



Oral presentation

Exposé oral

Submission from Ontario Power Generation

Mémoire de Ontario Power Generation

In the Matter of the

À l'égard des

Canadian Nuclear Laboratories

Les Laboratoires Nucléaires Canadiens

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

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

Commission Public Hearing

Audience publique de la Commission

January 23-25, 2018

23-25 janvier 2018

December 11, 2017

CD# N-CORR-00531-18990

Mr. M. Leblanc

Commission Secretary
Canadian Nuclear Safety Commission
280 Slater Street
Ottawa, Ontario
K1P 5S9

Dear Mr. Leblanc

**OPG Intervention to Canadian Nuclear Laboratories Application for Licence
Renewal**

The purpose of this letter is to provide Ontario Power Generation's written Intervention with respect to Canadian Nuclear Laboratories (CNL) application for renewal of the Nuclear Research and Test Establishment Licence for its Chalk River Laboratories Site, as described in Commission Member Document CMD 18-H2.1.

OPG supports the renewal of the CNL licence as requested in the CNL CMD, and as outlined in CNSC staff's CMD 18-H2.

CNL's CMD describes the many safety improvements and enhancements that have been made over the last licence period, and others which are planned for the future licence period. I will touch on a few of those below. CNSC staff's CMD describes how CNL has met the regulatory requirements, how CNL has satisfactory ratings in all the Safety and Control Areas, and how CNSC staff have concluded that CNL

"will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed."

The CNL Chalk River site plays a crucial role in Research and Development in the Canadian nuclear infrastructure. The importance of this work in the development of the homegrown Canadian industry cannot be overstated, and as discussed in CNL's CMD, their ongoing work program is critical to the future success of the nuclear industry in Canada. One notable such area is capacity for the demonstration of the commercial viability of advanced reactors including Small Modular Reactors and very Small Modular Reactors.

As just one example of many current research projects underway at Chalk River in support OPG's ongoing nuclear program, CNL has been working closely with industry on fuel channel research and development activities, including partnering

with OPG and Bruce Power on the Fuel Channel Life Management Project. CNL has developed a proprietary process that enables industry to artificially age ex-service pressure tube material in a hot cell up to, or beyond, predicted end of life conditions, prior to conducting burst tests to obtain information on fracture toughness. This work is extremely important to CANDU operators as it enables us to develop predictive fracture toughness models, some of which are available to the entire industry through Canadian Standards Association Standard N285.8, for use in fuel channel fitness for service assessments. This work also enables industry to 'look beyond our headlights' and strategically plan the operational life of our units.

Below I will briefly highlight a few of the very important safety practices which CNL has in place, and which can be noted in the CNL CMD.

CNL has established the direction and core values to ensure that nuclear safety is paramount. Through their Nuclear Management System, they have established the necessary controls and safety culture to ensure conventional and radiological safety, environmental performance, and security requirements are in place.

Many safety enhancements are discussed throughout the CNL CMD. Such ongoing investments in safety are typical of the best practices expected of Canadian nuclear facility operators. A couple of examples include

- Introduction of a dedicated Live Fire Fighting Training Complex
- Numerous Severe Accident Management upgrades to the Emergency Operations Centre (EOC) and Emergency Preparedness program

OPG notes that CNL has the same kinds of industry standard management systems and safety practices in place as nuclear power plant licensees in Canada and world-wide. These include, for example,

- Major multi-day nuclear emergency preparedness exercises testing interoperability with many external and governmental agencies
- Implementation of the new regulatory requirements such as CNSC's Nuclear Materials Accountancy Reporting (NMAR) system

In terms of CNL's strong safety performance over the past licensing period, OPG notes the following:

- No worker received a dose in excess of any dose limits in the Radiation Protection Regulations
- Dose to the most exposed member of the public below the regulatory limit and below the lower licence dose constraint.
- Distribution of potassium iodide pills to the entire primary zone and stockpiling for the entire secondary zone

It is also worth noting that CNL is an active participant in the CANDU Owner's Group (COG) forums for sharing industry OPEX and best practices. This includes, for example, participation in the many industry working groups on implementation of CNSC regulatory requirements such as those on Fitness For Duty, and our Chief Nuclear Officers' Forum. Such participation ensure that CNL benefits from the same learnings and best practices as do Canadian nuclear power plants.

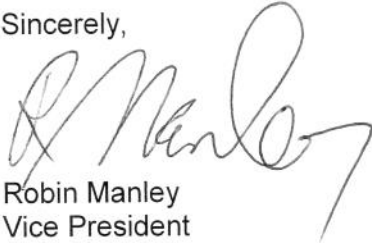
Finally, OPG notes that CNSC staff continue to make enhancements to the structure and the format of Licence Conditions Handbooks (LCH), and that in the case of CNL, the proposed LCH is improved from the previous version. OPG

supports such ongoing and continuous improvement to LCH structure to improve useability.

In conclusion, CNL has operated its facilities safely, and I am convinced they will continue to operate them safely and in compliance with regulatory requirements. OPG fully supports renewal of this licence.

OPG requests the opportunity to provide an oral submission at the Commission Hearing in January.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Manley', written over a horizontal line.

Robin Manley
Vice President
Nuclear Regulatory Affairs and Stakeholder Relations
Ontario Power Generation

cc: H. Tadros - CNSC Ottawa
J. Leclair - CNSC Ottawa