Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 22-H7.23

File / dossier : 6.01.07
Date: 2022-03-28
Edocs: 6756787

Written submission from Morgan Brown

Mémoire de Morgan Brown

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

Canada

Thoughts on the Proposed Near-Surface Disposal Facility

As an introduction, I have over 32 years of experience with AECL and CNL, as a research engineer in nuclear reactor safety programs. I worked at Whiteshell Laboratories for 12 years, and since then at Chalk River Laboratories. I live in Deep River, about 16 km from the proposed Near Surface Disposal Facility (NSDF). I am also involved with preserving and telling Canada's nuclear story, as president of the Society for the Preservation of Canada's Nuclear Heritage, Inc. I am an employee of CNL and a volunteer with the SPCNHI, but this intervention is representative of my views and opinions alone, and does not necessarily represent those of either of these organizations.

A fundamental concern of mine is "this fragile earth, our island home". While I am trained as a mechanical engineer, and am not an expert in waste management, stewardship of the earth is very important to me. For decades my wife and I have tried to reduce our impact on the earth: volunteering with recycling programs; house upgrades to reduce energy use; composting; owning an electric car (our favourite vehicle to date); and reusing and restoring waste material (e.g., bicycles, wood).

Now to the matter at hand. Chalk River Laboratories has been, and remains, a remarkable and valuable site for its contributions to both Canadian and international nuclear science and technology. Some of its infrastructure is tired and life-expired, primarily because much of it dates to the 1940s, 50s and 60s (the site construction contract was let on 1944 August 23). However, I have been impressed and pleased by the efforts expended by AECL, and more lately CNL, towards addressing the legacy waste and decommissioning issues, and revitalizing the site. It is morale-boosting to see large, coherently-designed facilities replacing a seemingly random assortment of old buildings with haphazard appendages.

Replacing or renewing old buildings requires a great deal of planning, sampling and historical research to quantify the waste accumulated over 50 to 75 years, prior to the commencement of demolition and reconstruction. Much of the demolition waste is recycled or shipped to off-site landfills, after first being analyzed for radioactive contamination. However, there is a substantial amount of low-level radioactive waste, estimated to reach 1,000,000 m^3, which requires on-site disposal.

Constructing a multi-celled, multi-layered Near Surface Disposal Facility is a reasonable, practical and cost-effective means to sequester low-level waste while the activity diminishes. Future generations should not be burdened with the responsibility for dealing with this waste, because it is a legacy of previous generations as well as my own, and we have benefitted from the processes which generated it. More importantly, future generations may not be able to deal with the waste, due to economic or societal problems; we have the ability to deal with this waste now, in a reasonable fashion, and we must not assume that there is a better solution available or that future Canadian society will be able to implement it.

Based upon my long experience with AECL and CNL, I have no doubts that the proposed NSDF is a well-designed, reasonable, cost-effective and do-able solution for low-level radioactive waste. As radar pioneer Sir Robert Watson-Watt stated "Give them the third best to go on with; the second best comes too late, the best never comes."

Morgan Brown, M.Eng., P.Eng., FCNS