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VIA EMAIL

Mr. Brian Torrie
Director General
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Dear Mr. Torrie:

Cameco Corporation's Comments on Post-Consultation Revisions to REGDOC-2.7.1 and REGDOC-2.7.2 Drafts

Cameco Corporation (Cameco) has reviewed and prepared the following comments on the Post Consultation Revisions to the draft REGDOC-2.7.1, *Radiation Protection* (the REGDOC-RP) and the draft REGDOC-2.7.2, *Dosimetry: Ascertaining Occupational Dose* (the REGDOC-AOD), both published in December 2020, for the Canadian Nuclear Safety Commission (CNSC).

REGDOC-2.7.1

As a general comment, Cameco continues to be concerned with the negative trend in REGDOC drafting that increases uncertainty and inconsistency with respect to compliance and potential enforcement. Based on our experience, when "may" is used to express an option and "should" is used to express guidance, but both are also used to mean "that which is advised", some inspectors will interpret options and guidance as *de facto* requirements and/or interpret "should" as either guidance or a requirement regardless of risk.

Dose constraints (4.1.5)

To eliminate the possibility that any of the options would be considered by inspectors as requirements or require a licensee to demonstrate why the option is not in use, Cameco strongly recommends that **4.1.5 *Oversight of the application of ALARA*** be revised to ensure that none of the enumerated options in the last paragraph containing "should" statements could be interpreted as requirements by revising the introductory paragraph to read "Examples of other measures that may be integrated…"

We are particularly concerned about Option 5 on dose constraints. Cameco reiterates our previous recommendation that this option be deleted from the REGDOC given that the CNSC decided it was unnecessary to include dose constraints in the *Radiation Protection Regulations* because the regulatory expectations for radiation protection programs and the licensee progress in adopting the optimization principle were sufficient so that there is no risk that any inspector or officer treats dose constraints as a *de facto* regulatory limit. While dose constraints could be an example of a measure a licensee may choose to incorporate into a radiation protection program, the REGDOC will create regulatory uncertainty unless it is clear that dose constraints are not a requirement.

Action Levels (6)

Cameco was pleased to see that the CNSC has revised this section of the REGDOC from the consultation version in response to industry comments. We note, however, that CNSC's response to Comment #48 on the consultation version states that "action levels are a concept of continual improvement". Cameco disagrees. In our view, there are other mechanisms in the radiation protection program for continual improvement, but Action Levels are not one of them. Although the text in this version of REGDOC appears to align with the CNSC definition of an Action Level, *i.e.*, an indicator of a potential loss of control of the radiation protection program, the misinterpretation of the intent of Action Levels expressed in the consultation response should be corrected by CNSC in the response to this round of comments to prevent any inconsistent application of action levels in the future.

Labelling Containers (20)

Cameco continues to support an industry-CNSC workshop to ensure labelling for containers and devices containing nuclear substances are applied based on a common understanding of terminology and the function labelling serves in different circumstances.

Cameco continues to support risk-based labelling based on who has access to the containers and devices and the location of the same. Within a licensed facility where NEWs are trained to recognize hazard levels and understand the boundary and point-of-access signage that identifies risk, affixing detailed labels creates an administrative burden that has no corresponding safety benefit. For waste containers, an unnecessary safety risk is created through the additional handling required to sample, analyze, and affix labels.

Appendix C: Monitoring for Radioactive Contamination

Cameco recommends the following:

> C.2 should be revised to clarify that monitoring such as swipe tests is to confirm that operational controls are effective in limiting the spread of contamination and is not monitoring of monitoring. We support the revision to include "Contamination monitoring should be performed at set locations and on a schedule based on risk of contamination. Follow up monitoring should be performed any time contamination is identified, either through routine monitoring or identified and reported through other means."
>
> C.7 should be replaced with general information and work procedural details should be deleted.

C.9 should be revised to read as follows: "Examples of acceptable approaches for mixtures of radionuclides include identifying the isotope for which the detector has the lowest response at the applicable contamination limit or use of a source that contains the radioisotope mixture to be measured." This would make it clear that there is more than one approach for mixtures.

C.11 should be revised to read as follows: "Licensees should be in a position to calculate the appropriate uncertainty for any measurement that is made and compared against a contamination criterion. For criterion associated with regulatory limits, a 2σ uncertainty (i.e., 95% confidence) would be appropriate, but may vary for other measurement types." This would provide for a risk-based approach.

C. 12 should be revised to read as follows: "This requires determination of both the MDA for the detector and isotope of interest, and the uncertainty (e.g. 2σ for comparison to regulatory limits). This would provide for a risk-based approach.

REGDOC-2.7.2

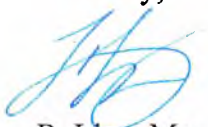
Air Monitoring to Ascertain Worker Dose (7.2)

This section limits confirmatory monitoring to bioassays, which is unnecessarily restrictive and inconsistent with NUREG 1400 and US NRC Regulatory Guide 8.25 (referenced in NUREG 1400). The uncertainty this creates would be avoided if the second last paragraph in this section were revised to read as follows: "This may be accomplished by confirmatory monitoring using personal air sampling in the breathing zone or bioassay. In order for the air sampling to be considered representative of breathing zone air, the ratio of intakes calculated from air monitoring to the intakes calculated from either personal air samples or confirmatory bioassays, averaged over all workers participating in the confirmatory monitoring, should be more than 0.7. The same ratio for each individual worker should be more than 0.5. For further information, consult NUREG-1400, Air Sampling in the Workplace [20] and/or US NRC Regulatory Guide 8.25 Rev 1 June 1992."

Cameco also participated in the industry comments and supports the comment table attached to the submission of the Canadian Nuclear Association.

If you have any questions with respect to the above, then please contact John Takala at (306) 956-6486 or john_takala@cameco.com.

Sincerely,



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