



Oral presentation

Submission from North American Young Generation in Nuclear

In the Matter of the

Canadian Nuclear Laboratories

Application for the renewal of the Nuclear
Research and Test Establishment Operating
Licence for the Chalk River Laboratories

Commission Public Hearing

January 23-25, 2018

Exposé oral

Mémoire de North American Young Generation in Nuclear

À l'égard des

Les Laboratoires Nucléaires Canadiens

Demande de renouvellement du permis
d'exploitation d'établissement de recherche
et d'essais nucléaires pour les Laboratoires
de Chalk River

Audience publique de la Commission

23-25 janvier 2018



NAYGN Written Submission

**CNSC PUBLIC HEARING
LICENCE RENEWAL FOR THE CHALK RIVER LABORATORIES**

HANNAH BUSHBY
Community Outreach Lead

DIANA URREGO
Public Relations Chair

THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY

CNSC PUBLIC HEARING - LICENCE RENEWAL FOR THE CHALK RIVER LABORATORIES

Written Submission in Support of an Oral Statement

The purpose of this submission is to request the Canadian Nuclear Safety Commission grant the North American Young Generation in Nuclear (NAYGN) Durham Chapter intervener status at the Public Hearing for the Licence Renewal of Canadian Nuclear Laboratories Research and Test Establishment Operating Licence for the Chalk River Laboratories (CRL) with a proposed expiry date of April 1, 2028; and to express NAYGN Durham Chapter's endorsement of the proposed licence renewal date. NAYGN Durham Chapter strongly supports the CNL proposal and requests the opportunity to participate in this important public discussion via both a written and oral submission.

Introduction

NAYGN is a non-profit organization, which brings together young professionals working in the nuclear industry and provides opportunities to develop leadership and professional skills, to engage our community and inform the public, and to inspire today's nuclear technology professionals to meet the challenges of the 21st century. There are currently 110 chapters operating throughout North America. The NAYGN Durham chapter was founded in 2008. The majority of its members work for Ontario Power Generation at Darlington or Pickering Nuclear Generating Stations. NAYGN Durham organizes activities to educate the public and provide development opportunities at the local and regional level. NAYGN Durham is the largest and most active chapter in Canada.

NAYGN Rationale for Supporting Licence Renewal for the Chalk River Laboratories

From its inception in the 1950's, CRL has provided valuable research and technical knowledge and served as a foundation to the Canadian nuclear industry. The National Research Universal (NRU) reactor, has been one of the world's most versatile research reactors, and has been operating at CRL since 1957. In addition, at CRL a Molybdenum production facility, several laboratories and waste management areas are operated. CNL's significant contributions to all aspects of nuclear research and development, and engineering, include areas such as reactor design, materials research, and nuclear medicine, to name a few.

Since 2014, CNL has made adequate provisions for security, the protection of health and safety of persons and the environment, and has taken the measures required to comply with its licence conditions concerning Canada's international obligations.

With this licence renewal, CNL will be able to continue this proud and important history. Their plans to build new infrastructure and laboratories will support new and innovative research and development through their Science and Technology program. The research and knowledge base provided by CNL is

integral to the continued safe operation of Canada's existing CANDU fleet. With the refurbishment of Bruce Power and Darlington, this research and knowledge base will be helpful for the decades to come. In addition, CNL plans to lead the development of the next generation of nuclear designs, such as supporting testing of Small Modular Reactors (SMR) concepts, which promise to provide safe, reliable, and carbon-free energy for smaller communities, such as a Canada's north.

Community Impact and Leadership

CRL is located in the province of Ontario, 160 kilometres northwest of the Nation's Capital City and, represents the largest single complex within Canada's science and technology infrastructure. Over the past 60 years, CRL has played a significant role in the economy base of nearby communities. Many of these community members have spent their entire careers at the CRL, raising and providing for their families, while supporting local businesses that in turn support their families. The ripple effect of the life CRL facility has on local and surrounding communities is immeasurable.

Ensuring the continued operation of CRL means the facility will be able to continue to provide stable and available long-term employment for people in the surrounding communities. As CRL grows, so will the opportunities for the local supply chain. In addition, the CRL's long-term operation will provide the younger generations of nuclear energy professionals with the opportunity to further develop within the industry and be a part of Canada's nuclear future.

As young nuclear professionals, we believe that it is important to invest in research, technology and innovation. This will help ensure the development, licencing and commercialization of advanced reactor technologies, and support Canada's energy decarbonization goals. In doing so, this will have a great impact not only on the local communities but the Nation as a whole.

Environmental Record

The environmental record of CRL continues to prove their commitment with protecting the public and environment. CNL maintains a comprehensive Environment Monitoring Program for CRL to verify that radiation doses to members of the public as a result of radioactive releases from the CRL site remain as low as reasonably achievable, with social and economic factors being taken into account. The program demonstrates that the radiation dose to the most exposed members of the public due to CRL operations does not exceed regulatory limits, and also serves to verify that nonradioactive releases do not pose hazards to human health. In addition, neither radioactive nor non-radioactive releases pose hazards to the environment.

Quality assurance is applied to the environment monitoring program that includes but is not limited to performance verification, program reviews and audits, and records management.

Affected areas on the CRL site are subject to routine groundwater, surface water, and ambient air monitoring. In 2015 radioactive environmental monitoring results indicate stability in the performance

of facilities and operations at CRL, and that the controls on the release of radioactive contaminants in place at CRL provided reasonable protection to the environment and to the public.

Conclusion

In summary, as members of the North American Young Generation in Nuclear Durham Chapter, we strongly support the proposal of Canadian Nuclear Laboratories for the renewal of its Nuclear Research and Test Establishment Operating Licence for the Chalk River Laboratories with a proposed expiry date of April 1, 2028.

CRL provides the ability for the Canadian nuclear industry to advance in research, innovation and new technologies that are crucial to support the safe operation of Canada's existing CANDU fleet and to lead the development of the next generation of nuclear designs, as well as to maintain and improve the Canadian nuclear industry's contributions to medicine. This cannot be achieved without CRL's research facility to foster nuclear technology, knowledge and development.

References

- [1] Canadian Nuclear Association, *"The 2017 Canadian Nuclear Factbook"*, 2017.
- [2] Canadian Nuclear Association, *"2016-2026 10-Year Integrated Plan Summary"*, April 2017.
- [3] Canadian Nuclear Association Annual Safety Report, *"Environmental Monitoring in 2015 at Chalk River Laboratories"*, CRL-509243-ASR-2015, June 2016.
- [4] CNSC, *"CNSC Staff Report on the Performance of CNL's Nuclear Sites and Projects: 2013"*, March 2015.
- [5] CNSC Record of Decision, *"Application to Renew and to Amend the Nuclear Research and Test Establishment Operating Licence for Chalk River Laboratories"*, April 2016.