The Boice Report #19

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

ICRP Main Commission Meeting and Second International Symposium, Abu Dhabi—October 2013

Justin (left) and John Boice and friend. Warning, they spit and bite—camels that is, not the Boices.

The next four-year cycle for the International Commission on Radiological Protection (ICRP) got off to a "hot" start in October 2013 in the Arabian Desert (Abu Dhabi, United Arab Emirates)! Don Cool, a National Council on Radiation Protection and Measurements (NCRP) council member, was elected chairman of Committee 4, which deals with the application of ICRP recommendations (see "NRC News" onpage 14 of this newsletter); this brings to three the number of HPS members on the Main Commission (MC)—Bill Morgan and I are the other two. Don is employed with the U.S. Nuclear Regulatory Commission. The first ICRP symposium was well attended in Bethesda in 2012, and the second in Abu Dhabi was even more successful. Presentations are available at icrp.org/page.asp?id=184. ICRP 2013 attracted 300 participants from 37 countries. The third symposium is planned for Seoul, Korea, 20–22 October 2015.

News from ICRP. ICRP is incorporated as a United Kingdom charity and operates with an MC and five committees—84 members in total. Claire Cousins (United Kingdom) is the chair and Jacques Lochard (France) is the vice chair. Continuing committee chairmen are Bill Morgan (United States, Committee 1 Effects) and Eliseo Vano (Spain, Committee 3 Medicine). New chairmen are John Harrison (United Kingdom, Committee 2 Doses), Don Cool (Committee 4 Implementation), and Carl-Magnus Larsson (Australia, Committee 5 Environment). New members of the MC include Hua Lia (China) and Sergey Romanov (Russia). ICRP has a strategic plan through 2017 (icrp.org/docs/ICRP%20Strategic%20Plan%202011-2017.pdf) and has embarked upon an ambitious fund-raising program to help support the burgeoning needs in radiation protection throughout the world.

ICRP reports to be published in 2014 include the long-anticipated *Occupational Intakes of Radionuclides Parts 1, 2, and 3*. The publication *Radiological Protection in Ion Beam Radiotherapy*, which I reviewed and found fascinating (the size of carbon ion treatment machines and facilities is mind boggling), was approved for public consultation. Issues and recommendations of Task Group (TG) 84 on initial lessons learned from the Fukushima reactor accident were reviewed (Abel Gonzalez chaired and I was a member of the TG), and the *Journal of Radiological Protection* has made the publication available free of charge at iopscience.iop.org/0952-4746/33/3/497. Many of the TG 84 recommendations are being addressed by new TG 93, Update of ICRP Publications 109 and 111, and TG 94, Ethics of Radiological Protection (Chair Deborah Oughton), was established. A session for special liaison organizations, which I found extremely informative, was held to hear the views and ideas presented by senior representatives. Notably absent, however, were any organizations from the United States—perhaps we in the HPS should look into applying (icrp.org/icrp_group.asp?id=80).

News from UNSCEAR. During the symposium, I critically examined the recent epidemiologic studies of pediatric computed tomography (CT) and cancer risk (icrp.org/page.asp?id=184). For this talk I relied heavily on the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) report that was published the day of my presentation and that was to be presented to the United Nations General Assembly the next day by Fred Mettler, our U.S. representative and UNSCEAR consultant to the published annex—talk about "hot" off the presses. This landmark UNSCEAR evaluation, the first of its kind, will be the definitive source for many years to come. It covers practically all aspects of health effects following childhood exposures to radiation, from anatomy to dosimetry to radiosensitivity. The UNSCEAR report is available at unscear.org/docs/reports/2013/UNSCEAR_2013_Report_Annex_B_Children.pdf. The 2012 NCRP Annual Meeting proceedings were published in the November 2013 issue of *Health Physics* and include an informative summary by FA Mettler, Jr., and colleagues (ncbi.nlm.nih.gov/pubmed/24077040).

News from IRPA. The International Radiation Protection Association (IRPA) was established in 1965, one year after the NCRP was chartered by Congress. IRPA membership includes 48 societies, including the HPS. Ken Kase, HPS member and NCRP council member, was the previous IRPA president. IRPA held a special session to encourage the Emirates and Middle East countries to become associate societies. Perhaps an HPS chapter is also in order? Please continue to support HPS's bid for IRPA 2024 to be held in Orlando (more than a Mickey Mouse city).

The ICRP Second Symposium in Five Preludes

- **Tissue Reactions (I still miss deterministic effects):** Lens-of-eye issues continue to be a matter of contention. Although it is agreed that the radiation level to cause lens opacities is much lower than previously thought, the ICRP recommendation of 20 mSv has proven difficult to implement in some, mainly medical, circumstances. An interesting topic is whether severity should be considered in the radiation protection detriment. Certainly a noncancer effect such as heart attack is of more serious health concern to an individual than a lens opacity that might be dealt with rather easily in a one-day operation for lens replacement.
- **Recovery and Response After Fukushima (I felt the earth move under my feet):** I was in Tokyo the week before the March 2011 earthquake struck. Several months later I visited the damaged reactors. "The woods are lovely, dark, and deep but I have promises to keep, and kilometers to go before I sleep and kilometers to go before I sleep." The issues are overwhelming. The removal of spent fuel rods was initiated, but the removal of the melted fuel will take several decades. There are concerns about releases into the ocean, population relocation, population return, food supply, population radiation exposure, and how to return to normality. I recommend two magnificent presentations. Ryu Hayano (European Organization for Nuclear Research antimatter physicist now at University of Tokyo) captured my complete attention with his first slide: Dan Brown's *Angels and Demons*, which I recalled started with the search for that elusive God particle, the Higgs boson. He then went on to give the most lucid (and clear) presentation of population measurements and dose reconstructions (check it out at icrp.org/page.asp?id=184). The second highlight was by Anne Nisbet (Public Health England, United Kingdom), who presented NCRP's Scientific Committee (SC) 5-1 soon-to-be-released report on late-stage recovery. How "cool" is it to have a Brit present an NCRP report in the Middle East (talk about integration and harmonization)? Stakeholder involvement and optimization are the keys to successful recovery (available for your viewing pleasure at icrp.org/page.asp?id=184).

Well, I sense my *Health Physics News* advisors are concluding that I've reached or exceeded the Boice allowable (tolerable?) dose of words, so I will hastily conclude. For the next three topics ("preludes") in the symposium you can check out the presentations and also the detailed program abstracts (icrp.org/docs/ICRP%20abstract%20document.pdf).

- **NORM today (gone tomorrow?):** How important is fracking? It's everywhere.
- **Medicine is where it's at ("it" being population exposure):** What came first, the CT or the brain cancer? Perhaps the brain cancer symptoms caused the CT! Association is not causation.
- **Environment (power to the snail darter?).**

Next Year in Moscow (I'm back in the U.S.S.R.). 7–14 April 2014 the MC of ICRP returns to Russia, hosted by new MC member Sergey Romanov.

50th NCRP Annual Meeting. Don't forget to register for the gala NCRP annual meeting, 10–11 March 2014. See the overview in the October 2013 *Health Physics News* on celebrating NCRP's 50th year since congressional charter and on the future of radiation protection (ncrponline.org/PDFs/BOICE-HPnews/17-NCR-2014-Annual-Mtg_%20Oct2013.pdf). Registration is still open at registration.ncrponline.org and it's free! Plan for a productive two days in beautiful downtown Bethesda!

The Main Commission of the ICRP in Front of the Sheikh Fayed bin Sultan Abu Dhabi Mosque in October 2013

Left to right: Hua Liu (China, MC), Mrs. Jai-Ki Lee, Derval Costello (CCS), Jai-Ki Lee (Korea, MC), Renate Lochard, Lynn Lemaire (Canada, executive assistant), Jacques Lochard (France, ICRP vice chair), Elizabeth Menzel, Hans Menzel (Germany, MC), Claire Cousins (United Kingdom, ICRP chair), Carl-Magnus Larsson (Australia, Committee 5 chair), Chris Clement (Canada, science secretary), Bill Morgan (United States, Committee 1 chair), Sergey Romanov (Russia, MC), Eliseo Vano (Spain, Committee 3 chair), John Harrison (United Kingdom, Committee 2 chair), John Boice (United States, MC), and Ohtsura Niwa (Japan, MC)