



**Radiation Safety
Institute of Canada**
Institut de radioprotection du Canada

Radiation Safety &
Wellness Webinars



March 23, 2023

Small Modular Reactors: Radiation Protection Considerations

RSIC Presenter: Lynn MacDonald
Invited Guest: Josip Zic

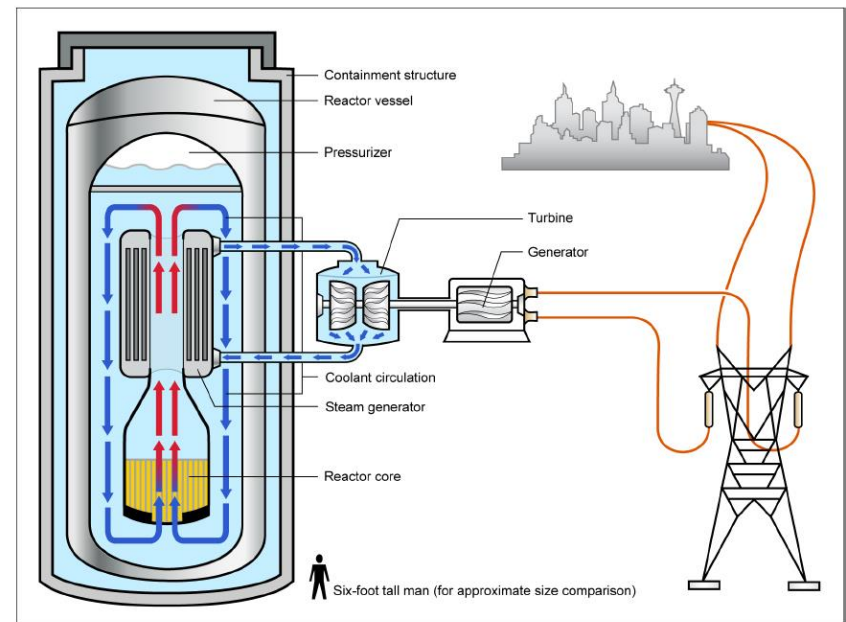
Good Science in Plain Language®



- Audio and video
 - During the presentation, from the presenters only
 - Use computer or telephone (call in)
 - Computer seems to give the best sound quality
- Use the **Chat** feature to talk to discuss with everyone
- Use Q&A feature to ask questions for Q&A portion
- Posted on webinar page
 - Video, answers to questions, copy of the slides
- Follow up email will be sent
 - Topics covered, time of attendance
- It may be possible to change your Zoom view if the controls are hiding the closed captioning.

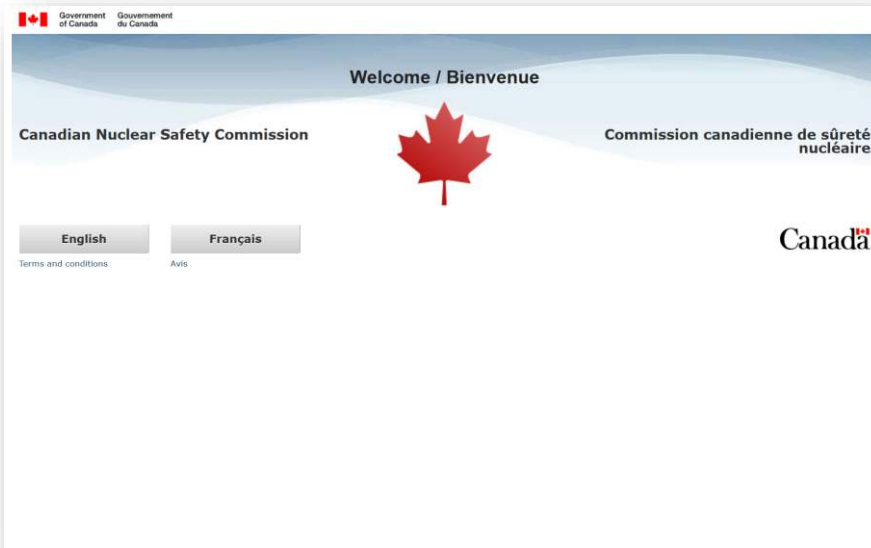


- Nuclear Reactor Regulation in Canada
 - CNSC
 - Licence Classes
 - Regulations
 - Radiation Protection Program (RPP)
- Guest Interview
 - Josip Zic (McMaster University)
- Q&A



Source: GAO, based on Department of Energy documentation. | GAO-15-652

U.S. Government Accountability Office from Washington, DC, United States, Public domain



- Canadian Nuclear Safety Commission
- Nuclear Regulator
- Exception Examples
 - Military use (DND/CAF)
 - NORM (Province/Territory)
 - Not being mined or refined for use



Class I Nuclear Facilities



Uranium Mines & Mills



Waste Nuclear
Substance Activities



Class II Nuclear Facilities
& Prescribed Equipment



Dosimetry Service



Nuclear Substances &
Radiation Devices



Nuclear Safety and Control Act

- Protect people, environment, and national security
- Nuclear materials, devices, and related information

Regulations under the NSCA

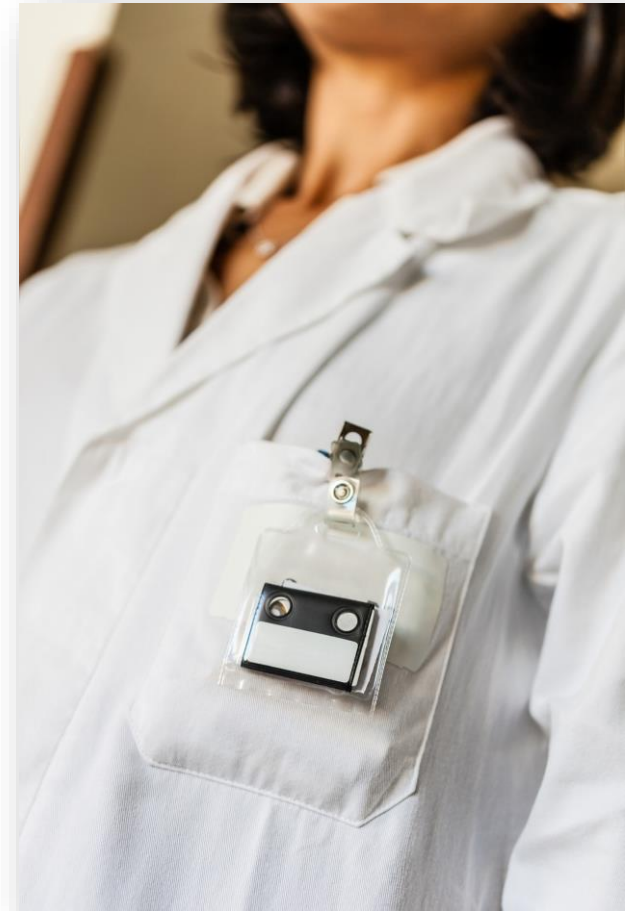
- General Nuclear Safety and Control Regs
- Radiation Protection Regs
- Class I Nuclear Facilities Regs
- Cost Recovery Fees Regs
- Nuclear Non-proliferation Import and Export Control Regs
- Nuclear Security Regs
- Nuclear Substances and Radiation Devices Regs
- Packaging and Transport of Nuclear Substances Regs

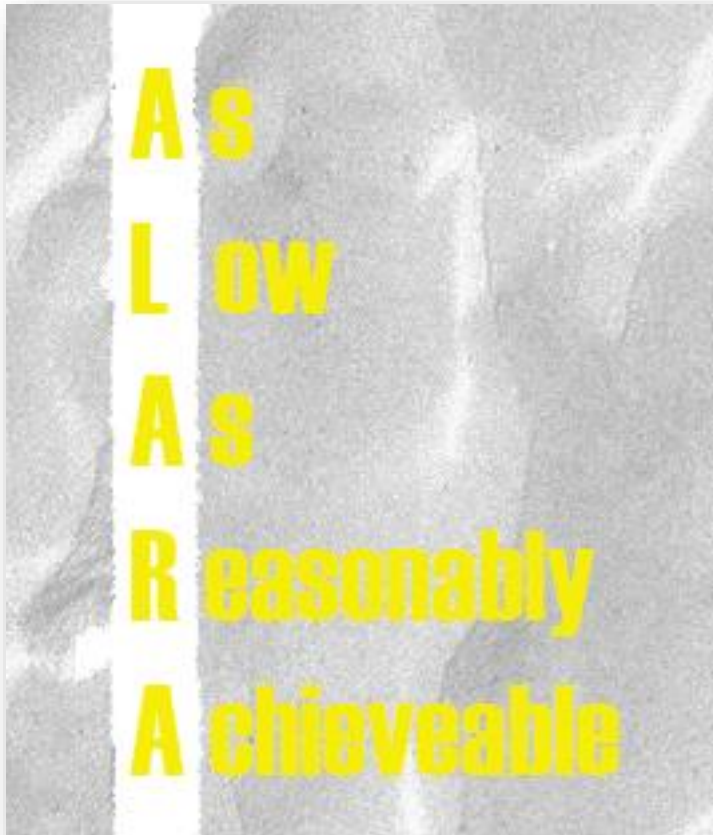
Licence

Orders



- Focused directly on exposures to radiation
- Worker classifications
- Radiation dose limits
- Dosimetry services
- Identification of radioactive materials and radiation areas





- Every licensee must have a radiation protection program.
- Purpose of the program:
 - keep the amount of radiation exposure as low as reasonably achievable (ALARA)
- Clause:
 - Take social and economic factors into account

RP Regs, Section 4



- How are doses kept ALARA?
 - Management control over work practices
 - personnel qualification and training
 - control of occupational and public exposure to radiation
 - planning for unusual situations



RP Regs, Section 4(a)



- During the interview, feel free to post questions in the Q&A.





- Questions posted in the chat room
- To ask a question verbally
 - use “raise hand” button
 - When asked, press spacebar or unmute to speak
- Questions we do not get to
 - Answers will be posted to our website and link to resources emailed out





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“Good science in plain language”[®]

Thank you for listening!

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Wellness Break

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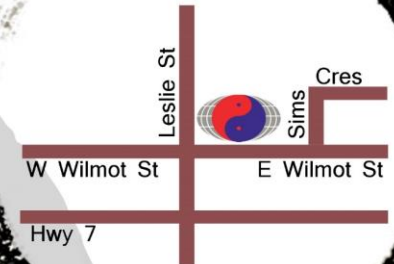
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