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**From:** Kim Hanson <Kim\_Hanson@cameco.com>  
**Sent:** June 25, 2019 6:20 PM  
**To:** Consultation (CNSC/CCSN)  
**Subject:** Cameco's Comments on REGDOC-2.11.1, Waste Management, Volume I: Management of Radioactive Waste  
**Attachments:** Cameco's Comments on draft REGDOC-2.11.1 Waste Management.pdf

***Sent on behalf of R. Liam Mooney, Vice-President SHEQ and Regulatory Relations***

Please find the attached correspondence with the subject matter "*Cameco's Comments on REGDOC-2.11.1 Waste Management, Volume I: Management of Radioactive Waste*".

If you have any questions with the respect to the above, please contact R. Liam Mooney at (306) 956-6685 or [liam\\_mooney@cameco.com](mailto:liam_mooney@cameco.com).

**Kim Hanson**  
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June 25, 2019

VIA EMAIL

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Dear Mr. Torrie:

**Cameco Corporation's Comments on draft REGDOC-2.11.1, Waste Management, Volume I: Management of Radioactive Waste**

Cameco Corporation (Cameco) has reviewed and prepared the following comments on the draft REGDOC-2.11.1, Waste Management, Volume I: Management of Radioactive Waste (the REGDOC) for the Canadian Nuclear Safety Commission (CNSC).

We have the following general comments:

Our review of the REGDOC identified instances in which the language used could create confusion and misunderstandings for the public. In general, the REGDOC would be clearer if the graded or risk-based approach is referred to when requirements vary with the types of wastes and types of facilities or activities (e.g. storage facilities and disposal facilities). Although the Preface refers to the graded approach and REGDOC-3.5.3, we do not believe that this is sufficient for a REGDOC that may have an elevated public interest.

Related to the above comment, the REGDOC does not clearly identify when more than one licensee may manage particular radioactive wastes at different times (i.e. waste generators may not remain waste owners) and does not make it clear that requirements vary with the type of wastes and activities.

The REGDOC also refers to draft or unpublished REGDOCs. Cameco understands that the development of related REGDOCs may be concurrent. However, in our view, this practice does not permit adequate review by licensees of draft REGDOCs. It is our view that until a REGDOC has been finalized, it should not be referred to in another draft REGDOC.

The following are specific Cameco's comments and recommendations by section:

Section 1.1: At the end of the bulleted list, insert "Requirements and guidance will vary with the type of radioactive waste being managed and the type of facility using a graded approach commensurate with the relative risks."<sup>55</sup>

Section 2: This section does not differentiate between waste generators and waste owners. We recommend adding "This includes waste generated by another licensee and transferred under a

commercial agreement to a waste owner to process, store and dispose...” after the first sentence in the first paragraph.

Section 3: The definition of “radioactive waste” should reproduce the definition in REGDOC-3.6 in order to clarify that only the waste owner may declare when material is waste.

Section 4:

Bullet 1: The words “so as to avoid imposing an undue burden on future generations” should be deleted because licensees cannot manage wastes against a subjective, undefined standard.

Bullet 5: Documentation is not implemented; this bullet should be amended to read “develop and implement programs, procedures and instructions to ensure...”

Bullet 7: This is an example where the graded approach should be expressly included by adding “commensurate with the scale of the licensed activity and the inventory” at the end of the bullet.

Section 5: The first three bullets duplicate licence requirements and should be deleted. The words “managing programs in the last sentence should be replaced with “management systems”.

Subsection 6.1: The second last statement in the last bullet is incorrect: Near-surface facilities are not the only practical option for long-term management of the mine and mill tailing wastes and such a statement is misleading. This sentence should be deleted.

Subsection 6.2: This first sentence could be interpreted to mean that waste characterization occurs at every step in waste management. It and the last sentence should be combined and revised to read “The licensee shall perform and record waste characterization at the appropriate step(s) for the management of the specific radioactive waste by considering, as applicable, the physical, mechanical, chemical, biological, thermal and/or radiological properties.”

Subsection 6.3: One licensee may transfer wastes to another licensee. This first sentence should be amended to read “For waste it generates or for which it assumes ownership, the licensee shall develop...”

This is the only subsection of Section 6 that does not apply to all licensees. We recommend that it be moved to the sections 9 and 10 specific to storage facilities and disposal facilities, respectively.

Subsection 7.3: The first sentence should be revised to “Subject to prescribed waste acceptance criteria, the licensee shall take into consideration...”

Subsection 7.6: Uncertainty would be avoided by replacing the first sentence with “...in a manner that provides for the protection of people and the environment, and in accordance with regulatory requirements at the time of the licence application.”

Section 8: Licensees may purchase packaging. This first sentence should be revised to “The licensee shall use engineered waste packages, as required, to contain radioactive wastes...”

Subsection 9.3: Not all facility states apply to all waste storage facilities. The first sentence should be revised to “...shall design new storage facilities to fulfill the applicable safety functions for the states defined for the facility...” and the bullets should be deleted.

Subsection 9.4: The last paragraph should be replaced with “The licensee shall verify that the equipment or SCCs important to safety perform as per design performance criteria...The report shall provide assurance that all licence conditions have been satisfied.”

Subsection 9.5: The last paragraph on page 8 should be replaced with “The licensee should maintain, test and inspect in accordance with the design intent.”

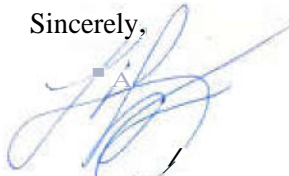
Subsection 10.8: In the second bullet, it is unclear whether “early warning” refers to passive controls, such as environmental monitoring or active controls such as on-line sensors. In Cameco’s view, a post-closure monitoring and maintenance plan is acceptable to ensure ongoing performance of the decommissioning objectives as part of an institutional control program while the maintenance of an automated early warning control system that requires “operation and maintenance” is an unreasonable expectation post-closure. A site requiring this type of rigorous ongoing monitoring should not be considered for institutional control. We recommend replacing this bullet with “development of a post closure monitoring and maintenance plan to ensure that the decommissioning objectives continue to be met”.

The reference in the third bullet to the CNSC expectation that “active controls” will be used during institutional control monitoring is inconsistent with the Province of Saskatchewan’s expectation in its institutional control program that passive controls will be used whenever possible to reduce maintenance requirements for a site. In addition, the goal of many decommissioning plans is to allow unrestricted access to future land users. We recommend replacing this bullet with “implementation of active controls, where required, to prevent unauthorized access to the site”.

If the above recommendation is accepted, then the Note should be deleted because it would be unnecessary and it also confuses controlling land use with controlling access to a site.

If you have any questions with respect to the above, then please contact the undersigned at 306-956-6685 or [liam\\_mooney@cameco.com](mailto:liam_mooney@cameco.com).

Sincerely,



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