

Thank you for the opportunity to provide comments on the revised project description [1] for the proposed near surface disposal facility at Chalk River Laboratories.

Please consider expanding the project description to include the following additions:

- An explicit commitment to ensure the health and safety of persons and the protection of the environment (HSE), and details of the radiological criteria to be used in the assessment of long-term safety [2, 3];
- An explanation that the waste acceptance criteria (WAC) are derived from the safety case to ensure that long-term HSE criteria are met;
- Details of the facilities and equipment needed to ensure compliance with the WAC, particularly the anticipated need to restrict the inventory of long-lived radionuclides;
- An explanation of how waste that is non-compliant with the WAC will be dispositioned; and
- Details of the stepwise approach used in the development of the proposed facility to optimize the site, design, operation, safety, etc [4, 5].

Further to the last point, above, the revised project description [1] states that it is planned to co-dispose both low level wastes and intermediate level wastes in the proposed facility. Given that near surface disposal is not considered appropriate for the disposal of intermediate level wastes [6], the proponent (Canadian Nuclear Laboratories) and its funding agencies (Atomic Energy of Canada Limited and Natural Resources Canada) may wish to consider alternative disposal concepts that could have a higher probability of success.

I believe that attention to these comments will provide additional confidence in Canadian radioactive waste disposal, assist the Commission in its decision-making, and assist Canada in demonstrating that it has met its international obligations under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management [7].

I appreciate the opportunity to provide comments, and I hope that my input contributes to the achievement of the best possible path forward for disposing of Canada's radioactive waste.

#### References

- [1] Canadian Nuclear Laboratories, *Project Description: Near Surface Disposal Facility at Chalk River Laboratories*, 232-509200-ENA-001, Revision 1, 2016 September.
- [2] Canadian Nuclear Safety Commission, *Assessing the Long Term Safety of Radioactive Waste Management*, G-320, 2006.
- [3] International Atomic Energy Agency, *The Safety Case and Safety Assessment for the Disposal of Radioactive Waste*, SSG-23, 2012.

- [4] International Atomic Energy Agency, *Disposal of Radioactive Waste*, Specific Safety Requirements SSR-5, 2011.
- [5] International Atomic Energy Agency, *Near Surface Disposal Facilities for Radioactive Waste*, Specific Safety Guide SSG-29, 2014.
- [6] International Atomic Energy Agency, *Classification of Radioactive Waste*, General Safety Guide GSG-1, 2009.
- [7] International Atomic Energy Agency, *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*, International Law Series No. 1, 2006.