Options to Revise Radiation Protection Regulations

Background

Washington D.C. Workshop
October 25, 2010

Donald A. Cool, Ph.D.
Senior Advisor, Radiation Safety and International Liaison

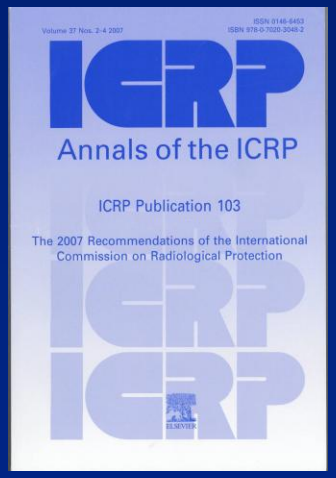
History

- **ICRP Recommendations published in**
  - **Earlier fundamental recommendations: 1928, 1934, 1937, 1950, 1954**
  - **1959 Publication 2**
  - **1977 Publication 26**
  - **1990 Publication 60**
  - **2007 Publication 103**

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Overview on ICRP 103

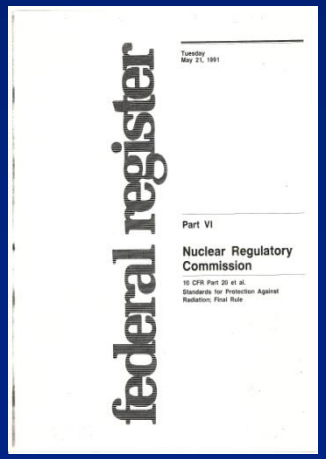
- Consolidated updates since 1990 (ICRP-60)
- Updated science, but no fundamental change
  - New radiation and tissue weighting factors
  - Overall detriment still 5% per Sv
- Process based → Situation based
- Stability
  - Fundamental principles unchanged (with more emphasis on optimisation in all situations)
  - Dose limits unchanged



U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

NRC Regulation Updates

- Most recent rulemaking to incorporate the recommendations of the ICRP into 10 CFR 20 was completed in 1991, and was based primarily on ICRP Publications 26 (1977)
- Regulations that contained explicit dose criteria, rather than cross-references to Part 20, were not updated in 1991, and remain based primarily on ICRP Publications 1 (1958) and 2 (1959)



U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

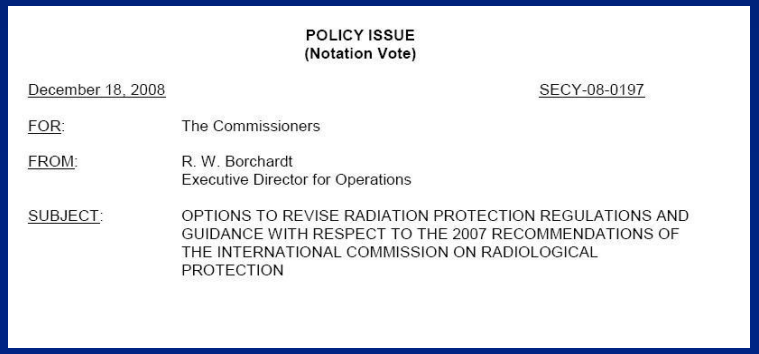
Background of NRC Revision

- NRC staff recommended in 2001 that the Commission wait for next set of ICRP recommendations, and begin Technical Basis development
- Commission agreed in April, 2002, but did not approve Technical Basis efforts
- ICRP Recommendations published in December, 2007 as Publication 103, following considerable public consultation

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

SECY-08-0197

- Policy Issue Notation Vote paper provided to Commission on December 18, 2008
- Provided Options for next steps regarding NRC radiation protection standards
- Provided Background on technical issues in 10 CFR Part 20 and 10 CFR Part 50
- Recommended Commission approval for staff to undertake stakeholder dialogue and technical basis development



POLICY ISSUE
(Notation Vote)

December 18, 2008 SECY-08-0197

FOR: The Commissioners

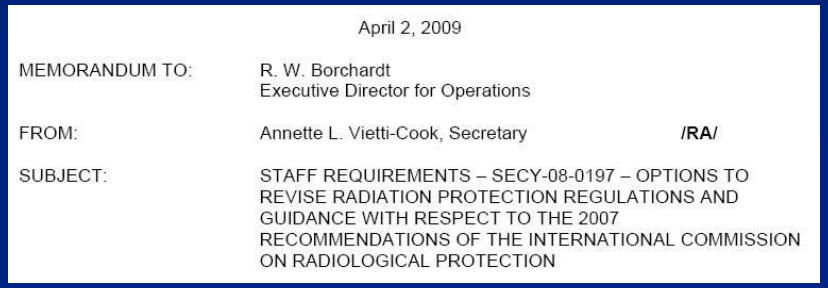
FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: OPTIONS TO REVISE RADIATION PROTECTION REGULATIONS AND GUIDANCE WITH RESPECT TO THE 2007 RECOMMENDATIONS OF THE INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

SRM-SECY-08-0197

- On April 2, 2009, Commission approved staff recommendation.
- Objective is to explore implications, as appropriate and where scientifically justified, of greater alignment with ICRP Publication 103.
- Given adequate protection, discussion is to focus on discerning the benefits and burdens associated with revising the radiation protection regulatory framework.



April 2, 2009

MEMORANDUM TO: R. W. Borchardt
Executive Director for Operations

FROM: Annette L. Vietti-Cook, Secretary /RA/

SUBJECT: STAFF REQUIREMENTS – SECY-08-0197 – OPTIONS TO REVISE RADIATION PROTECTION REGULATIONS AND GUIDANCE WITH RESPECT TO THE 2007 RECOMMENDATIONS OF THE INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Outreach Activities

- **Phase I of outreach has included:**
  - **Presentations to numerous organizations and groups**
  - **FRN published inviting inputs (72 FR 32198)**
  - **Dedicated web address for comments**
- **Phase II Workshops**
  - **FRN published with issues and questions (75 FR 59160)**
  - **Comments accepted through January 31, 2011**

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

These Meetings

- Engage wide diversity of stakeholders in facilitated round tables meetings
- Objective to hear from you on issues and options
- Explore in detail the implications for different types of licensed uses, to develop the information needed to make recommendations to the Commission

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

What Comes Next?

- Assemble viewpoints and comments from workshops and Federal Register
- Develop issues paper for Commission with background, information received, and options
- Commission direction on key issues
- Completion of technical basis development and preparation of proposed rule
- More Public comment

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Questions ?

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment