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Written submission from the Canadian Nuclear Society

Mémoire de la Société Nucléaire Canadienne

In the Matter of the

À l'égard de

Canadian Nuclear Laboratories, Douglas Point Waste Facility

Les Laboratoires Nucléaires Canadiens, installation de gestion des déchets de Douglas Point

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Application to amend the waste facility decommissioning licence for the Douglas Point Waste Facility

Demande de modification du permis de déclassement de l'installation de gestion des déchets de Douglas Point

Commission Public Hearing

Audience publique de la Commission

November 25-26, 2020

25 et 26 novembre 2020

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Intervention by the Canadian Nuclear Society (CNS)
Before the Canadian Nuclear Safety Commission (CNSC)

Application by Canadian Nuclear Laboratories (CNL)
To amend the operating licence for the Douglas Point waste facility
(Ref 2020-H-04)

The Canadian Nuclear Society (CNS)

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The Canadian Nuclear Society (CNS), a voluntary, not for profit society that promotes the exchange of information on all aspects of nuclear science and technology, submits the following in support of the request by Canadian Nuclear Laboratories (CNL) for an amendment to its existing Douglas Point decommissioning license.

Douglas Point Nuclear Generating station (Douglas Point) was Canada's first commercially sized CANDU reactor. This nuclear power plant was designed, constructed, commissioned and operated following the successful CANDU demonstration reactor (Nuclear Power Demonstration 2). This venture was, again, a collaboration between various companies the main parties being Atomic Energy of Canada Ltd. (AECL) and Ontario Hydro (now Ontario Power Generation, OPG). Ontario Hydro provided the plant operating staff and operation support whereas AECL provided the design engineering and engineering support.

The Douglas Point design was, in effect, copied for the KANUPP reactor in Pakistan and the two MAPP reactors in India. Douglas Point is in fact the reference plant for KANUPP in Pakistan, and 16 power reactors in India: Kakrapar 1, 2; Kaiga 1-4; Madras 1, 2; Narora 1, 2 and Rajasthan 1-6. Further modifications to the Douglas Point design formed the basis of the nine CANDU-6 reactors now operating in Canada, South Korea, Rumania, Argentina, China. These 'descendants' of Douglas Point have generally showed improving performance since about 2012 (https://pris.iaea.org/PRIS/CountryStatistics/CountryDetails.aspx?current=IN).

Ontario Hydro and AECL used Douglas Point, as at NPD, for training staff during construction, commissioning and operation. Lessons learned were applied to other CANDU plants starting with Pickering (https://cns-snc.ca/media/history/DouglasPoint/DouglasPoint.html).

I, John Roberts have a personal link to Douglas Point having worked occasionally on the demineralization water treatment plant (circa 1977), assisted in pressure tube elongation measurements in the reactor vault (circa 1978) – part of my initiation into CANDU technology. Finally, following the shutdown of Douglas Point my Chemistry Laboratory staff from Bruce B supported activities as Douglas Point was starting into decommissioning. My final involvement was having my staff performing the environmental monitoring related to the Irradiated Fuel storage modules and such items as monitoring Domestic water chemistry.

With respect to the current situation CNL is wishing to further decommission Douglas Point to which end a licence amendment is required. CNS members have reviewed the submission made by CNL and are satisfied that it meets the requirements of the Canadian Nuclear Safety Commission (CNSC) for such license amendment. CNS also agrees with the path forward as described by CNL which is logical and well thought out.

John G. Roberts 10 Oct 20

John G. Roberts