



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Proposals to Amend the *Radiation Protection Regulations*

DNSR Outreach Program

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nuclearsafety.gc.ca

Outline



- Background on the *Radiation Protection Regulations*
- Rationale for revision
- Revision process
- Key comments from stakeholders
- Feedback on new proposed requirements
- Next steps

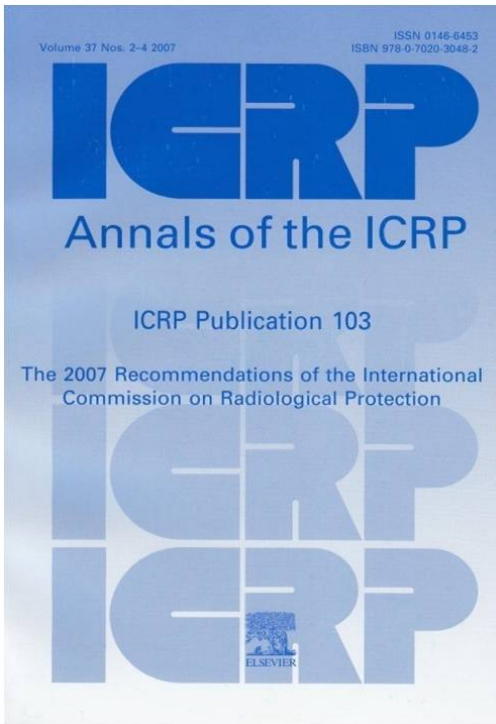
Background



- **Current *Radiation Protection Regulations (RPR)*:**
- Promulgated May 31, 2000
- Patterned after ICRP 60 (1990) recommendations



Rationale for Revision



1. Changes to international benchmarks:
 - new ICRP 103 Recommendations
 - new IAEA and EU basic safety standards (2011 and 2014)
2. Operational issues identified
3. Fukushima disaster

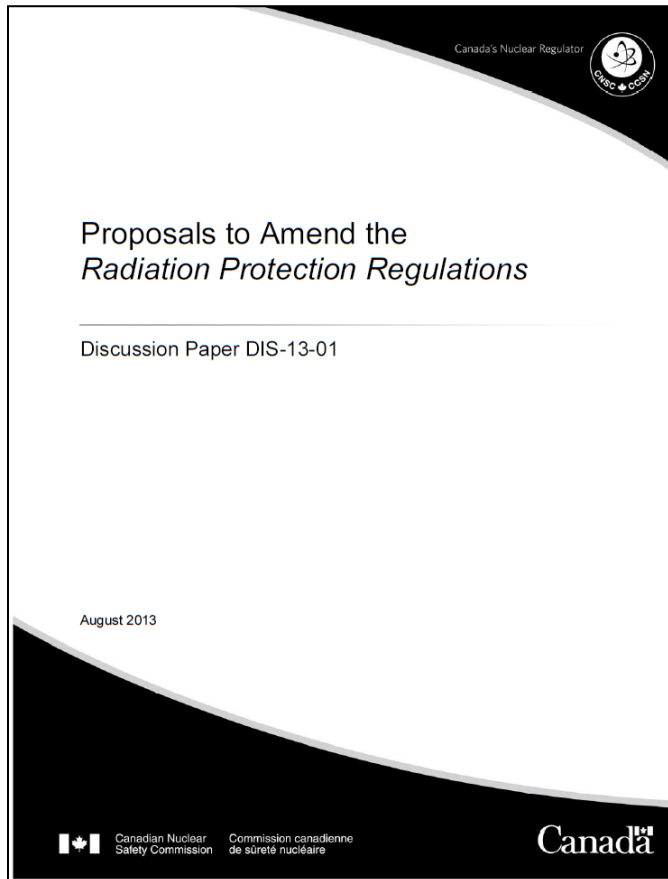
<http://www.icrp.org/publication.asp>

Revision Process



- Multidisciplinary CNSC project team assembled and operational experience sought from all areas of organization
- Gap analysis conducted between current regulations and international benchmarks
- Discussion paper [DIS-13-01](#), “Proposals to Amend the *Radiation Protection Regulations*” developed

Revision Process (continued)



- [DIS-13-01](#) published on the CNSC website on August 9, 2013 for a 120-day public consultation period
- includes discussion of proposed revisions in ~ 20 sections of the *Radiation Protection Regulations*
- objective was to seek feedback on the proposed revisions

Feedback from Stakeholders



- ~380 comments from 34 different organizations
- Comments received from:
 - CNSC licensees (NPPs, research reactors, mines and mills, educational institutions, health care facilities/hospitals, industrial radiography, processing facilities)
 - other government organizations
 - associations
 - individuals
- Comments published on the CNSC website for viewing and feedback for 30 days





FEEDBACK ON KEY ISSUES

Key Comments from Stakeholders (1)



Section 2 – Application

- Clarify the requirements for doses of radiation received while a person is acting as a caregiver for a patient who has received a nuclear substance for therapeutic purposes
- Define the term ‘caregiver’

Many respondents commented that the definition of caregiver should not be limited to individuals ‘outside a medical facility’ as originally proposed



Key Comments from Stakeholders (2)



Section 3 – Administration of Nuclear Substance for Medical Purposes

- Addition of a requirement that licensees inform caregivers that they may incur radiation exposure above the 1 mSv/year dose limit



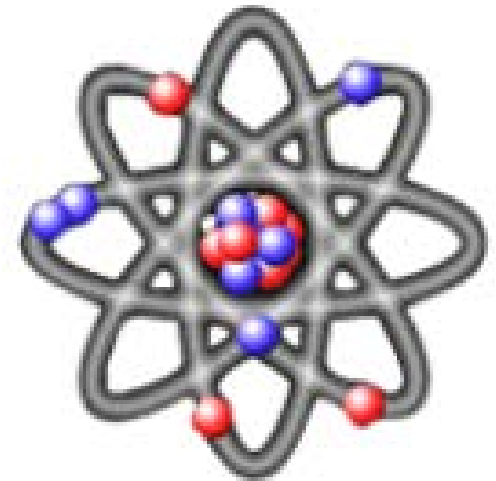
Concern was expressed due to potential scope of obligation and associated administrative burden

Key Comments from Stakeholders (3)



Section 7 - Provision of Information

- Expand the requirement to **provide information** on the risks of radiation exposure, applicable dose limits, and radiation dose levels **to all “workers”**



Concerns regarding high administrative burden and cost versus benefit

Key Comments from Stakeholders (4)



Section 7 - Provision of Information (continued)

- Clarify requirements for informing all workers of their dose information (both effective and equivalent) on an annual basis, individually and in writing



<http://www.landauer.com>

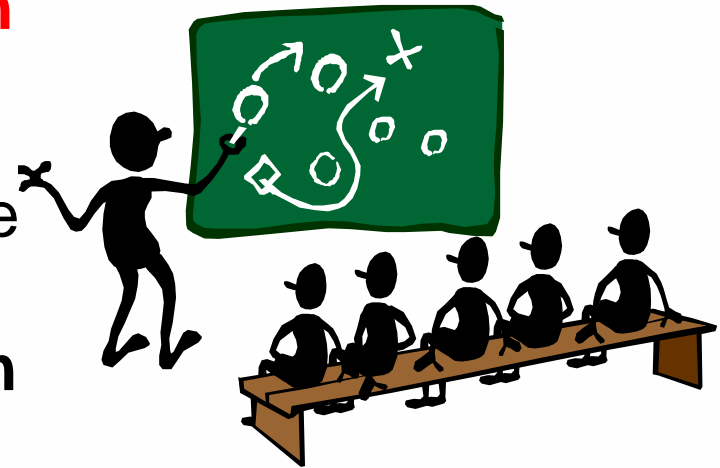
Questions/concerns regarding the acceptable methods of informing workers of their dose information and documenting evidence that it was done, as well as the perceived need for individual monitoring

Key Comments from Stakeholders (5)



Section 7 - Provision of Information (continued)

- Addition of a requirement to provide information to workers of their **responsibilities in the event of an emergency**



Questions on the scope of the requirement to inform all workers, including off-site organizations, of their duties during an emergency

Key Comments from Stakeholders (6)



Section 7 - Provision of Information (continued)

- Inform each female worker on the potential **risks** to breast-fed infants during routine operations and emergencies
- Inform female workers of their **rights and obligations with respect to breastfeeding**



The provision of risk information to women with respect to breastfeeding should only apply to female nuclear energy workers

Key Comments from Stakeholders (7)



Section 11- Pregnant *and Breast-Feeding* Workers

- Addition of a requirement for a female worker to **inform the licensee in writing** if she is breast-feeding
- Addition of a requirement that licensees **adapt working conditions** for breast-feeding workers



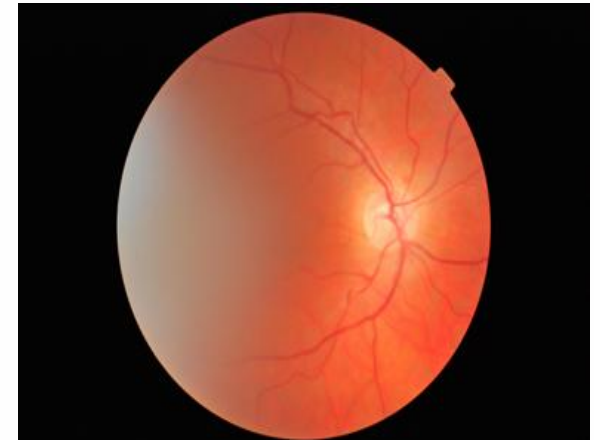
Comments relate to privacy issues, practicalities of implementation and scope to include only female nuclear energy workers

Key Comments from Stakeholders (8)



Section 14 – Equivalent Dose Limits

- Revise the equivalent dose limit for the lens of the eye for a nuclear energy worker from 150 mSv to **50 mSv in a one-year dosimetry period and 100 mSv in a five-year dosimetry period**



Many respondents identified this as a critical issue with concerns about the scientific basis for the change, current uncertainties for ascertaining dose and unavailability of lens of eye licensed dosimetry

Key Comments from Stakeholders (9)



Section 15 – Emergencies

- Addition of new specific dose limits for undertaking emergency tasks

General support for the proposed change and alignment with international expectations

Need to define 'emergency'





FEEDBACK ON NEW REQUIREMENTS

Feedback on New Requirements (1)



Radiation Detection and Measurement Instrumentation

- Introduce requirements to ensure that instruments are fit for purpose and calibrated in accordance with a recognized standard at a defined frequency



<http://www.ludlums.com>

Support for consolidating requirements for instruments in one regulation

Concern regarding calibration against technical requirements in proposed IAEA document

Feedback on New Requirements (2)



Responsibility for Radiation Protection

- Require that the licensee appoint a person or position to be responsible for implementing the radiation protection program
- Require that the licensee demonstrate that the individual meets and maintains qualification and competency requirements

Feedback that this requirement is sufficiently covered in other regulations

Recommend that any regulatory expectations be incorporated into regulatory documents

Feedback on New Requirements (3)



Carriers of Radioactive Nuclear Substances

- Require that transport carriers adhere to specific requirements in the *Radiation Protection Regulations*

Radiation protection related requirements for carriers will be managed through amendments to the *Packaging and Transport of Nuclear Substances Regulations*

Next Steps



- All stakeholder comments are under review
- “What We Heard” report will be published on the CNSC website
- Input will be used to develop detailed proposals for regulatory amendments
- Additional outreach activities may be considered to focus on specific key issues if necessary

Next Steps (continued)



- The regulatory amendments will be pre-published in the *Canada Gazette*, Part I for further stakeholder input
- Proposed amendments will be presented to the CNSC Commission and Governor in Council for consideration
- If approved, amended regulations will be published in *Canada Gazette*, Part II



Conclusions



- CNSC is committed to ensuring its radiation protection requirements remain clear and up-to-date
- Stakeholder feedback is an important part of CNSC's regulatory reviews
- CNSC actively encourages input from stakeholders about the potential impact of proposed amendments
- Regulation making is a rigorous process which involves pre-consultation, drafting, additional public consultation, and the approval of the CNSC Commission and Governor in Council



QUESTIONS AND DISCUSSION



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