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To: Consultation (CNSC/CCSN)
Cc: Fundarek, Peter (CNSC/CCSN)
Subject: Cameco's Comments on draft REGDOC-2.11.1, Waste Management, Volume III: Safety Case for Long Term Radioactive Waste Management
Cameco's Comments on draft REGDOC-2.11.1, Waste Managment Volume III.pdf

Attachments:

Sent on behalf of R. Liam Mooney, Vice-President, Safety, Health, Environment, Quality & Regulatory Relations, Cameco Corporation

Dear Mr. Torrie:

Cameco Corporation (Cameco) has prepared the attached comments on *draft REGDOC-2.11.1, Waste Management, Volume III: Safety Case for Long Term Radioactive Waste Management*.

If you have any questions with respect to the above, then please contact Liam Mooney at [personal information redacted] or [[personal information redacted](#)].

Kim Hanson

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September 16, 2019

VIA EMAIL

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Dear Mr. Torrie:

Cameco Corporation's Comments on draft REGDOC-2.11.1, Waste Management, Volume III: Safety Case for Long-Term Radioactive Waste Management

Cameco Corporation (Cameco) participated in the industry review of the draft **REGDOC-2.11.1, Waste Management, Volume III: Safety Case for Long-Term Radioactive Waste Management** (the REGDOC) and supports the detailed comments made by the Canadian Nuclear Association in its September 16, 2019 letter. Cameco would like to emphasize its concern with specific aspects of the REGDOC as summarized below.

In general, Cameco notes that this REGDOC continues the negative trends in REGDOC drafting we have commented on before with respect to the addition of requirements to legislated requirements when REGDOCs should be used to provide guidance on how licensees may meet the legislated requirements. This creates uncertainty and inconsistency with respect to compliance expectations and enforcement without the necessary checks and balances.

Another trend is the reference to draft REGDOCs (see Sections 1.2., 1.3, 2, 5.0, 6.4.2, 6.4.3, 6.9, 6.10 and 7.1.3.1). Cameco believes that only published REGDOCs should be referenced to permit a thorough review of a draft REGDOC and its implications.

Cameco also found this REGDOC to be particularly difficult to follow and understand because the language used is inconsistent, many undefined terms and acronyms are used, there are redundant sections, and the body of the document does not align with the form of the appendices.

Exacerbating this is the use of operational concepts for assessing a nuclear facility that do not apply to some or all life cycle phases of a waste management facility. These ambiguities prevent a consistent and common understanding between and among licensees and regulatory staff and this, in turn, creates unclear expectations and compliance uncertainty.

As a result, this REGDOC creates ambiguity and confusion and Cameco strongly recommends that the REGDOC be substantially revised in light of licensee comments and then be released for a further consultation.

Scope (Section 1.2)

Cameco's main comment is that radioactive waste management at uranium mines and mills should be exempt from the scope of this REGDOC. As recognized in CSA N292.0-14, *General Principles for the Management of Radioactive Waste and Irradiated Fuel*, Section 1.4 and A.8, the nature of the wastes generated and the facilities appropriate for long-term storage of wastes at uranium mines and mills requires specific safety assessments for which sufficient guidance is provided in REGDOC-2.11.1, *Waste Management, Volume II: Management of Uranium Mine Waste Rock and Mill Tailings* (Volume II).

It is no answer that this REGDOC is intended to apply "as applicable" to mines and mill licensees because this would require licensees to interpret and re-write what is a complex and confusing document thereby creating uncertainty and a significant administrative burden without any corresponding benefit. In the event specific guidance regarding the safety case applicable to mines and mill waste is not currently included in Volume II, it would be simpler and more efficient for such guidance to be added to the next revision of it.

Although Volume II is specific to mines and mill waste management, the above comment on "as applicable" applies generally to all licensees because the Scope section does not clearly identify which licensees the REGDOC applies to (e.g. lower-level risk licensees), which type of wastes it applies to (i.e. low, intermediate or high level) and the facilities and sites that are within the scope of "long-term waste management facility or site" (e.g. facilities that do not require a safety analysis). This, in combination with little to no guidance on how the graded approach applies in relevant sections, creates what may have been intended to be a "one size fit all" document that is not helpful to any licensee.

Design Requirements (Sections 6.2 to 6.4)

These sections refer to several design requirements. In Cameco's view, this REGDOC is not the appropriate document to set out design requirements and we recommend that these references should be removed.

Institutional Control (Section 6.10)

The third paragraph states that licensees "should limit reliance on institutional controls as a safety feature to a few hundred years". With respect to mines and mills, it would be preferable to recommend that the "design of new facilities should minimize reliance on institutional controls to the greatest extent possible" and delete the reference to "a few hundred years" because many passive controls are designed to extend well beyond a few hundred years as is the Saskatchewan institutional control program. Alternatively, Cameco recommends that the third paragraph be deleted in the event that the scope of the document is not revised to exclude its application to uranium mines and mills.

Cameco also recommends the deletion of “[w]ith the end of institutional control” from the fifth paragraph because this gives the false impression that institutional control is insufficient to control future risks when the purpose of facility design is to address the risks that will not be managed by institutional controls.

Identification of Human and Environmental Receptors (Section 7.1.1.3)

The process for receptor selection and characterization is in CSA documents, which were and are developed with the participation and approval of the Canadian Nuclear Safety Commission. Cameco believes that this section should merely reference CSA N288.6-12, *Environmental Risk Assessments at Class I Nuclear Facilities and Uranium Mines and Mills* to avoid inconsistencies with this standard.

Cameco would welcome the opportunity to review and comment on a revision to this draft REGDOC.

If you have any questions with respect to the above, then please contact liam_mooney@cameco.com.

Sincerely,



R. Liam Mooney
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c. Mr. Peter Fundarek, Director Canadian Nuclear Safety Commission