



**Final submission from
Ipsos Custodes**

**Mémoire définitif de
Ipsos Custodes**

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 and June 2022

Mai et juin 2022



IPSOS CUSTODES

Canadian Nuclear Safety Commission
c/o Senior Tribunal Officer, Commission Registry
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Ottawa ON K1P 5S9

Ipsos Custodes, as a lawful intervenor in these proceedings takes this opportunity to finalize the case that critical flaws exist in the application made by the proponent, such that the licence change requested cannot be accepted at this time. Furthermore, the licence, if granted, would not satisfy the honour of the Crown since critical information required by Indians to consult the Crown has not been made available.

Firstly, the proponent and the court's own agents both submit that, as designed, a person living on the site of the proposed nuclear landfill in the future could be subject to up to one thousand (1000) microsieverts of effective dose per year, as defined by the regulations. This circumstance is acknowledged by the proponent as reasonably unpreventable due to absence of institutional controls after four hundred (400) years. The fact that this reasonably attributable dose is over three times higher than the published design criterion could be considered by objective observers as deceptive. It is clear that the proponent does not consider "human intervention" post-closure as credible. However, this would not be consistent with "Good Industry Practice" as defined in the contract between His Majesty's agent, AECL, and the proponent. Good Industry Practice must consider what practices are present worldwide in the nuclear industry. In this case, this proposed project would not be allowed for unrestricted use in the United States of America due to 10 CFR § 20.1402. The US regulations specify that the applicant must include dose to "individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances". In fact, that section specifically mentions effective dose "from groundwater sources of drinking water", the very issue here.

Ipsos Custodes moves that the proponent and this court must consider human intervention activities on the future impact of the proposed nuclear facility, including it in limits to the design basis. A reasonable member of this court would require the proponent to consider human intervention as a reasonably foreseeable outcome given that it explicitly cannot be prevented and the timespan involved. Canadians, future and current, should not be expected to shoulder nuclear risk in a greater amount than our neighbours to the South.

Second, the design criterion of the proposed nuclear landfill of three hundred (300) microsieverts per year effective dose is unethical given the disposal limit today is ten (10) microsieverts. Disposal and abandonment as included in the regulations today allows for up to one hundred *de minimis* exposures per year. Even if the proposed nuclear facility met its design criterion of three hundred (300) microsieverts per year (which it doesn't, *supra*), the reduction in margin to the radiation dose limits represents an unfair and unjustifiable risk to future inhabitants of the project site.

Ipsos Custodes moves that it is unethical to burden future generations with radiation dose depending on the locale of Canada they live in. Ipsos Custodes suggests that should the proponent still wish to use the design as a disposal facility—and not merely a storage facility—that the radioactive nuclear substances, as defined in the regulations, be limited to a point that the potential effective dose does not exceed a *de minimis* ten (10) microsieverts per annum to the most exposed population.

Thirdly, neither His Majesty nor the proponent have provided adequate information required by His Majesty's loyal Indians to adequately assess the future impacts and thereby be fully consulted. The final radiation dose, including methods and values assumed—especially subsurface water velocity—cannot be audited even by experts in the field. Ipsos Custodes, on behalf of all Indians, requests the ability to fully interrogate and comment on all final radiation calculations made by the proponent, especially those made with the aid of the computer code RESRAD. Furthermore, should the proponent and His Majesty rely on the output of RESRAD, that the court, as an agent of His Majesty, is bound by honour to provide access to RESRAD to the Indians so requesting access and audit. In dealing with Indians, His Majesty cannot rely on a paternalistic ethos where decisions are immune from interrogation, the proponent here has asked the court to do just that. Given the pitiful information provided by the proponent, one must assume that the levels of radioiodine and plutonium should be further limited in the proposed project. The exact limits that Ipsos Custodes would recommend cannot be determined without the specific missing information detailed, *supra*.

Ipsos Custodes moves that the honor of the Crown cannot be satisfied until His Majesty's loyal Indians have been given the information to properly consider if the design criterion relating to effective dose is met, *supra*. This particular information must include the ability to recreate, *ab initio*, the models used to quantify the effective dose to the exposed future population. In specifics, Ipsos Custodes, and all loyal Indians require the ability to consult His Majesty on the effective dose models, *inter alia*.

For all these reasons the *curia* cannot grant the licence requested by the proponent at this time.



Curtis Russell
Owner/Operator
Ipsos Custodes