U.S. NRC Discussion of Options to Revise Radiation Protection Recommendations

2011 ICRP International Symposium

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NRC - Who We Are

- Atomic Energy Act of 1954 formed the Atomic Energy Commission
- The Energy Reorganization Act of 1974 established the independent U.S. NRC to regulate commercial uses of nuclear material.
- Energy Policy Act of 2005 added new types of Byproduct Material

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NRC - What We Regulate

- **Nuclear reactors** - commercial power reactors, research and test reactors, new reactor designs

- **Nuclear materials** - nuclear reactor fuel, radioactive materials for medical, industrial and academic use

- **Nuclear waste** – transportation, storage and disposal of nuclear material and waste, decommissioning of nuclear facilities

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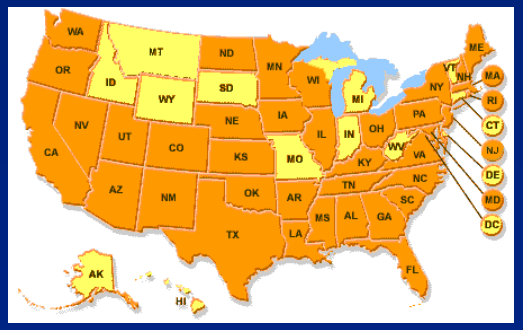
Who Does What?

- **NRC and States regulate radioactive materials**
  - Authority relinquished by Agreements to States (37)
  - Adequacy and Compatibility requirements
    - Some things essentially identical
    - Some things States can be more restrictive
    - Some things (reactors) reserved to NRC
- **States regulate machine produced radiation**
  - X-ray, CT, Mammography, Fluoroscopy, etc.
  - Most State radiation protection requirements match for materials and machine produced radiation



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Other Responsible Organizations

- **Federal**
  - **EPA – General and Environmental Standards**
  - **DOE – Military, Promotion, Education**
  - **HHS – Medical and Devices**
  - **DHS – Security and Emergency Response**
- **Interagency Steering Committee on Radiation Standards**
  - **Forum for Federal agencies to keep abreast of national and international radiation protection activities**
  - **Identifying interagency issues and coordinating their resolution**

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Background of Regulations

- NRC regulations last revised in 1991
- Requirements in Part 20, Licensing Parts
- NRC staff analysis indicated areas warranting consideration for revision
- Commission approved staff recommendation to engage stakeholders and initiate development of technical basis materials on April 2, 2009

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Outreach Activities

- **Phase I of outreach included:**
  - **Presentations to numerous organizations and groups**
  - **FRN published inviting inputs (72 FR 32198)**
- **Phase II Workshops**
  - **FRN published with issues and questions (75 FR 59160)**
  - **Workshops in Washington, Los Angeles, and Houston**
- **Phase III Comment – Lens of the Eye**
  - **FRN published asking for feedback (76 FR 53847)**
  - **Comments due by October 31, 2011**

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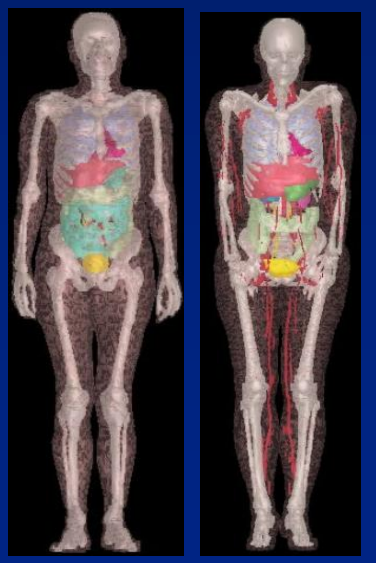
TED and Numerical Values

- **Issue: Update terms and scientific information?**

- **Feedback:**
  - **General support for updating numerical values and scientific base**
  - **Mixed views on terminology**
  - **Many suggested delaying rulemaking until ICRP completes work on dose coefficients**
  - **Some discussion of moving from Regulation to Guidance**



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Occupational Dose Limits

- **Issue: Change the Occupational Dose Limit?**

- **Feedback:**
  - **Little support for change to regulation**
  - **Certain groups of licensees continue to have individuals above 20 mSv/yr (2 rem)**
  - **Legal Boundary for enforcement needs to remain as is**
  - **ALARA has resulted in achieving desired dose reductions**
  - **Many do not believe changes in risk justify change to limit**

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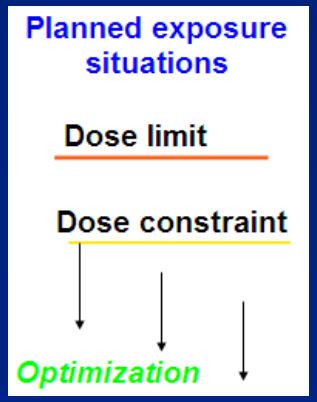
Lens of the Eye

- **Issue: New Recommendation from ICRP**
  - **ICRP recommendation is now 20 mSv (2 rem) over 5 years, with a maximum of 50 mSv (5 rem) in any one year**
  - **Part 20 limit is 150 mSv (15 rem) per year**
  - **Fluoroscopy and other procedures contribute significantly**
- **Feedback:**
  - **Caution needed in making any changes**
  - **Numeric value for LDE could be the same as the numeric value of TED, to avoid compliance issues**

ALARA Planning

- **Issue: Add to requirements for ALARA?**

- **Feedback:**
  - **Most licensees do planning to reduce exposures and use a variety of criteria to trigger actions**
  - **Little support for using the term "constraint"**
  - **Many concerned that any numerical values in regulations will be a *de facto* limit**
  - **Some support for explicitly requiring planning, but with reservations of what inspectors would be expecting in licensing programs**



Path Forward

- Policy paper for Commission consideration in April 2012
- Development of Technical Basis to support Commission decisions
- It is still “too soon to tell” what the staff will ultimately recommend
- Comments and views welcomed

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Interagency

- NRC working with interagency through ISCORS to keep them up to date on stakeholder dialogue
- Federal Agencies funding for development of dose coefficients
- Discussions underway on need to update Federal Guidance documents (EPA lead)

Resources

- **Web pages**

  http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/opt-revise.html

- **Email Address:** regs4rp@nrc.gov
  Rulemaking.Comments@nrc.gov

- **Rulemaking Web Site:**

  http://www.regulations.gov

  Docket ID: NRC-2009-0279

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Questions?

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