



November 8, 2022

Karine Glenn
Strategic Project Director
Nuclear Waste Management Organization

Re: Submission on Draft Integrated Strategy for Radioactive Waste

Dear Ms. Glenn:

I am writing in response to the Nuclear Waste Management Organization (NWMO) Draft Integrated Strategy for Radioactive Waste, released for public comment on August 25, 2022. Moltex is developing an advanced small modular reactor (aSMR) with the potential to significantly reduce waste volume, and we feel that our perspective – as well as the impact that technologies like ours can have on radioactive waste – merits consideration in the final strategy.

Recommendation 1 states that **low-level waste should be disposed of in multiple near-surface facilities with implementation resting with the waste owners**. We would add that near-surface repositories should also be an option for short-lived intermediate-level waste (ILW), in line with international best practices.

Recommendation 2 states that **intermediate-level waste should be disposed of in a single deep geological repository (DGR) with implementation by a single organization, the NWMO**. The report references deep boreholes as potentially beneficial for smaller quantities of ILW, but does not consider their potential for longer-lived waste forms. We do not believe there is a technical basis for only using deep boreholes for ILW, and would recommend considering their use for HLW, especially small volume HLW scenarios.

Finally, we believe that Recommendation 2 should consider how new reactor technologies will impact quantities and types of waste. A broad strategy that includes and embraces new technologies, such as those being developed by Moltex, is important for SMR and new generation reactor developers and users.

Recommendation 3 states that **a third-party, independent of the implementing organizations, should oversee the implementation of the strategy**. Regarding this, we note that Natural Resources Canada has always overseen strategy implementation for high level waste. We believe that they are well-positioned to oversee all nuclear waste strategy, and that having them in this role would be the best and most efficient solution. We fear that adding another administrative body will create additional, unnecessary bureaucracy, and could extend already long timelines.

Recommendation 7 states that **we need to take action now and not defer to future generations**. Although not leaving matters for future generations is appropriate, it may also be appropriate to ensure we do not take irreversible actions – or actions that would impose significant costs to reverse – when the overall waste picture is evolving. For example, storing large quantities of nuclear reactor fuel in a DGR could hinder the potential to reduce the quantity and hazard through fuel recycling.



Regarding **Additional Recommendations Outside of the Scope of the ISRW**, we see value in further studying processing and volume reduction methods. This is consistent with a recommendation we made in a previous letter submitted on December 22, 2021.

Ultimately, we believe that volume and radiotoxicity reduction should be part of the waste management strategy, and would benefit all parties, particularly the public, both present and future.

Sincerely,

Rory O'Sullivan
Chief Executive Officer, Moltex