



**CMD 25-H9.12**

Date: 2025-10-24

**Written Submission from  
Victoria Obedkoff**

**Mémoire de  
Victoria Obedkoff**

In the matter of

À l'égard de

**Denison Mines Corporation**

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Licence Application to Prepare Site and  
Construct for Denison Mines' Wheeler  
River Mine and Mill Project

**Denison Mines Corporation**

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Demande de permis pour la préparation de  
l'emplacement et la construction du projet  
de mine et d'usine de concentration  
d'uranium Wheeler River de Denison Mines

**Commission Public Hearing**

**Audience publique de la Commission**

December 2025

Décembre 2025

## Comments for the Canadian Nuclear Safety Commission regarding the Denison Mines Corp. Wheeler River Project Proposal

Submitted October 24, 2025, by Victoria Obedkoff, Saskatoon, Saskatchewan

Thank you for the opportunity to come before you today. Recently I heard an eminent hydrologist speak on climate change, global water futures, and the cryosphere. Modelling based on current global data shows an alarming picture. Climate changes are accelerating faster than expected. The global average temperature is on track to rise from the current 1.5 degrees C above the pre-industrial level to just over 4 degrees before the end of this century, making life unsustainable in many parts of the world. Permafrost is thawing more rapidly than expected, and this will accelerate. It is essential to protect our precious sources and supplies of water to sustain human life and that of all of our relations. Have CNSC Commissioners and staff considered how massive permafrost thaw might impact the proponents' plan to remediate the site and protect ground and surface waters and area habitat? And how might extreme weather events, heavier rainfalls, flash flooding, and permafrost melt affect the wastes landfill planned for the site? Could stored wastes start to mobilize?

I request that you consult with global water futures hydrologists, such as at the University of Saskatchewan, and ask the proponents to build into their modelling best practices projections for future precipitation in northern Saskatchewan, over the long time periods necessary for safely storing radioactive and heavy metal wastes, before considering granting any license to proceed. Proper remediation and safe storage of contaminants simply cannot be assured, and I don't believe should be risked. Private profit-taking from uranium exports in the short-term of 15 years are not worth the price of contaminating life in the North for thousands of years.

My second concern is with the proponent's choice of sulphuric acid –based rather than alkaline-based leaching. I am not a chemist, but from my reading on the matter, sulphuric acid has more challenges and negative consequences for groundwater and for the environment. Acid leaching can leave behind high salinity and some heavy metals in the groundwater. And acid leaching can lead to more difficult and expensive groundwater restoration efforts compared to alkaline leaching. Radionuclides like **radium-226**, **thorium-230**, and **polonium-210** may migrate through groundwater flow paths, posing long-term radiological hazards. If mobilized, these isotopes can contaminate groundwater for a long time to come. The persistence of acidic and sulfate-rich waters may increase the mobility of uranium decay products. The environmental degradation caused by sulfuric acid in –situ recovery has both ecological and human health implications. Tipping the neutral pH conditions of aquifers towards acidic can eliminate microbial and aquatic life. Toxic metals and radionuclides may bioaccumulate in food chains, affecting plants, animals, and humans. Exposure to contaminated water can lead to health problems such as kidney damage, neurological disorders, and increased cancer risks due to chronic ingestion of uranium and radium isotopes.

Alkaline leaching is now used predominantly in the United States for commercial operations, due to environmental concerns and restoration challenges associated with acid

leaching. Will the CNSC question the proponent on their choice and require compliance with the best leaching practices used in the U.S.? While climate change and melting permafrost can change the equation of radioactive contaminants to mobilize, the choice of acidic or alkaline leaching is surely within the proponent's full control. I concur with the 1993 report of the Joint Federal-Provincial Panel on Uranium Mining Developments in Northern Saskatchewan which stated: ***"Residents of the Athabasca region should be able to hunt, fish, harvest plants, drink the water, and use the land throughout the region without fear of being poisoned by past, present or future mining activity."*** I hope you will take it upon yourselves to ensure this continues to be the case.

My third concern has to do with the management of radionuclides and other persistent wastes as a long-term liability. Considerable amounts of radon are released during the in-situ process. Reclamation challenges include radium releases which cannot be controlled. The proponents do not give enough detail on waste form characterization, long-term storage specifications, or institutional controls. I hope the CNSC will require full waste characterization studies, mandated engineered disposal facilities meeting radiation safety best practice, and a funded long-term stewardship plan that includes institutional controls and monitoring backed by secure and adequate financial resources.

The cost of sufficient remediation is high. The IAEA reports that insufficient remediation budget is one of the main public concerns related to ISR and the uranium mining industry in general (2016). It should be the shared responsibility of the proponent and of the CNSC to outline remediation objectives and together determine a reasonable budget for achieving these targets. I urge CNSC to mandate transparency and access to documents regarding remediation budgets and concrete plans. For long-term remediation and wastes management.

The United Church of Canada, of whom I am a member, has a long-standing policy calling for a moratorium on any expansion of existing nuclear facilities and /or the establishment of new nuclear facilities as well as a moratorium on new uranium mines and uranium exploration. The proposed moratorium extends to the export of nuclear technology and materials. The latter concern relates to the proliferation of nuclear weapons, made possible in part by exports of Saskatchewan uranium to countries such as India who has not signed the United Nations Non-Proliferation Treaty, as well as to countries such as the United States who are walking back their commitments to non-proliferation. In the U.S., uranium enrichment takes place at facilities controlled by the military, making the line between civilian and military applications easily blurred. The World Council of Churches views nuclear energy and nuclear weapons as two sides of one coin. Canada needs to take greater steps to ensure exports of uranium will not end up in dirty bombs or in the hands of warmongering nations.

United Church policy also calls for extensive investment in renewable energies, and energy conservation. World-wide, renewable energy is overtaking nuclear and fossil fuels. It comes online faster and at much lower costs than nuclear. Timeliness and scale is urgent in lowering greenhouse gas emissions and lessening the severity of climate impacts to come. The negative health effects of nuclear power and of the entire nuclear fuel cycle, starting with

uranium exploration and then mining and milling and nuclear power plants and waste disposal, have been consistently underplayed and dare I say, denied, in previous CNSC hearings and decisions that I have closely watched. An authoritative and statistically significant KKK German government study of the health of children living in proximity to nuclear power reactors found higher rates of leukemia. When this study was brought as evidence by an intervenor to the Darlington hearing in March 2011, a senior CSNC staff said that probably it was a virus that was responsible for the sick children, not cumulative low doses of radiation in routine emissions from the nuclear power plants. Denial of cumulative effects of low-level radiation on vulnerable members of our societies, such as children and pregnant women, is not acceptable.

The United Church of Canada has consistently heard from victims of negative health and environmental impacts in nuclearized regions and communities where our churches are placed. I heard firsthand the testimonies of residents contracting lung and other cancers in the Elliot Lake and Serpent River areas in Ontario. Denison Mines Corp. oversaw uranium mining in this region between 1957-1992 and will be aware of the health and environmental impacts, while I acknowledge their contribution of jobs in the region for some years. For more detailed information, I have included a reference to the book of their stories at the end of my submission.

In conclusion, I have had the good fortune to grow up in British Columbia, a province that consciously chose not to go nuclear. The public fought off uranium exploration at China Creek, B.C. in the late 1970s. When 3 protesters were arrested for their non-violent action of sitting down on the road to block access to uranium exploration, the judge ruled that the existing law did not adequately protect the public from contaminants and released the protesters. Around this time the B.C. Medical Association released their report on the health effects and hazards of uranium exploration and mining. This authoritative study and report is still found online. Shortly afterwards the B.C. government of the day put a moratorium on any uranium exploration. This has now become permanent through an order-in-council. I am asking and hoping that the current CNSC Commissioners will pause their decision until substantial questions from intervenors and from yourselves have been adequately addressed. And even then, I stand opposed to expanded uranium mining in Saskatchewan for the reasons mentioned above, although I have just touched on a few. Risking contamination of large areas of life in the North for thousands of years is too high a price for short-term profits for private interests.

Yours sincerely,

Victoria Obedkoff,, PhD Social Ethics

## **References:**

**This is My Homeland: Stories of the Nuclear Industries by People of the Serpent River and the North Shore of Lake Huron**, edited by Lorraine Rekmans,, Keith Lewis, and Anobel Dwyer, a Serpent River First Nation publication, 2003. Testimonies and history about the effects of the nuclear industry on an Indigenous group and territory in Ontario.

**Energy in the One Earth Community: Current Challenges and Future Options for Energy Use in the Canadian and Global Contexts**, a policy statement by the 37<sup>th</sup> General Council of the United Church of Canada, August 2000

**Earthworks** ( a U.S. based NGO) fact sheet on In-situ leaching

**WISE uranium project** backgrounder on uranium in-situ leaching