Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

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Supplementary Information

Presentation from Erwin Dreessen

Renseignements supplémentaires

Présentation d’ Erwin Dreessen

In the Matter of the

À l’égard des

Canadian Nuclear Laboratories (CNL)

Laboratoires Nucléaires Canadiens (LNC)

Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility

Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d’une installation de gestion des déchets près de la surface

Commission Public Hearing
Part 2

Audience publique de la Commission
Partie 2

May 30 to June 3, 2022

30 mai au 3 juin 2022

Canada

Canadian Nuclear Safety Commission
Part II of hearings re NSDF project
Intervention by Erwin Dreessen
May 31, 2022

Context

Question #1

Table 13 of the WAC document shows that Cobalt-60 would be present in a concentration of 94,700 Bq/g at placement and 15,300 Bq/g at closure.

But Table 4 had set a concentration limit of 1,000 Bq/g for long-lived beta-gamma emitting radionuclides (if non-leachate controlled waste) or 10,000 Bq/g (for leachate-controlled waste).

Why would such high concentrations of Cobalt-60 be allowed?

(Cobalt-60, with a half-life of 5.27 years, is to be considered long-lived as it is more than the half-life of Cs-137.)

Question #2

a. Model results show Aluminum, Phosphorous, Copper and Lead in the Ottawa River to exceed drinking water quality standards as set by Health Canada. Yet staff concludes, without evidence, that any exceedences would not be measurable. The Commission should insist that surface water standards be adhered to.

b. Almost all post-treatment exceedences are already observed in the baseline data for surface water quality (and model results show that they are made worse for 28 of 39 elements). Why would CNL not be tasked with cleaning up the effluent, even if it is the result of legacy Chalk River operations? Who else will do it?

Ref.: Environmental Assessment Report, PDF pages 236-246

Question #3

Table 6.1 of the Environmental Assessment Report lists just five radionuclides potentially in surface water. But Table 13 of the WAC document shows that 30 radionuclides would be licensed to go into the facility. Why the discrepancy?

If it is because the missing radionuclides would not show up in surface water, what is such an assumption based on?

Ref.: Environmental Assessment Report, PDF pages 236-246

Question #4

The discussion on surface water in the Environmental Assessment Report regards the 50 years of operations and the period after the 300-year institutional control. Why is there no discussion of effluent during the 30 years of closure and the 300-year institutional control period?

Ref.: Environmental Assessment Report, PDF pages 236-246

Question #5

Will the Commission ensure that CNL will make all results of monitoring of surface and groundwater publicly available on a timely basis?

Q1: Why would Cobalt-60 concentration levels be allowed to far exceed the set limits?

Q2: a. Why would concentrations of Aluminum, Phosphorous, Copper and Lead in the Ottawa River be allowed to exceed Health Canada standards?

b. Why should CNL not be compelled to clean up Chalk River's legacy contaminations?

Q3: Why the discrepancy between the number of radionuclides shown to be potentially in surface water and the full list of radionuclides that will go in the mound?

Q4: Why no discussion of surface water after the 50-year operation period and during the 300-year institutional control period?

Q5: Will all monitoring data of surface and groundwater be publicly available as they are produced?