2022-04-01

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RE: Modernizing Canada's Policy for Radioactive Waste Management and Decommissioning (Draft for Public Comment) – Canadian Nuclear Laboratories Response

Dear Mr. Delaney,

This letter provides Canadian Nuclear Laboratories' written submission to the *Modernizing Canada's Policy for Radioactive Waste Management and Decommissioning (Draft for Public Comment),* published by Natural Resources Canada (NRCan). Enclosed with this letter are CNL's summarized comments in response to the 'Draft for Public Comment' issued in 2022 February.

Canadian Nuclear Laboratories (CNL) and Atomic Energy of Canada Limited (AECL) have been instrumental in the development of Canada's nuclear industry. For more than 70 years, nuclear technology has evolved to meet the needs of the world for clean, reliable energy; sustainable economic growth; public health, safety and security. Today, CNL is actively restoring and protecting Canada's environment by reducing and effectively managing AECL's nuclear liabilities at multiple sites across Canada. A key part of this mission to "Restore and Protect Canada's Environment" is the implementation of CNL's Integrated Waste Strategy, which creates the framework for the lifecycle management of all types of waste at all CNL-operated sites.

CNL agrees with the key policy commitments and principles presented by NRCan and we have been an active participant in the policy review, including the submission of responses to NRCan questions on 2021 May 31. CNL appreciates the opportunity to provide feedback throughout the process.

CNL would like to thank NRCan for the opportunity to provide input on *Modernizing Canada's Policy for Radioactive Waste Management and Decommissioning*. We look forward to continued participation in this process and reading, hearing, and engaging with the views of all participants in this important activity.

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Regards,

[redacted]

[redacted] on behalf of [redacted]
[redacted]

Cc:
[redacted]

Modernizing Canada's Policy for Radioactive Waste Management and Decommissioning: Responses from Canadian Nuclear Laboratories

Natural Resources Canada (NRCan) has issued a draft for public comment version for *Modernizing Canada's Policy for Radioactive Waste Management and Decommissioning*. The following are Canadian Nuclear Laboratories' (CNL) feedback to the draft.

Elements of the draft policy that CNL specifically supports includes:

Focus on Stakeholder and Indigenous Community Engagement

CNL appreciates the increased expectations and commitment to "openness, transparency and inclusive engagement with Indigenous peoples, provinces, territories, interested communities, scientific experts, waste producers and owners, and other interested persons in Canada" as well as the recognition of the *United Nations Declaration on the Rights of Indigenous Peoples Act*

In recent major waste and decommissioning projects, such as the NSDF Project, the NPD In-Situ Decommissioning Project, and the WR-1 In-Situ Decommissioning Project, CNL has directly observed the significant benefits of early focused engagement and partnerships. In particular, CNL appreciates the added value of incorporation of Traditional Ecological Knowledge and other forms of input from Canada's Indigenous Communities.

Recognition of Transportation as a Key Element of Waste Management and Decommissioning

CNL appreciates the explicit incorporation of transportation as part of radioactive waste management and decommissioning activities. Transportation is a key element of the waste management lifecycle for CNL, and is anticipated to become an increasingly important element in the pursuit and development of disposal solutions. The acknowledgement of transportation in Items 1.1 and 1.6 is beneficial in support of the focus on safety optimization and integrated planning for waste management and decommissioning.

Focus on Integrating Waste Management and Decommissioning

The strategic incorporation of decommissioning into this policy represents a significant benefit to highlight the focus on integrated and holistic planning.

At CNL sites across Canada, significant efforts are underway to focus on decommissioning and the connection to radioactive waste management. CNL has increasingly focused on integrated and holistic lifecycle planning for all nuclear liabilities, and appreciates this draft policy reflects the expectation and requirements for this level of unification.

Importance of Waste Minimization

Waste minimization is a key element of effective management of radioactive wastes, and CNL has significant experience with implementing the Waste Hierarchy throughout the waste management lifecycle. CNL appreciates the acknowledgement in this draft policy on the Government of Canada's vision and the policy commitment for the prevention and minimization of radioactive waste, as far as practicable. CNL also interprets the commitment of "as far as practicable" to encompass technical, social, and economic factors.

Incorporation of Flexibility in Long-Term Management and Disposal Solutions

CNL appreciates the incorporated flexibility to develop fit-for-use approaches. In particular, CNL appreciates the statement that "Waste producers and owners will decommission facilities and sites within an appropriate timeframe to avoid transferring the responsibility to future generations, recognizing that alternative approaches may be justified, subject to approval by the regulator" (1.10). The adaptability inherently communicated through this statement directly enables innovation and approaches that offer optimized benefits. In particular, CNL recognizes the value that this statement presents in the context of currently proposed in-situ disposal projects (WR1 and NPD).

Focus on Disposal Capabilities by 2050

In the Background Section, the Government of Canada's vision for radioactive waste management is stated to include "key elements of Canada's radioactive waste disposal infrastructure is in place" by 2050. The acknowledgement of timely development of disposal infrastructure is a key element of lifecycle planning, safety performance (i.e., minimization of double-handling), economic performance, overall technical performance optimization, and the minimization of any burdens on future generations.

With recognition of the improvements of this draft policy, CNL notes the following opportunities for further potential improvement and clarification:

Alignment to Radioactive Waste Classes Defined in Canadian Standards

In the Background Section, the definitions of waste classes do not directly align to the definitions provided in documents provided by the Canadian Standards Association (CSA) or Canadian Nuclear Safety Commission. As an example, the definition in the Background Section (p. 2) specifies that Intermediate-level Radioactive Waste "is also high-hazard waste requiring remote handling and isolation"; however, not all ILW requires remote handling. CNL recommends modifying the definitions to align to the applicable CSA Standards, CNSC REGDOCs, and/or IAEA guidance, or simply listing the classes of waste rather than defining them.

This comment is part of a broader consideration to recognize the role of the CSA Standards. CSA Standards incorporate international guidance, as well as input from the general public (including academia), government and regulatory agencies, operators and suppliers, and uses a public consultation process, all of which are not always considered in the development of the international guidance. Adhering to the CSA Standards are a key element for CNL's implementation of waste management and decommissioning processes and activities.

Alignment of Key Phrases to Recent Industry Deliverables

Throughout the draft policy, there are opportunities to make minor phrase changes that align the policy better to established language from across the nuclear industry. As an example, the use of the word 'optimized' could create a better expectation and reflects the preference noted by the Nuclear Waste Management Organization's report on "Integrated Strategy for Radioactive Waste: What We Heard Report." Additionally on Item 1.10, the phrase "reducing the burden for future generation" could serve as a replacement for the current statement of "avoid transferring the responsibility to future generations".

Clarification of Federal Government's Role for Integrated Strategy

CNL has an Integrated Waste Strategy, which serves as the framework for lifecycle waste management for all types of waste at all CNL-operated sites. The CNL Integrated Waste Strategy reflects alignment to the Canadian regulations and policy, international guidance, and industry best practices. The CNL Integrated Waste Strategy will be updated as appropriate following the Nuclear Waste Management Organization's recommendation to the Minister of Natural Resources regarding development of an Integrated Strategy for Radioactive Waste.

Based on the language presented in Item 2.2, CNL raises the question about whether the federal government will oversee strategy-level documents in a more formal capacity, as inferred through the use of the phrase "oversees the development…of an integrated strategy for radioactive waste management." It is a common practice for organizations, including CNL, to create strategy plans which are informed by government policies and legislation. A new level of oversight of strategic plans could impact CNL's ability to adapt and evolve in a timely manner.

Acknowledgement of Environmental Remediation and Cleanup as a Key Element of Decommissioning

As part of the holistic and integrated planning at CNL, there is a direct connection between decommissioning, waste management, *and* environmental remediation or cleanup. The role of environmental remediation or clean-up, while mentioned in Item

1.7, is slightly underrepresented in this draft policy. However, CNL does recognize that the extent of environmental remediation and cleanup elements of the waste management and decommissioning may be a unique focus for CNL-operated sites, and is therefore not a key element of the policy.