Options to Revise Radiation Protection Regulations

Background

Houston, TX Workshop
November 9-10, 2010

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Senior Advisor, Radiation Safety and International Liaison

History

- International Commission on Radiological Protection (ICRP) Recommendations
  - Earlier fundamental recommendations: 1928, 1934, 1937, 1950, 1954
  - 1959 Publication 2
  - 1977 Publication 26
  - 1990 Publication 60
  - 2007 Publication 103

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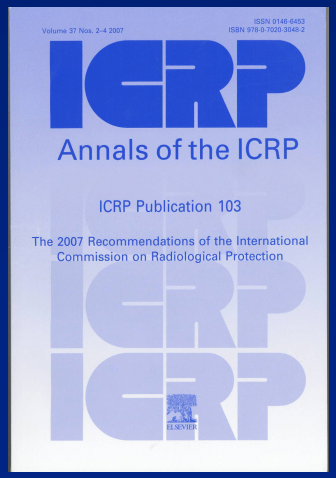
Overview on ICRP 103

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



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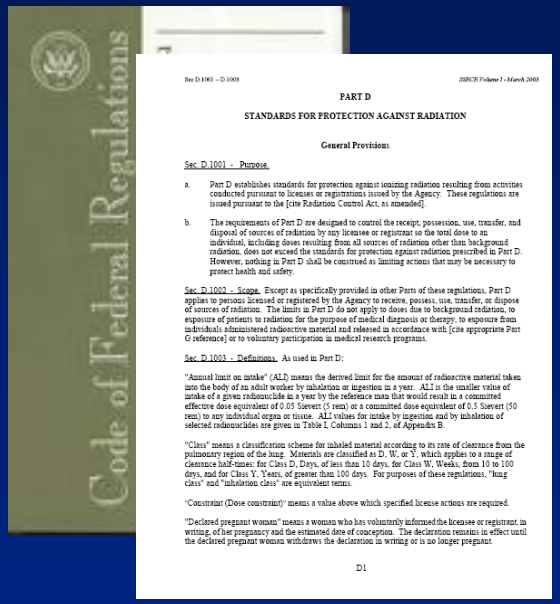
NRC Regulations

- **10 CFR Part 20 – Standards for Protection Against Ionizing Radiation**
  - **Definitions**
  - **Radiation Protection Programs**
  - **Occupational Dose Limits**
  - **Public Dose Limits**
- **Agreement State Regulations**
  - **Adequate and Compatible**
- **Use Specific Requirements**
  - **Part 30, 40, 50, 60, 70 …**



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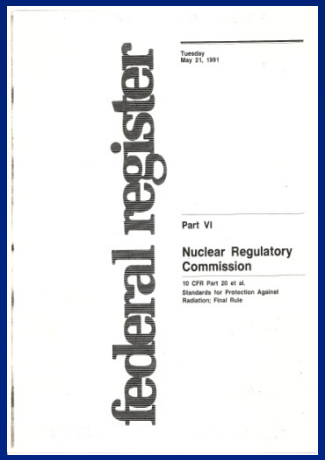
NRC Regulation Updates

- 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)
- License amendments to use ICRP 60+ methodology


federal register

Tuesday
May 21, 1991

Part VI

Nuclear Regulatory Commission

10 CFR Part 20 et al.
Standards for Protection Against Radiation; Final Rule

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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

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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

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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

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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 Regs4RP@nrc.gov**
- **Phase II Workshops**
  - **FRN published with issues and questions (75 FR 59160)**
  - **Comments accepted through January 31, 2011**

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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

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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

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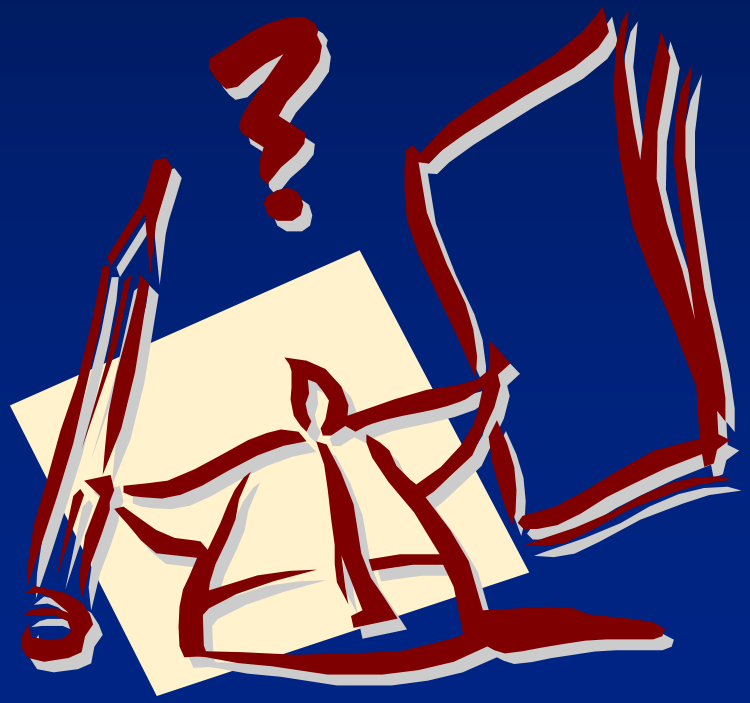

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