



Safety and Licensing

The Canadian nuclear reactor safety philosophy and practice has evolved over four decades. A long-standing basic principle is that the licensee (owner/operator) has the main responsibility for achieving a high standard of safety. The operator of the CNF is responsible for ensuring the health and safety of its employees and the public, as well as the protection of the environment.

The overall safety objective for the CNF is to protect individuals, society and the environment by establishing and maintaining an effective defence against radiological hazards.

NRC will support AECL in its efforts to obtain the above licenses by providing technical data related to the safe design, installation, commissioning and operation of the cold source, the neutron guides and the suite of neutron beam instruments proposed.

Good design practice and construction, including the use of appropriate codes and standards and a quality assurance program, will ensure reactor safety for normal operation and anticipated abnormal events. Operating procedures for the reactor will ensure that radioactive releases and the resultant radiation doses are as low as reasonably achievable. The defence-in-depth strategy will be followed in the design of the CNF to compensate for potential human and mechanical failure and unexpected occurrences. Abnormal events will be prevented, then mitigated, then accommodated, in that order; and a series of barriers will prevent, reduce or slow down releases of radioactivity into the environment.

The facility will meet the regulatory requirements of the Atomic Energy Control Board (AECB). The AECB will issue a site approval, and construction and operating licenses, when AECL has demonstrated that the design and operation of the facility meets all safety requirements.