



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

February 18, 2009

The Honorable Dale E. Klein  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT:** SECY-08-0197, "REVIEW OF OPTIONS TO REVISE RADIATION PROTECTION REGULATIONS AND GUIDANCE WITH RESPECT TO THE 2007 RECOMMENDATIONS OF THE INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION"

Dear Chairman Klein:

During the 559<sup>th</sup> meeting of the Advisory Committee on Reactor Safeguards (ACRS), February 5-7, 2009, we reviewed the NRC's staff Options Paper to revise radiation protection regulations and guidance with respect to the 2007 recommendations of the International Commission on Radiological Protection (ICRP). We were also briefed on the draft Options Paper during our 557<sup>th</sup> meeting in November 2008. During these meetings, we had the benefit of discussions with representatives of the NRC staff and industry. We also had the benefit of the documents referenced, which include letter reports previously generated by the Advisory Committee on Nuclear Waste and Materials (ACNW&M).

### **CONCLUSIONS AND RECOMMENDATIONS**

1. We endorse the NRC staff's preferred option 3, which would begin the process of moving toward a greater degree of alignment between the regulatory framework of 10 CFR Parts 20 and 50 and Appendix I of Part 50 with the recommendations contained in ICRP Publication 103.
2. We concur with the staff position that the current NRC regulatory framework continues to provide adequate protection of the health and safety of workers, the public, and the environment.
3. The NRC should not develop separate radiation protection regulations for plant and animal species.
4. The NRC staff should continue its participation in ICRP and other national and international committees and standards organizations.

### **DISCUSSION**

In response to the recommendations in the ICRP Publication 103, the NRC staff has presented three options for revising the NRC radiation protection framework. In brief, the three options

are: (1) no action – make no changes to the existing regulatory framework; (2) update certain portions of the regulations, not previously revised, to conform to existing 10 CFR Part 20 concepts and quantities based on ICRP Publications 26 and 30; and (3) begin aligning, to a greater degree, NRC’s regulatory framework with the recommendations in ICRP Publication 103. The staff prefers option 3, which places emphasis on incorporating the latest scientific information as well as conducting an open dialogue with the general public, NRC licensees, other Federal agencies, State and local governments, Indian Tribes, industry organizations, industry workers, technical societies, and citizen groups.

The NRC staff actively engages with the international scientific community by participating in ICRP committees. It is important that the staff continues this participation, remains fully informed of future ICRP work, and identifies information that could enhance NRC’s radiation protection regulations.

The NRC staff should continue to stay informed about: (a) developments in the epidemiological studies (cancer rates and life-span) of large cohorts of exposed populations, and (b) new findings in the area of low-dose and low dose-rate radiation effects. This should include work by the ICRP, National Council on Radiation Protection and Measurements, the United Nations Scientific Committee on the Effects of Atomic Radiation, and the U.S. Department of Energy’s Low Dose Radiation Research Program and similar efforts elsewhere.

ICRP Publication 103 includes a chapter titled, “Protection of the Environment.” The ICRP states that it does not propose to set any form of “dose limits” with respect to environmental protection, and that, in contrast to human radiological protection, the objectives of environmental protection are both complex and difficult to articulate. The ICRP has issued for comment a draft document with data for a set of reference animals and plants to further the dialogue on this issue. Consistent with previous observations made by the ACNW&M in 2008, we emphasize that there is no evidence that the current set of radiation protection controls is not protective of the environment. The NRC should not develop separate radiation protection regulations for plant and animal species.

Sincerely,

*/RA/*

Mario V. Bonaca  
Chairman

References:

1. SECY-08-0197, “Options to Revise Radiation Protection Regulations and Guidance with Respect to the 2007 Recommendations of the International Commission on Radiological Protection,” dated December 18, 2008 (ML083360582)
2. SECY-08-0092, “Plans for Review of Radiation Protection Regulations in Light of the New International Commission on Radiological Protection Recommendations,” dated June 30, 2008 (ML081690673)

3. The 2007 Recommendations of the International Commission on Radiological Protection. *Annals of the ICRP*, Volume 37/2-4, Report 103, *Elsevier* (December 2007)
4. Report from Michael T. Ryan, Chairman, ACNW&M, to Dale E. Klein, Chairman, NRC, "Review of ICRP Publication 103 – The 2007 Recommendations of the International Commission on Radiological Protection (ICRP)," dated March 27, 2008 (ML080790301)
5. Report from Michael T. Ryan, Chairman, ACNW, to Dale E. Klein, Chairman, NRC, "Comments on 'Draft Recommendations of the International Commission on Radiological Protection,' dated January 12, 2007," dated February 28, 2007 (ML070600286)
6. Report from Michael T. Ryan, Chairman, ACNW, to Dale E. Klein, Chairman, NRC, "The 2006 Draft Recommendations of the International Commission on Radiological Protection," dated July 18, 2006 (ML062000554)
7. Report from Michael T. Ryan, Chairman, ACNW, to Nils J. Diaz, Chairman, NRC, "Comments on ICRP Foundation Documents – A Followup to the ACNW's November 3, 2004 Comments," dated July 1, 2005 (ML051820303)
8. Report from Michael T. Ryan, Chairman, ACNW, to Nils J. Diaz, Chairman, NRC, "The 2005 Recommendations of the International Commission on Radiological Protection," dated November 3, 2004 (ML043100323)

3. The 2007 Recommendations of the International Commission on Radiological Protection. Annals of the ICRP, Volume 37/2-4, Report 103, *Elsevier* (December 2007)
4. Report from Michael T. Ryan, Chairman, ACNW&M, to Dale E. Klein, Chairman, NRC, "Review of ICRP Publication 103 – The 2007 Recommendations of the International Commission on Radiological Protection (ICRP)," dated March 27, 2008 (ML080790301)
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