

The Boice Report #4



John D. Boice, Jr., NCRP President
 ICRP Main Commissioner, UNSCEAR delegation
 Veterans' Advisory Board on Dose Reconstruction Board member
 Vanderbilt Professor of Medicine



HPS Annual Meeting – July 2012 Sacramento The Times They Are A-Changin'

And by “*the Times*” I do not mean *The New York Times*, but rather the winds of change are blowing in the radiation protection community—not only internationally, but also in the United States. If you missed the 22–26 July 2012 annual meeting in Sacramento, you missed one of the best. The plenary session began at 8:15 a.m. and was standing room only. It covered the international and national perspectives on changing and accepting new radiation protection guidelines. The take-home message for me was that the United States governmental agencies, regulatory authorities, and protection bodies appear aligned for change—to modify and improve radiation protection guidelines for the health and welfare of workers and the public. Not immediately, but in a careful systematic approach. The abstracts are published in *Health Physics* (<http://journals.lww.com/health-physics/toc/2012/08001>) and are also available at http://www.hps.org/documents/57_annual_meeting_final_program.pdf. A few comments on change:

- **Overview on Consistency.** The session “Consistency in Radiation Protection Standards” was organized by Past President Kathy Pryor and was timely and informative. Speakers represented the International Commission on Radiological Protection, International Radiation Protection Association, National Council on Radiation Protection and Measurements (NCRP), Nuclear Regulatory Commission (NRC), Environmental Protection Agency (EPA), and radiation “user community.” Not only were the presentations well prepared, there was a healthy dose of humor that made the information transfer effective and often entertaining. The presentations seemed seamless and one led to the next.
- **Dade Moeller Lecture.** I had the privilege to present the fourth Dade Moeller Lecture during the plenary session (available at <http://www.ncrponline.org/>). This is the first annual meeting held after Dade’s death in September 2011. I knew Dade for six decades as we both were in the U.S. Public Health Service in the 1960s at the then Northeastern Radiological Health Laboratory, then at Harvard and at NCRP. He was the most wonderful of gentlemen—a teacher, scientist, author, leader, and father. His legacy continues through his family and with his colleagues at Dade Moeller. Dade will remain an inspiration to all of us in the Health Physics Society and the radiation protection community. He knew how to interact at the highest level of integrity, getting tasks accomplished, knowing how to compromise, and having fun in the process. Check out his Guidelines for Life – Rules for Success at <http://moellerinc.com/dademoellerblog/dr-dade-w-moellers-guidelines-for-life/>.
- **If it ain’t broke, don’t fix it.** Should the United States change/modify any of our radiation protection guidelines given that they have been so very effective over the past 30 years as worker annual exposures continue to drop? But the recommendations are so old that it seems time to modify and improve to keep pace with today’s changing world. Most of us have changed to smart phones even though our rotary telephones got the job done. When was the last time you used film in your camera? There are new radiation technologies that have been introduced (such as CT scans and nuclear imaging in medicine, modular reactors in power development), astronauts spend lengthy times in space (and Curiosity just landed on Mars), and the uranium industry appears primed for a renewal to meet the future needs for electricity. What about radio-

active nanoparticles? Population exposures in medicine have increased (NCRP Report No. 160, 2009). There is also new knowledge about the health effects of radiation such as cataracts and lens opacities developing at radiation dose levels lower than previously thought, as well as new information on noncancers such as coronary heart disease following lower doses of radiation than seen in therapy.

- **Harmony does not mean exactly the same.** Those who sing harmony don't sing the same note! Or for the country folk, "There is more than one way to skin a cat." With regard to international and national recommendations, there are various ways in which the common goal of protecting workers and the public can be achieved. The United States differs from other countries in that we have the most nuclear reactors, the most radiation workers, the most diagnostic nuclear imaging devices, the most travelers in space (astronauts), and so on. In addition, we have the most nuclear regulatory and radiation advisory committees! We have our own NCRP and we have our National Academies prestigious committees that evaluate radiation health effects. Also, the process the United States has for making changes and introducing new recommendations takes an extensive amount of time, in part because of the need for substantial stakeholder involvement. The time to bring about change can be lengthy—some current regulations go back to ICRP Publication 2 (1959) and ICRP Publication 26 (1977), and the more recent international guidelines in ICRP Publication 60 (1991) and the new ICRP Publication 103 (2007) have yet to be addressed. There is an opportunity today to benefit from the recent compilations on the philosophy of radiation protection and the evaluation of health effects so we can build on this knowledge in making change that is most appropriate for the United States.
- **"Come together, right now . . ."** (Beatles, "Abby Road," 1969). Let's not "Let It Be" but look for change that is improving. And while strolling down this "Long and Winding Road," shoot for national harmonization and consistency among the agencies: NRC, EPA, the Occupational Safety and Health Administration, NASA (recognizing the unique circumstances), and the U.S. Food and Drug Administration to the extent that the regulations are overlapping. And when coming together, leap-frog the old recommendations and go right for the gold in the latest in ICRP Publication 103! As Captain EO would say, "We are here to change the world" (I'm writing this report at Disney World).
- **Change the name, not the game.** Lauriston Taylor, the first president of NCRP and one of the first presidents of the Health Physics Society (1958–1959), strongly recommended that we change the name of our society (<http://www.ncbi.nlm.nih.gov/pubmed/7035403>). He reasoned that the term "health physics" was chosen to be noninformative and nondescriptive during the secret days of the Manhattan Project in the development of nuclear weapons. Few outside our profession know what a "health physicist" is. He or she is not necessarily a physicist and he or she is not necessarily working in health-related jobs. The name was chosen to obfuscate



John Boice shares Dade Moeller's Guidelines for Life as he presents the Fourth Dade Moeller Lecture at the 2012 HPS Annual Meeting in July.

Photo by Paula Tumlinson

the enemy. With apologies to Pogo, "we have seen the enemy" but now is the time for transparency. The United States and the rest of the world have a renewed interest in radiation because of Fukushima, the nuclear renaissance, CT scans, and more—when an opportunity for change comes, don't miss it! We need to step out, and changing our name might even attract young and talented scientists into the field and into the Society (it certainly wouldn't hurt). The Society should continue to expand its horizons, including nuclear power, but with renewed emphasis on radiation in research, medicine, space, environment, and more. Let's expand the horizons, change with the times, and become the Radiation Protection Society! ■