Canadian Nuclear Safety Commission
Commission canadienne de sûreté nucléaire

Canadian Nuclear Safety Commission
Canada's Nuclear Regulator

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NWMO Citizens' Dialogues

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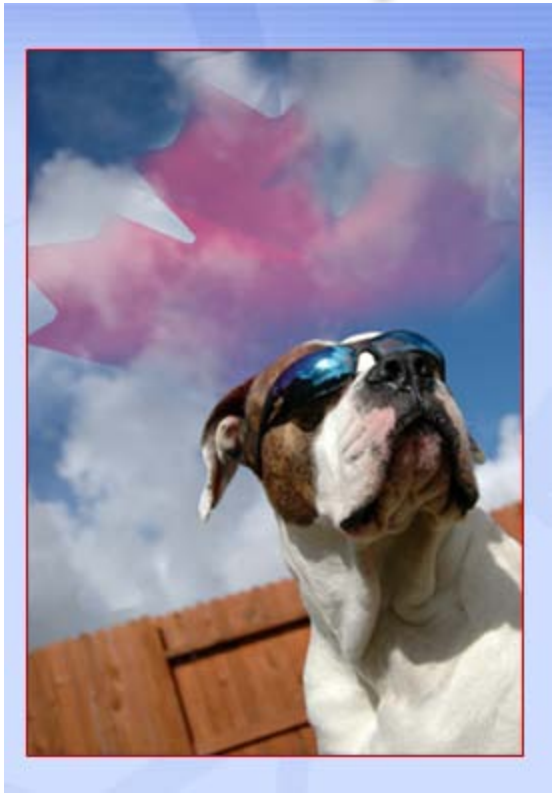
nuclearsafety.gc.ca

Outline

- An overview of the CNSC
- Nuclear regulation in Canada
- Interim management of used nuclear fuel
- CNSC regulatory process

Canadian Nuclear Safety Commission

- CNSC is Canada's nuclear watchdog
- Quasi-judicial body
- Independent of, but not isolated from, government
- Regulates the use of nuclear energy and materials to protect the health, safety and security of persons and the environment; and to respect Canada's international commitments on the peaceful use of nuclear energy



Nuclear Regulation is a Federal Responsibility

CNSC regulates all nuclear facilities and activities in Canada including:

- Nuclear power plants
- Uranium mines and mills
- Uranium fuel fabricators and processing
- Nuclear substance processing
- Industrial and medical applications of nuclear substances, such as nuclear medicine and cancer treatment centers
- Research Labs and educational facilities
- Export/import of controlled nuclear substances, equipment and technology
- Waste Management Facilities

CNSC Regulatory Philosophy

The CNSC regulatory philosophy stems from the *Nuclear Safety and Control Act* (NSCA), and is articulated in ***P-299, Regulatory Fundamentals Policy*** (see the CNSC Web site)

- Licensees are responsible for managing regulated activities in a manner that protects health, safety, security and the environment while respecting Canada's international obligations.
- CNSC is responsible to the public, through Parliament, for regulatory policies and programs which assure that licensees properly discharge their responsibilities.

Members of Commission Tribunal

Dr. Michael Binder

President and Chief Executive Officer

Dr. Christopher R. Barnes

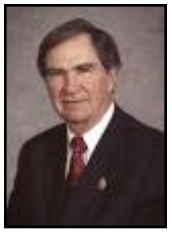
Professor, School of Earth and Ocean Sciences, University of Victoria,
Victoria, British Columbia

Dr. Ronald J. Barriault

Practising physician and member of the Canadian Medical Association, the College of Family Physicians of Canada and the New Brunswick Medical Society
Charlo, New Brunswick

Mr. Alan R. Graham

Businessman and former Minister of Natural Resources and Energy in New Brunswick
Rexton, New Brunswick



Mr. André Harvey

Former President of the Bureau d'audiences publiques sur l'environnement (BAPE)
Québec, Québec

Mr. Dan D. Tolgyesi

President of the Québec Mining Association
Québec, Québec

Dr. J. Moyra J. McDill

Professor, Department of Mechanical and Aerospace Engineering, Carleton University, Ottawa, Ontario

Commission Tribunal

- Quasi-judicial administrative tribunal
- Key decision drivers are health, safety, security and the environment
- Holds public hearings on licensing matters for major nuclear facilities
  - Affected parties and members of the public have opportunity to be heard
  - Usually held during 2 hearing days about 60 days apart

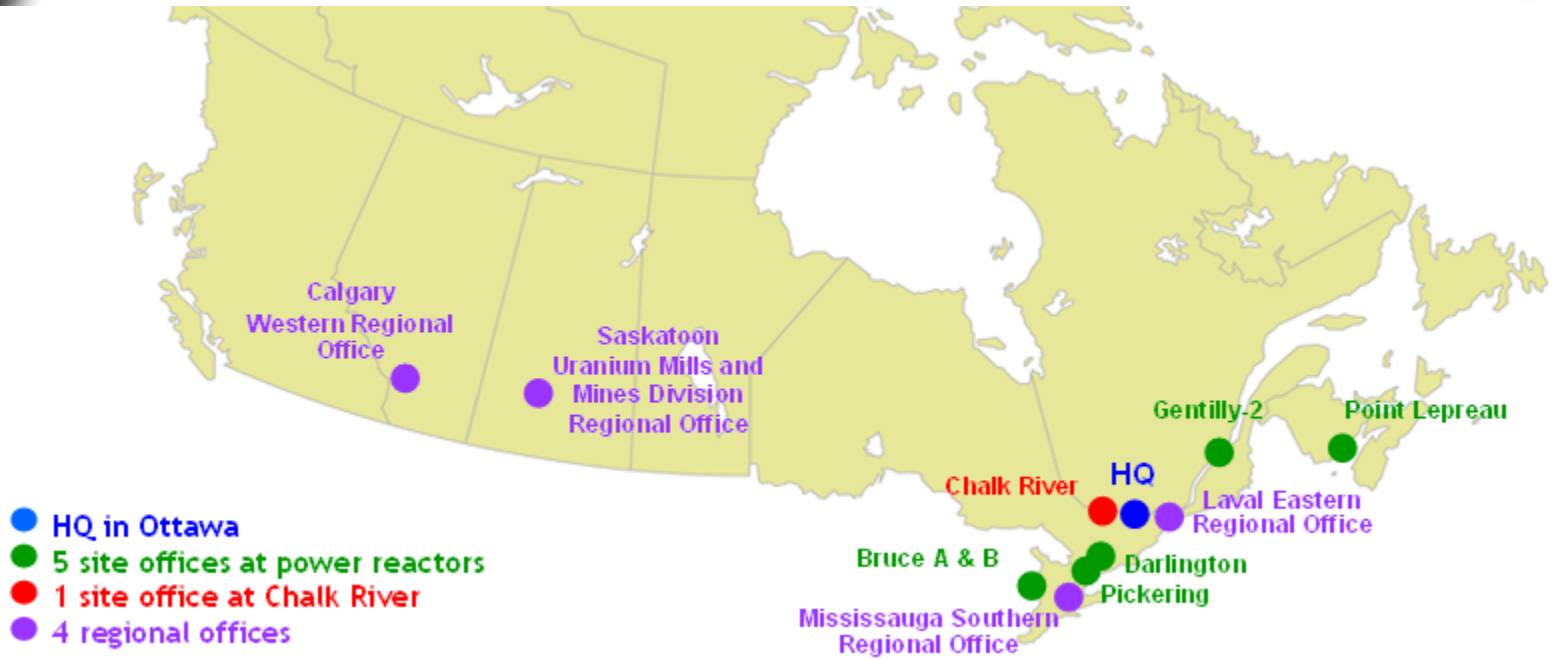
Transparent decision-making

CNSC Staff

Scientific, technical and other professional staff, responsible for:

- implementing the decisions of the Commission
- verifying compliance with licences and regulations
- reviewing licence applications and performing EA review work
- developing regulatory guidance
- advising on regulatory policy and options
- engaging citizens and communities through outreach

Located Across Canada



- Staff of about 800
- Resources of approximately $150 million

Ongoing Regulatory Activities

Non-power reactors

- NRU
- 8 others

Uranium mines and mills

- 6 active projects

Nuclear substances

- Majority of licensees and licences
- Administer approximately 2900 licences

International obligations

- Imports, exports and safeguards that assure safe and peaceful trade

Nuclear power reactors

- 18 in operation

Radioactive waste management

- Mine and mill tailings
- Nuclear substance wastes
- Low and intermediate level power reactor wastes
- Used nuclear fuel in wet and dry storage

Interim Management of Used Nuclear Fuel

- Each reactor site has wet storage pools for used nuclear fuel storage (15 to 20 yrs of operation)
- After a period in wet storage (7 to 10 yrs), used fuel can be transferred to dry storage
- Each reactor site has facilities for the safe, dry storage of used nuclear fuel
- Dry storage facilities are monitored and have no measurable impact on the public and the environment
- Dry storage facilities requirements for national security and international agreements

Interim Management of Used Nuclear Fuel

Used nuclear fuel in wet storage within reactor bays

Transportable dry storage containers holding used nuclear fuel

Interim Management of Used Nuclear Fuel

Concrete used nuclear fuel storage structures

Silos/canisters containing used nuclear fuel

CNSC Regulatory Process

- CNSC authorization required (licences, certification) under NSCA
- Licensing is open and transparent with a public hearings process
- ‘Cradle to grave’ stepwise approach to licensing applies to used nuclear fuel facilities like Adaptive Phase Management for the long-term management of used nuclear fuel
- Environmental Assessment under the Canadian Environmental Assessment Act (CEAA)

Licences for Class 1 Facilities
(Step-wise Approach and Early Planning)

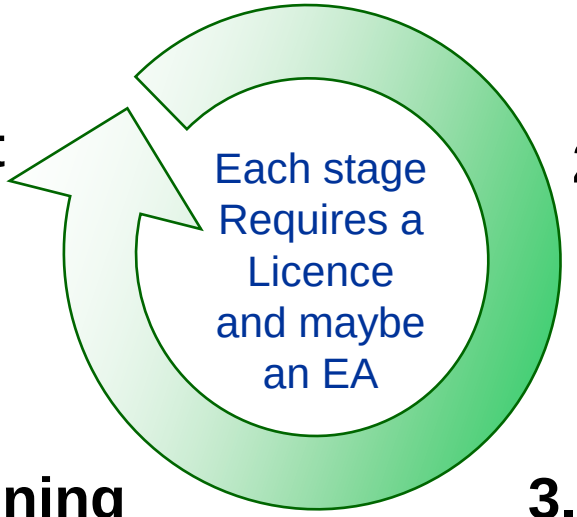
1. Site Preparation

2. Site Construction

3. Site Operation

4. Decommissioning

5. Abandonment (Release from Licensing)



Financial Guarantees also required for steps 1-4

CNSC and Transport Regulations

For used nuclear fuel transportation

- CNSC Packaging and Transport of Nuclear Substances Regulation
  - Package design certification
  - Package registration
  - Licence to transport
- CNSC Nuclear Security Regulations
  - Licence to transport
- Transportation of Dangerous Goods Act

CNSC

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Canada

- nuclearsafety.gc.ca