



**Written submission from the  
Canadian Nuclear Laboratories**

**Mémoire des Laboratoires  
Nucléaires Canadiens**

In the Matter of

À l'égard de

**McMaster University**

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**Université McMaster**

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Application to renew its McMaster Nuclear  
Reactor Class IA non-power reactor operating  
licence

Demande concernant le renouvellement de son  
permis d'exploitation d'un réacteur de catégorie  
IA non producteur de puissance pour le réacteur  
nucléaire McMaster

Public Hearing - Hearing in writing based on  
written submissions

Audience publique - Audience fondée sur des  
mémoires

**April 2024**

**Avril 2024**

## SCIENCE AND TECHNOLOGY

Office of the Vice-President

2024 March 7

### RE: McMaster University Research Reactor Licence Renewal (Licence #NPROL-01)

I am writing on behalf of Canadian Nuclear Laboratories Ltd. (CNL) to voice my strong support for McMaster University and its application to renew the reactor licence for the McMaster Nuclear Reactor (MNR) (#NPROL-01).

As Canada's national nuclear laboratories, and a world leader in the development of innovative nuclear science and technology products and services, CNL understands how critical it is to have the necessary infrastructure and resources to confront issues of strategic, national importance. Operational since 1959, the MNR is a one-of-a-kind facility here in Canada that has served that very purpose for nearly 65 years.

As a world-leading facility in neutron beam research, the MNR has enabled McMaster University researchers to explore the development of new and innovative materials for numerous applications. In addition to that research, every year, hundreds of thousands of neutron irradiations are performed by the MNR, directly supporting a wide variety of industries here in Canada, from mining exploration to environmental sampling.

Perhaps most importantly, the MNR has also served as a world leader in the production of iodine-125, a radioactive isotope that is used in the treatment of prostate cancer, with 70,000 treatments a year performed all around the world using material produced by the MNR. McMaster continues to be a leader in isotope production and research to this day, and most recently manufactured and packaged its first patient dose of holmium-166 for liver cancer treatment trials.

As a member of CNL's academic partnership program, McMaster also shares CNL's commitment to developing the next generation of nuclear scientists, engineers and technical professionals. Working in partnership with one another, our organizations recently launched a new program to enrich learning and real-world experience in nuclear research for McMaster undergraduate students, known as the CNL Nuclear Undergraduate Research Experience. This is in addition to our recent signing of an MOU, which is designed to enable knowledge mobilization, spur innovation and the development of intellectual property, and advance solutions to address both national and industry challenges.

Finally, as an active contributor to the Government of Canada's Small Modular Reactor (SMR) Action Plan, McMaster University has proven itself to be an important national voice and advocate in SMR research, directly supporting Canada's clean energy transition. As CNL knows from our own SMR siting and research programs, SMRs have the potential to transform the future of clean energy production in Canada and the world, particularly in Northern and remote communities and industries sites, and

experts at McMaster are spearheading research needed to help advance the design, deployment and safety of next-generation SMR technologies.

Canada continues to maintain its position as a tier-1 nuclear nation, but it can only remain so with the support of facilities such as the MNR, which gives us the tools to fulfill the growing needs of the nuclear industry in research and education. It is for these reasons that CNL endorses the renewal of McMaster's licence for this strategic national asset, ensuring the continued success of our industry and Canada's leadership position in nuclear science and technology.

Sincerely,



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