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Atomic Energy  
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ILLIMITÉE

2022 March 30

Record Number: [REDACTED]

Jim Delaney  
Director, Uranium and Radioactive Waste Division  
Natural Resources Canada  
580 Booth Street  
Ottawa, Ontario K1A 0E4  
Via email: jim.delaney@canada.ca

**Re: AECL Comments on Canada's Radioactive Waste Policy Review**

References:

- [1] [REDACTED] AECL Letter to J. Delaney, 2021 May 28

Dear Mr. Delaney,

Atomic Energy of Canada Limited (AECL) is a federal Crown corporation with a mandate to enable nuclear science and technology and to protect the environment by fulfilling the Government of Canada's radioactive waste and decommissioning responsibilities. AECL acknowledges Natural Resources Canada (NRCAN) has launched a review of Canada's Policy Framework for Radioactive Waste with a view to modernizing it and was pleased to have the opportunity to participate in various engagement activities led by NRCAN. AECL was also pleased to make a written submission to NRCAN's engagement process [1]. AECL offers the following comments on the draft policy for consideration by NRCAN.

AECL recognizes and supports the principles recognizing three key areas to be prioritized in terms of federal government commitments:

- i. health, safety, security and protection of the environment;
- ii. openness, transparency and inclusive engagement to encourage the timely development of the necessary infrastructure for effectively dealing with all of Canada's radioactive waste and decommissioning activities; and
- iii. global excellence in the fields of radioactive waste management and decommissioning.

AECL would like to point out that in the section titled "**BACKGROUND**" the descriptions for the various radioactive waste classes do not appear to fully align with the text in both the CSA standard and REGDOC. AECL recommends defaulting to the agreed CSA and REGDOC definitions as these processes involved extensive engagement.

AECL is pleased to see additional context setting in the first paragraph of the section titled, "**MODERNIZING CANADA'S POLICY FOR RADIOACTIVE WASTE MANAGEMENT AND DECOMMISSIONING**" that introduces the primary principles of the modernized policy, and in particular the opening sentence, "*The Government of Canada recognizes the many national benefits of nuclear technology, including zero-emissions electricity, medical, industrial and research applications.*" This is important context setting highlighting that radioactive

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waste is generated as a by-product of activities that bring value to the lives of Canadians.

AECL notes that text pertaining to waste minimization includes the words *“as far as practicable”* (in both the BACKGROUND section and commitment 1.8. To some readers this could be seen as overly vague. AECL notes that in the “What We Heard” report, language from IAEA guidance that better explains this concept was included *“...implementation of a waste minimization strategy is always an optimization exercise that takes into consideration factors such as worker doses, the cost of recovering materials, the availability of disposal routes for specific types of waste, the quantities of waste generated in each category, and the duration and cost of interim storage of waste compared with the estimated ultimate disposal cost.”* Perhaps NRCan may wish to include some of that language for increased clarity, e.g. *“as far as practicable taking into consideration factors such as worker doses, the cost of recovering materials, the availability of disposal routes for specific types of waste, the quantities of waste generated in each category, and the duration and cost of interim storage of waste compared with the estimated ultimate disposal cost”*.

With respect to commitments 1.6 through 1.10, as a responsible waste owner AECL has always taken its responsibilities seriously and will continue to do so and fully supports these identified responsibilities. AECL is committed to engaging with Indigenous communities in an open and cooperative way to work towards mutual understanding and opportunities for mutual benefit, and to enable healing and reconciliation. We are committed to having productive relationships with Indigenous communities, and, in fact, we work closely with Indigenous communities located in close proximity to our sites. We do this through relationship building, including providing capacity funding, having in place MOUs and working towards long-term relationship agreements. In all cases we work with communities with the objective of achieving a common understanding and shared objectives.

AECL is also committed to openness, transparency and inclusive engagement with provinces, territories, interested communities, scientific experts, other waste producers and owners, and other interested persons in Canada to encourage the timely development of the necessary infrastructure to manage our radioactive wastes.

AECL is committed to respecting international guidance in the area of radioactive waste management and decommissioning and is pleased to see recognition that Canada’s domestic context is not always represented clearly in IAEA guidance examples, which tend to focus more on examples from Europe. AECL is pleased to see language acknowledging this reality and that it may result in the implementation of alternative approaches that are protective of human health, safety, security and the environment, and that are approved by Canada’s nuclear regulator (the CNSC). This is in keeping with Canada’s framework whereby requirements are captured in REGDOCs issued by our regulatory body, the CNSC, and relevant CSA standards, both of which are developed taking into consideration international guidance as well as input from the general public (including academia), government and regulators, operators and suppliers using a public consultation process during their production.

AECL notes the inclusion of the prohibition on importing or exporting radioactive waste for disposal (excepting repatriation of disused sources manufactured in Canada, used abroad and returned to Canada for disposition) in commitment 3.4, which is new. AECL sees this as not prohibiting movement of wastes for commercial processing as one of the means of achieving waste minimization, whereby the volume reduced radioactive

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waste following processing is returned to its country of origin for storage and disposal. AECL also sees this as not prohibiting repatriation of used nuclear fuel to country of origin where that is agreed as part of the supply of fuel for an advanced reactor technology.

Yours truly,

2022-03-30

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Atomic Energy of Canada Ltd.

Cc:

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