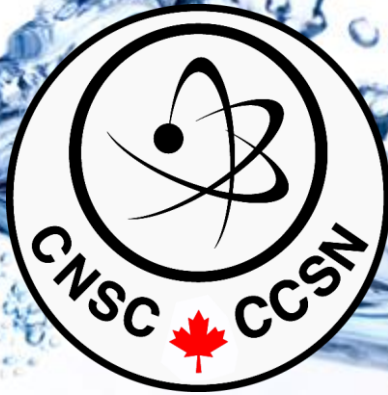




Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

CNSC Licensing Process



Nunavut Mining Symposium
April, 2014

Canadian Nuclear Safety Commission (CNSC)



- The CNSC was established through the *Nuclear Safety and Control Act* (NSCA) in May 2000
- The CNSC has jurisdiction over all nuclear-related matters in Canada



Canada's Independent Nuclear Regulator

Mission of the CNSC



- The CNSC's mission is to **regulate** the use of nuclear energy and materials so that the **health, safety** and **security** of Canadians and the **environment** are protected, and to implement Canada's **international commitments** on the peaceful use of nuclear energy; and to **disseminate objective scientific, technical and regulatory information** to the public.



We are Canada's nuclear watchdog and we will not compromise safety

Commission and Staff



Permanent Commission Members



**Dr. Sandy
McEwan**



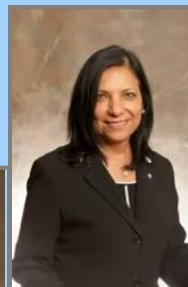
**Dr. J. Moyra
J. McDill**



**Dr. Ronald
J. Barriault**



**Dr. Michael
Binder**



**Ms. Rumina
Velshi**



**Mr. Dan D.
Tolgyesi**



**Mr. André
Harvey**

CNSC STAFF



CNSC Offices



Calgary
Western Regional Office

Saskatoon
Uranium Mills and Mines
Division Regional Office

Gentilly-2

Point Lepreau

Chalk River

HQ

Bruce

Laval Eastern Regional Office

Darlington

Mississauga Southern
Regional Office

Pickering - A and B

What does the CNSC Regulate?



- Uranium mines and mills
- Uranium processing and fuel fabricators
- Nuclear power plants
- Nuclear waste facilities
- Nuclear substance processing
- Industrial and medical applications
- Nuclear research and educational
- Export / Import control



CNSC Regulates all Nuclear-Related Facilities and Activities



Mining



Rock containing 1 - 19 % uranium (uranium ore) is extracted from the ground. The ore is transported to a mill

Milling



Uranium ore is processed and the uranium (U_3O_8) is chemically separated. The uranium concentrate, containing approximately 98% uranium (yellowcake) is shipped to a refinery

Refining



The remaining contaminants in the uranium concentrate are chemically separated from the uranium. The purified uranium (UO_3) is shipped to a uranium conversion facility

Conversion

The chemical form of uranium is converted to UO_2 (for CANDU reactor fuel) or to UF_6 (for export). UO_2 powder is shipped to a fuel fabrication facility

Fuel fabrication



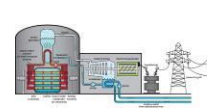
The UO_2 powder is pressed into pellets

Fuel assembly



The UO_2 pellets are assembled in CANDU reactor fuel bundles. The fuel bundles are shipped to a nuclear generating station

CANDU reactor



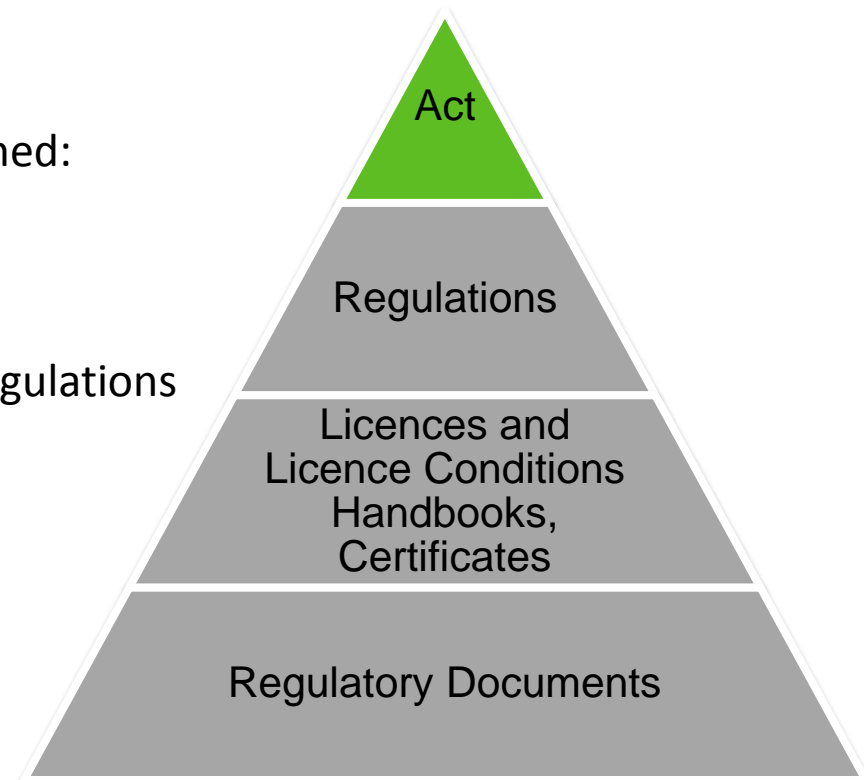
Fuel bundles are loaded into reactors, where they generate heat to produce electricity

CNSC Legislation

Nuclear Safety and Control Act



- *Nuclear Safety and Control Act (NSCA)* came into force in May 2000
- The NSCA is the legal framework that established:
 - the Commission
 - Commission authority and responsibilities
 - the CNSC to make regulations
 - the power to licence, inspect, and enforce regulations



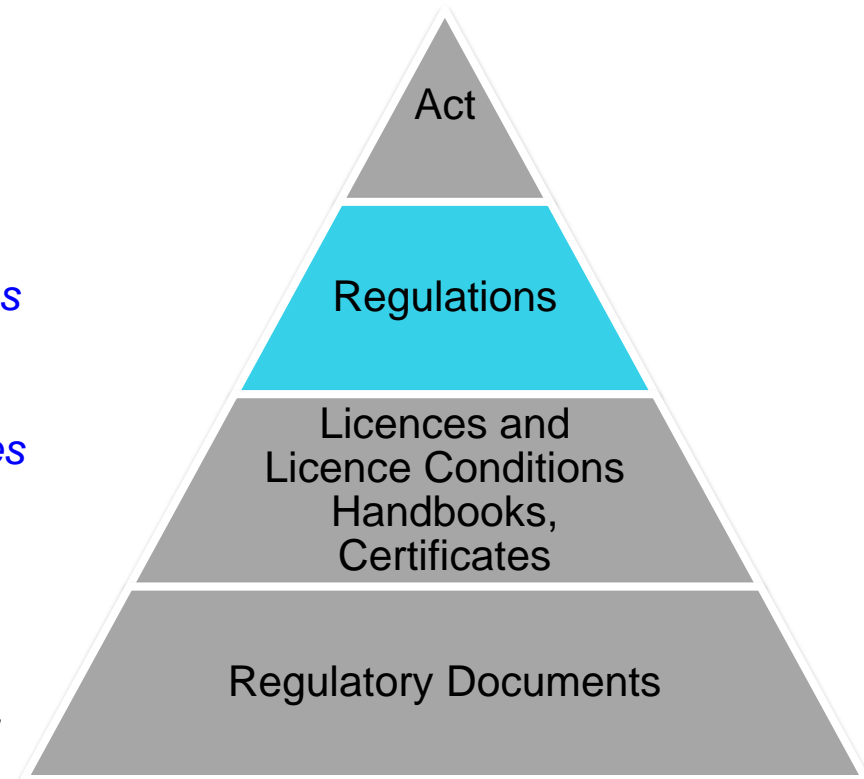
CNSC Legislation Regulations



- *Class I Nuclear Facilities Regulations*
- *Class II Nuclear Facilities and Prescribed Equipment Regulations*
- *Uranium Mines and Mills Regulations*
- *Nuclear Substances and Radiation Devices Regulations*

- *General Nuclear Safety and Control Regulations*
- *Radiation Protection Regulations*
- *Nuclear Security Regulations*
- *Packaging and Transport of Nuclear Substances Regulations*
- *Nuclear Non-Proliferation Import and Export Control Regulations*

- *CNSC Cost-Recovery Fees Regulations*
- *Canadian Nuclear Safety Commission Rules of Procedure*
- *Canadian Nuclear Safety Commission By-laws*
- *Administrative Monetary Penalties*



CNSC Legislation

Licences / Licence Conditions Handbook

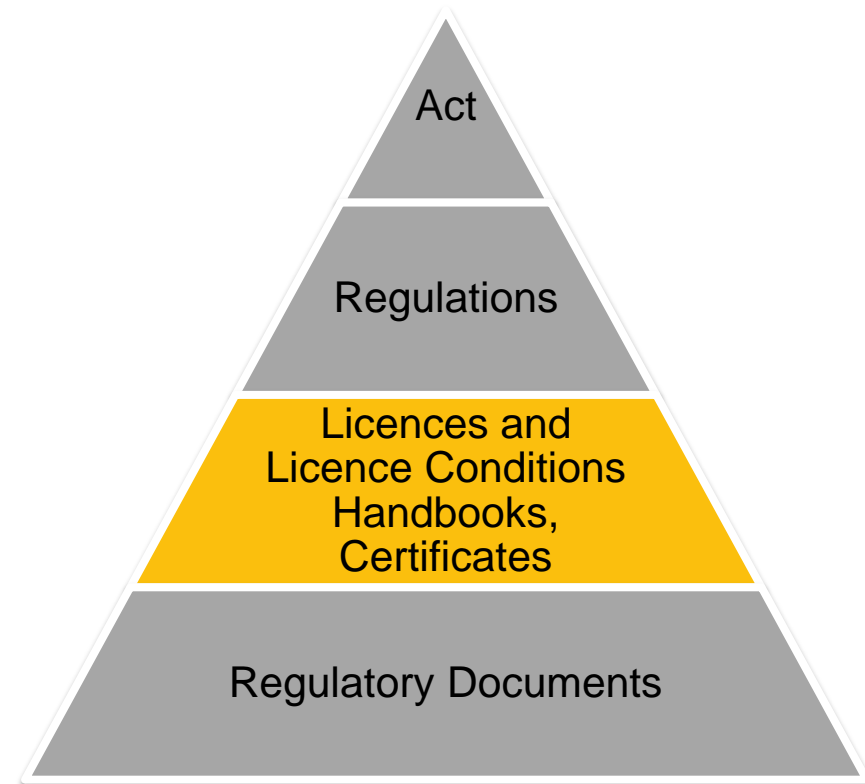


Licences:

- CNSC issues a licence if the applicant is qualified to operate safely
- The company or corporation becomes a CNSC licensee
- Licensees are required to comply with all applicable Licence conditions

Licence Conditions Handbook (LCH):

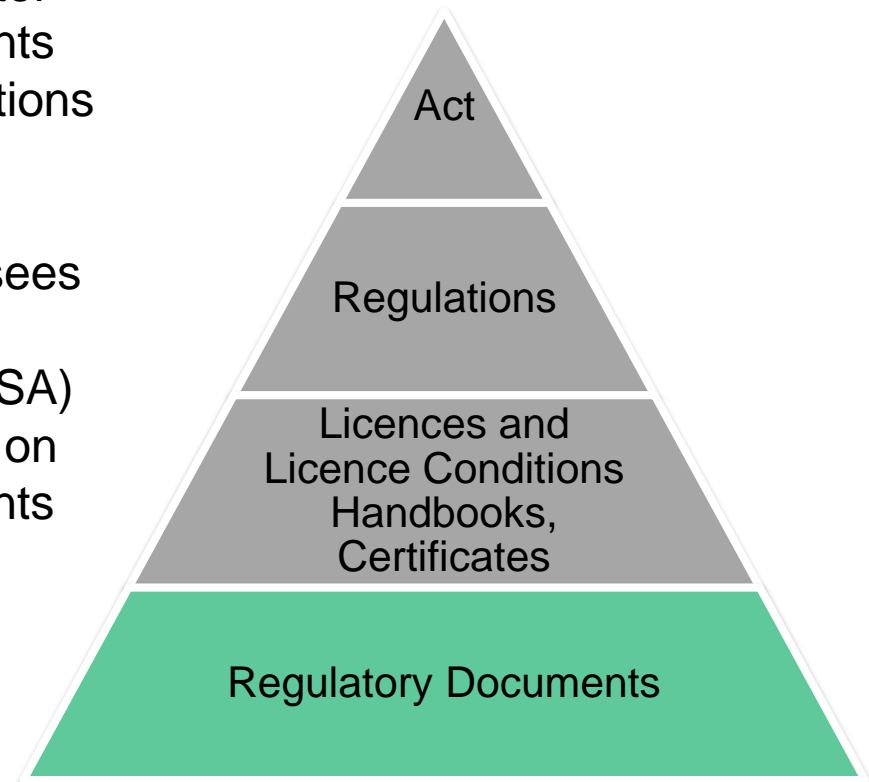
- LCH is attached to the licence
- Contains all of the requirements for the licensee to operate safely
- The Licence Condition Handbook provides further explanation of licence conditions



CNSC Legislation Regulatory Documents



- Regulatory documents provide greater detail and clarification on requirements set out in the NSCA and the Regulations
- Regulatory documents present both requirements and guidance to licensees
- Canadian Standards Association (CSA) documents also provide information on standards to comply with requirements



CNSC Regulatory Framework



- The Canadian Nuclear Safety Commission is **Canada's nuclear regulator**
- Nuclear-related activities can only be conducted by persons or organizations that are licensed by the CNSC
- A person or organization must apply to the CNSC to obtain a licence
- Applicants must demonstrate how they will meet CNSC requirements
- Once a licence is obtained, the CNSC ensures that activities are conducted safely through processes of verifying, enforcing and reporting



Gouvernement
du Canada

Government
of Canada

Regulatory Framework (Cont.)



Licensees' responsibilities

- Licensees are responsible for managing their activities in a manner that protects the health, safety and security of Canadians and the environment

CNSC's responsibilities

- Through compliance activities, the CNSC independently verifies to ensure that licensees activities are protective of the health, safety and security of Canadians and the environment





CNSC Compliance Activities



CNSC staff **conduct**:

- inspections at all active sites approximately 6 times per year, and once per year at decommissioned sites
- regular reviews of licensee reports related to radiation protection, environmental protection and conventional health and safety

CNSC compliance activities **verify**:

- the health and safety of workers and the public
- the environment is protected
- radiation doses are kept as low as reasonably achievable (ALARA)

Aboriginal Consultation



- The CNSC consults with aboriginal groups whose rights may be affected by any activity the CNSC regulates
- The CNSC requires licensees to consult early and often
- The CNSC works with other government bodies such as the province to assure effective consultation



Community Engagement



CNSC staff regularly participate in community engagement activities held both by licensees or by the CNSC such as:

- EQC meetings
- Northern tours
- Project specific meetings





Commission Hearings and Meetings

CNSC staff update the Commission at hearings and meetings of the Commission:

- through Annual CNSC Reports
- for licence amendments
- when reporting on significant incidents and events



CNSC Participant Funding Program (PFP)



- The CNSC Participant Funding Program was established to provide the public, Aboriginal groups, and other stakeholders, the opportunity to request funding from the CNSC to participate in its regulatory processes
- PFP enhances Aboriginal, public and stakeholder participation to bring valuable information to the Commission
- Funding is approved on a case-by-case basis, through a funding application process
- Find out more online at nuclearsafety.gc.ca



Contact Names and Numbers



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- CNSC Media Relations – 1-613-996-6860

**Learn more at
nuclearsafety.gc.ca**

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