartered in 1964. He was reelected to that position in April 2008.

"Several major challenges have been met and more lie ahead in 2008 and beyond, but I am confident that NCRP can meet them," Tenforde said at his 8 May 2008 NCRP staff meeting. He now shares with *Health Physics News* readers information about challenges and goals that have been met and his vision for the next several years.

### Has the job of NCRP president been what you expected when you were elected six years ago?

**Tenforde:** When I decided in 2001 to become a candidate for the presidency of NCRP, I had no delusions about the challenges that I would face if elected. There had been correspondence sent to Council members by my predecessor, Charles Meinhold, about the necessary reduction in staffing of the NCRP office. Journal articles and editorials were being published about the historical importance of NCRP in producing definitive

reports on radiation protection and measurements through much of the 20<sup>th</sup> century and the difficult challenges the organization now faced to survive. The financial position of NCRP had become so tenuous that the Board of Directors asked NCRP's accountant, Jim Berg, to evaluate the cost of closing down the organization in relation to its available financial assets.

My family and many friends and colleagues questioned why I would consider leaving a position as a Laboratory Fellow at the Pacific

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## The Status of NCRP

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Northwest National Laboratory (PNNL) to become the leader of an organization with such an uncertain future. I had thoroughly enjoyed a career spanning three decades at the Lawrence Berkeley National Laboratory (LBNL) and PNNL, and there was no compelling reason to seek another position outside of the supportive scientific environment provided by a growing national laboratory.

As a young scientist I would occasionally think about how I would like my career to evolve. It was in my mind that I would gradually progress from a focus on scientific research to a combination of research and management roles, and that indeed occurred at both LBNL and PNNL.

However, I also thought that I would like to complete my career in a service role to the scientific community, such as becoming the president of NCRP. That thought ultimately motivated me to become a candidate for the NCRP presidency, and it was a wonderful surprise when I was selected for that position by the NCRP Board of Directors and then formally nominated and elected by Council in April 2002.

I recall that when Charlie Meinhold introduced me as his successor at the 2002 NCRP annual business meeting, he commented that an important factor in my selection had been my success in winning major contracts and grants at LBNL and PNNL and in obtaining funds from several sponsors for new work by NCRP while serving for five years as the Scientific Vice President for Nonionizing Radiation. It was clear at that point that I would need to put my scientific marketing skills to work if I was to succeed in leading the restoration of NCRP's financial health.



NCRP President Thomas Tenforde

I was indeed fortunate early in my tenure as president to find that there were several clients in both federal agencies and private-sector organizations who needed the services of NCRP to produce reports related to radiation protection and measurements, for example, in applications of radiation in security screening systems, medical procedures, and the cleanup of radioactively contaminated sites. As a product of the dedicated efforts of talented scientists and the supportive sponsors of new report activities, the fortunes of NCRP began to rise in 2002 and the net assets of NCRP showed significant growth in 2003 for the first time in nearly a decade.

I give much of the credit for the resurgence of NCRP to the volunteered time and effort of scientific committee members in producing new reports in a timely manner, the competence of NCRP staff members, and the supportive roles of Council, the Board of Directors, and the sponsors of NCRP's report activities. In many ways, I feel that I was fortunate to be in the right place at the right time to help guide the recovery of NCRP early in my presidency.

**What have you found most satisfying in your role as NCRP president so far?**

**Tenforde:** Unquestionably the most satisfying aspects of my term as president have been the restoration of the financial stability of NCRP and its productivity in preparing timely new reports related to radiation protection in medicine, countermeasures to incidents of nuclear or radiological terrorism, environmental radiation protection, radiation measurements and dosimetry, and basic radiation biology.

A very important and satisfying aspect of NCRP's activities over the past few years has been its role in assisting the Defense Threat Reduction Agency (DTRA) and the Department of Veterans Affairs (VA) in forming the Veterans' Advisory Board on Dose Reconstruction (VBDR) and subsequently providing administrative and technical support for operations of the Board.

The formation of VBDR was required under Public Law 108-183, the Veterans Benefits Act of 2003, enacted on 16 December 2003. The Board provides oversight of the radiation dose reconstruction and claims adjudication programs for veterans who occupied Hiroshima and Nagasaki, Japan, following detonation of atomic bombs in 1945, who were prisoners of war in those locations at the time of the atomic bombs, or who participated in atmospheric nuclear weapons testing in the Pacific and Nevada Test Site until 1962. These veterans are eligible for compensation and medical benefits from VA if they contract diseases that may be associated with radiation exposure. When required, the reconstruction of radiation doses received by the veterans is performed by DTRA and its contractors.

In addition to providing funding support for NCRP's administrative role in organizing public meetings of VBDR and helping to coordinate its reporting activities and maintain its Web site (<http://vbdr.org>), DTRA

and VA have sponsored the preparation of three major NCRP reports on uncertainties in radiation measurements and dosimetry for external radiation sources, uncertainties in internal radiation dosimetry, and practices and principles in radiation dose reconstruction. The first of these reports will soon be issued as NCRP Report No. 158, and the other two are in a draft stage being prepared for Council review.

**In the July 2002 HPS Newsletter you stated that an important goal as incoming president of NCRP was to achieve excellent communication at all levels of the organization, as well as with NCRP sponsors and the general public. How have you and the NCRP worked to reach those goals?**

**Tenforde:** I believe that considerable progress has been made in maintaining effective avenues of communication with sponsors and contributors to the work of NCRP. The operations of the NCRP office have been streamlined—in large measure due to the management skills of the executive director, David Schauer, and the office manager, Laura Atwell—and the confidence of sponsors of NCRP’s work in our ability to produce definitive reports and commentaries on schedule and on budget has been increased as a result. This growth in confidence has been an important factor in improving communication with NCRP’s clients.

We have also made a concerted effort to improve communications with members of NCRP’s scientific committees, technical staff consultants, and members of Council and the Board of Directors. I feel that this effort has paid off in building confidence among the many contributors to NCRP’s report activities and annual meetings that their efforts will have a successful outcome.

We have also made it a high priority to respond to questions from members of the public about potential radiation health effects and protective measures that should be used in medical practices, industrial

and research procedures involving radiation, and public venues. Telephone calls, letters, and e-mail messages are received by NCRP nearly every day, and Dr. Schauer and I respond promptly either by answering these questions directly or by referring the person raising the question to members of Council or other scientists with relevant expertise.

**What are your near-term and long-range goals and vision for NCRP and major challenges in realizing that vision?**

**Tenforde:** Early in my tenure as president I made it an important goal with enthusiastic support of the Board of Directors to issue triennial strategic program plans, the latest of which is the Strategic Program Plan 2008-2010, which can be accessed on the NCRP Web site (<http://NCRPonline.org>). This document describes the vision, goals, strategic initiatives, and implementation plans of NCRP over the coming three years. The plans described in this document are ambitious, but I believe that any successful organization must establish “stretch goals” and clearly define the pathway to achieving them.

The goals for the current triennium also point the way and pave the path toward meeting longer-range goals that will be essential for sustaining the productivity and achieving the financial stability of NCRP for many years into the future. Examples of goals that extend well beyond the 2008-2010 time frame are to continue to build NCRP’s report activities in many aspects of radiation protection in

medicine, the deterrence of and countermeasures against nuclear and radiological terrorism incidents, preparation of a definitive report containing reliable predictive models of biological and human health effects of low-dose radiation exposures, and reports on safety, health, and environmental aspects of the expected growth in nuclear power production worldwide.

**The annual meetings of NCRP continue to be popular. The 2008**

**How do you see that the NCRP has flourished under Tenforde’s leadership?**

*S.J. (Jim) Adelstein, NCRP Honorary Vice President*

Tom Tenforde brought a fine skill set to the presidency of NCRP: a comprehensive science education at Harvard and University of California, Berkeley, a distinguished career at two national laboratories (LBNL and PNNL), both in science and in science management, as well as a deep understanding of both ionizing and nonionizing radiation effects.

Under his stewardship, the Council has broadened its horizons and achieved fiscal stability. Its compass, as reflected in meetings and reports, includes planning for radiologic terrorism, medical radiation exposure, approaches to achieving more robust estimates of low-dose radiation exposures and risks, and other issues of importance to the health physics community.

Tom has brought accomplished people into key positions of the Council who have set new directions for its work and adroitly revised the organizational structure to meet its current challenges and goals.



meeting was very well attended. What initiatives, if any, are you working on to continue to meet the needs of the radiation protection community through the annual meeting?

**Tenforde:** We are striving to have 400 to 500 registrants at the NCRP annual meetings. We exceeded 500 registrants at the 2004 meeting on “Consequence Management for Radiological Terrorism Events”

(proceedings published in *Health Physics* 89(5):415-588, 2005) and have had close to or more than 400 registrants at the meetings held during the last three years (see titles and citations to published proceedings of annual meetings in the Strategic Program Plan 2008-2010). The success of NCRP’s annual meetings over the past few years has been primarily due to the selection of topics of considerable contemporary interest in the scientific community and to members of government agencies and collaborating scientific organizations. We hope to continue to achieve the goal of selecting topics of great interest, and I believe that the 2009 meeting on “Future of Nuclear Power Worldwide: Safety, Health and Environment” will draw a large number of registrants.

The process of selecting topics for the annual meeting is a collective effort of NCRP’s officers, members of the Board of Directors, and members of Program Area Committees, Collaborating Organizations, Special Liaison Organizations, and the Council as a whole. We welcome the input from all of these organizations and individuals, and we also welcome their recommendations on membership of scientific report committees and the program committees that plan the annual meetings.

Can you tell us about any new report-writing activities or other initiatives?

**Tenforde:** NCRP is in an advanced stage of completing a report that has already received attention in the scientific community and public news media, namely, an update of Report No. 93 which was published in 1987 on “Ionizing Radiation Exposure of the Popula-

tion of the United States.” The aspect of the new NCRP report that is of greatest interest is the presentation of extensive data showing that the average annual exposure of individuals in the U.S. population from medical radiological procedures has increased approximately sixfold over the past two decades. Medical exposures are now comparable to those received from natural background radiation, and the average annual exposure to a member of the U.S. population has now increased by more than 2.5 mSv over the value of 3.6 mSv reported in the 1980s.

Several other NCRP reports currently in preparation are expected to be of considerable interest, including risk to the thyroid from ionizing radiation, second cancers and cardiopulmonary effects after radiotherapy, radiation safety issues for image-guided interventional medical procedures, management of persons contaminated

with radionuclides, population monitoring and decontamination following a nuclear or radiological incident, key decision points and information needed by decision makers in the aftermath of a nuclear or radiological terrorism incident, and risks of ionizing radiation to the developing embryo, fetus, and nursing infant. A description of these and other NCRP report

### How do NCRP activities contribute to the field of radiation safety?

*Richard J. Vetter, HPS Past President*

Health physicists depend on technical and scientific journals and various consensus reports to remain current. The pages of *Health Physics*, *Medical Physics*, and numerous radiology and engineering journals contain many articles that reference the content of NCRP reports. These consensus reports are assembled by NCRP committees that include members of the radiation safety community who are knowledgeable experts on the subject of the report. The reports must pass rigorous peer review and must be approved by the 100-member NCRP Council. Many regulations and policies on safe use of radiation are based on recommendations in these reports. NCRP reports focus on improving radiation safety, and they establish standards that form the basis of radiation protection of radiation workers, patients, and members of the public. Health physicists use these reports as the basis of their radiation safety programs and for specific methods and practices such as radiation shielding methodology for medical facilities.

NCRP also makes significant contributions through its annual meetings, most of which focus on a specific radiation safety or radiation biology topic. Speakers at these meetings are the tops in their field and often include practicing health physicists. NCRP charges no registration fee for these meetings, which facilitates attendance by practicing health physicists on budget and members of government agencies, especially those who live in the Washington, DC, area. The value and impact of these NCRP publications and annual meetings is nearly inestimable.





activities can be found under the Current Program link on the NCRP Web site.

**As the world of communications becomes increasingly dependent on the Internet, how is NCRP addressing the issue of electronic publications?**

**Tenforde:** In an effort to more broadly disseminate NCRP publications and increase their sales, NCRP launched its new publications Web site (<http://NCRPpublications.org>) on 24 January 2005. To date there have been 290,000 visitors on this Web site, and the shopping cart permits the selection by visitors of either hard-copy or electronic (PDF) versions of NCRP's publications. About one-third of the sales since early 2005 have been electronic publications, and approximately one-sixth of the total sales have been to customers outside the United States.

In 2007 NCRP also entered into agreements with a data aggregator (Knovel Corporation) and an eBook provider (NetLibrary) to make NCRP's publications and the information they contain more widely available to the scientific community worldwide.



**In what ways should the HPS and the NCRP collaborate in matters related to radiation safety?**

*Brian Dodd, HPS Past President*

One of the roles of the NCRP is to develop guidance and publish data relating to radiation safety that is based on our best knowledge of the specific subject. Therefore, HPS collaboration with the NCRP must be a two-way street because individual members should not only help generate the information, but should also use it.

Individual HPS members who are experts in each specific subject should be, and are, used on the committees that generate the publication. The HPS should maintain close contact with the NCRP so that as committees are being formed, the Society can offer names of individuals who can contribute expert knowledge and experience to the document. Conversely, since HPS members are some of the prime users of its publications, the NCRP needs to ensure not only that the documents are authoritative, but also that they are internationally coherent, realistic, and practical in their guidance.

The HPS's routine financial contribution to the NCRP reflects the close linkage between the two organizations. However, if there is a topic for which a significant number of HPS members need guidance or data and there is nothing else suitable, the Society should consider specifically funding the development of such a document through the NCRP.

**When you began your term as NCRP president you said, "I am looking forward with enthusiasm to continuing to build the strong relationship between NCRP and HPS that has existed for many years." In what ways has that relationship grown over the past six years?**

**Tenforde:** NCRP has had an excellent working relationship with all of the recent HPS presidents, and a continuing goal has been to increase our collaborative activities. Members of HPS, for example, are often significant contributors to the preparation of new NCRP publications. HPS has also been making valuable contributions in support of work by NCRP's Program Area Committee 2 in the area of operational radiation safety. These contributions have been important in the successful completion of Report No. 157 on "Radiation Protection in Educational Institutions" and in the ongoing work by Program Area Committee 2 in preparing a report on "Self-

Assessment of Radiation Safety Programs." NCRP also appreciates the announcements and book reviews of its new publications that have been published on a regular basis in *Health Physics* and *Health Physics News*.



**NCRP 2009 Annual Meeting**

<http://www.ncrponline.org>

"Future of Nuclear Power Worldwide: Safety, Health and Environment"

2-3 March 2009

Bethesda, Maryland