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**Written Submission from the
Ecological Justice Working Group
of the Justice, Mission and
Outreach Committee, United
Church of Canada, Regions East**

**Mémoire du
Ecological Justice Working Group of
the Justice, Mission and Outreach
Committee, United Church of
Canada, Regions East**

In the matter of

À l'égard de

Denison Mines Corporation

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

Denison Mines Corporation

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

Submission to the Canadian Nuclear Safety Commission

Comments on Denison Mines Corporation Wheeler River Mine and Mill Project

By Ecological Justice Working Group of the Justice, Mission and Outreach Committee, United Church of Canada, regions east

October 24, 2025

Communication Contact: Dr. Mary Lou Harley

Thank you for this opportunity to comment on the licensing application by Denison Mines Corp. for an in situ recovery (ISR) uranium mine (also termed in situ leaching (ISL)) and the processing facility (mill) in the Athabasca Basin in Saskatchewan.

Uranium mining using ISR has not been done in Canada which necessitates incorporating information on the impacts when ISR has been used in other countries. As part of the licensing process, the proponent submitted an Environmental Impact Statement (EIS) and the Environmental Assessment (EA) has been done by CNSC staff with recommendations, upon which we comment as they affect this stage of licensing.

The United Church of Canada has a long history of policies, documents, and submissions to calls for public input on social, environmental and ethical issues relating to resource development issues. This Submission is grounded in that extensive base including the foundational policy *One Earth Community*, a copy of which is in the Appendix.

The United Church has acknowledged the harmful role that past false assumptions of human separation from and superiority over the natural world has had in the commodification of nature and environmental destruction. In its policies supporting this Submission, the United Church has clearly articulated humanity's fundamental integration with the rest of creation along with a call towards responsibility for the care of creation.

Further, the United Church notes that such crucial understandings are at the root of the richness and wisdom of Indigenous worldview and draws your attention to the importance of that wisdom in this licensing process.

Indigenous Sovereignty and Rights

Information posted on the CNSC website for the Environment Assessment (EA) for the Denison Mines Corp. Wheeler River Mine and Mill Project indicates failures already to support the rights of the Indigenous people in this process.

CNSC material notes that there are concerns raised by Indigenous communities about contamination of the groundwater and potentially also contamination of surface water by the ISR process. However, material in the proponent's Environmental Impact statement (EIS) fails to respond to those valid concerns with the known relevant information on long-term groundwater contamination and failed mitigation attempts in other countries. Further, the proponent fails to acknowledge the limitations of drawing conclusions from their own modelling and that of a pilot project, not a commercial operational mine.

The proponent is not only to be seen carrying out engagement activities with Indigenous communities but must demonstrate that

- Indigenous sovereignty is being respected and will continue to be fully respected
- constitutional and legal frameworks are being strictly adhered to, including
 - Section 35 of the Constitution Act, 1982, which affirms Indigenous treaty rights;
 - the United Nations Declaration on the Rights of Indigenous Peoples Act (UNDA), which mandates free, prior, and informed consent (FPIC); and
 - related landmark Supreme Court rulings
- Indigenous communities are being meaningfully informed, seriously consulted and fully involved in all decisions that affect their lands, resources, and communities
- the proponent's interactions with Indigenous people meet both legal obligations and the moral responsibility to uphold the principles of reconciliation.

Denison Mines Corp. must state and demonstrate throughout their material, that they understand the meaning and requirements of consultation, treaty rights, and the proponent's role and responsibilities as being Treaty People.

Alternatives

The health and environmental issues of open pit and underground uranium mining methods are well known in Canada; however, the seriousness of associated negative impacts and unsolved problems of ISR are not part of the Canadian mining experience.

For ISR uranium mining, some of these concerns reported from the United States and Australia include:

- contamination issues for aquifers, related to the choice of solution and the limits to the predictability of geochemical interaction of the leaching liquid on the rock;
- contamination risks for the groundwater due to the downstream spreading of leaching liquid as a radioactive toxic plume outside of the uranium deposit;
- contamination of site surface from spills of leaching solution
- significant and on-going releases of radon from drill holes;
- radon releases during recovery of the uranium from the leaching liquid
- disposal issues for the waste slurries and waste water produced from the ISR and mill processes.¹

Restoring natural groundwater conditions to their pre-ISR condition and pre-ISR uses after completion of the leaching operations has not been possible. Groundwater restoration is a very tedious process not fully understood:

To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to baseline conditions.²

¹ Mudd, Gavin M. "Critical review of acid in situ leach uranium mining: 1. USA and Australia." *Environmental Geology* 41 (2001): 390-403.

<https://www.i2massociates.com/downloads/s002540100406.pdf>

² Otton, J.K. and Hall, S. "Overview of production and remediation issues." International Atomic Energy Agency Report. 2009 Version v1

<https://inis.iaea.org/records/hy9k1-1rx43>

For most companies, the reason for the choice of ISR for uranium mining is mainly the economy of the process over open pit or underground mining. That economic advantage is lost if protective regulation is prioritized or remediation of affected aquifers and groundwater to their baseline conditions become required.

Repeatedly, regulations set for mitigation and remediation are minimized or ignored as impractical and unrealistic given the serious level of contamination, the complexities of issues including hydrological, geochemical, and radiological considerations, the extensive timeframes required, and the cost.

At this stage of the CNSC process, there is no discussion as to why ISR has been proposed by Denison Mines Corp. for this location, and the comparison information is not provided whereby the issues associated with the mining alternatives can be assessed and critically compared.

From a simplified view:

- conventional mining involves removing ore from the ground, crushing it and treating it to remove and recover the wanted minerals,
- ISR chemically treats the ore in the ground to dissolve minerals and pumps the resultant liquid to the surface to recover the dissolved minerals.

In the case of uranium ore, both above ground and below ground methods involve radioactive exposures and contamination, and radioactive wastes that require long-term management.

Since ISR involves a grid of bore holes, hoses and processing facilities, there is less surface disturbance than convention mining.

However, ISR causes very significant below-ground disturbance with groundwater contamination, potential impact on surface water bodies and loss of ability to use that precious water resource for all its pre-ISR purposes.

This CNSC process should require that these alternatives are critically assessed for the mining of this area.

The Licensing Application

The licensing application requires that the Commission has determined that the Project is not likely to cause significant adverse environmental effects and has set out enforceable conditions in the license.

The CNSC staff recommended and the Commission concluded that, taking into account the implementation of proposed mitigation and follow-up monitoring program measures, the Project is not likely to cause significant adverse environmental effects as defined by CEEA 2012.

Given the reality of the groundwater impacts experienced by ISR uranium mines; unresolved related problems at other acid-based ISR uranium mines globally, and the failure to remediate any ISR operation in the United States, it is implausible that the extensive Denison Mines Corp. ISR uranium mine project could avoid significant adverse environmental effects.

Neither the 5 EA conditions listed in Table 12.1 of "CNSC Environmental Assessment Report: Wheeler River Project August 2025" nor commitments listed in the "Denison Mines Corp. Commitments Register (Version 5, December 2024)" provide evidence of planning or ability to avoid serious impacts suffered by other ISR mines and expectable at this Denison Mines Corporation Wheeler River ISR Mine and Mill Project.

Appendix: *One Earth Community*

A foundational policy of the United Church of Canada

General Council: 34th General Council, 1992; Record of Proceedings Page Ref. 1992 ROP, pp. 127–128
<https://generalcouncil.ca/document/gc34-one-earth-community>

GC34 One Earth Community

Our Vision

Life is a gift from God and elicits our respect, awe and reverence. We are one Earth community, one human family and we share one destiny. We cherish and respect the rich diversity of life and celebrate the beauty of the Earth. For us, as members of one family, love and caring are the basis of our relationships with one another and with nature. The Earth community is a sacred trust. We recognize God's call to live in harmony with this total community, to draw on the Earth's sustenance responsibly, and to care for it that all may benefit equitably now and in the future.

The Threat

This vision has been distorted. Now the life of the Earth community is threatened with destruction. In the name of human progress, exploitation (often called development) has caused widespread and increasing poverty and increasing devastation of nature. The present world economy, with the powerful influence of technological, industrial and economic interests, makes the rich richer and the poor poorer. It has promoted consumerism and greed and the preoccupation of people and nations with money, control and power at the cost of justice and cultural and spiritual enhancement. Massive international debt enslaves many peoples, even as it enriches others.

The streams and seas which give life are used as dumps for our wastes; the forests which give life are destroyed for commercial gain; the soil which gives life is abused both by those constrained by poverty and by those seeking short-term profit. We have become alienated from ourselves, from one another and from nature. Past development strategies have degraded cultures, threatened future generations and led to the death of millions of

our brothers and sisters and the destruction of nature. They have intensified the exploitation of women and children and have further marginalized indigenous peoples. Although they have given short-term temporary benefit to a substantial minority, who have been in a position to take advantage of them, for most they have meant agony.

The Way Forward

We are at a major turning point at which we can either continue along the path of self-destruction, or turn toward restoration and renewal. We need to reaffirm the importance of justice, frugality, humility and reverence for life and nature. The human family, in which the rich have dominated the poor as well as nature, must be re-oriented. The human family must learn to live in just relationship and to bring itself back into harmony with nature and the universe. Every member of the family must be a full participant in the web of life, sharing equally in the work to be done and the fruits of that work. Power must be shared equitably so that the unique value of all members is recognized and protected.

To live within such a holistic relationship requires our rediscovering the spiritual connection that unites us to the land and that nourishes our souls as well as our bodies. We need to listen to those communities which have remained close to the Earth, and recognize and incorporate the wisdom culled from the traditional links of women and Native peoples with nature. We have to realize that there are limits to "growth" as industrialized societies have defined it. The Earth's resources are being depleted and we must end the unsustainable over-consumption of industrialized societies. We must make institutions accountable to the people whose lives they touch. We must restructure economic institutions so that they serve the needs of the poor and function in harmony with ecological reality. Environmentally-sound technology can assist in building a more sustainable future.

Ethical Principles for Environment and Development

1. Human societies must bear a responsibility toward the Earth in its wholeness.

The Earth, with its diverse life forms, is a functioning whole. Whatever we humans do to the web of life, we do to ourselves. The Earth is God's creation

and we need to respect its inherent value and right to protection. States, financial institutions, multinational corporations and individuals have the obligation to respect the functioning of the whole. Rights and obligations need to be defined within this perspective.

2. To be both people-oriented and ecologically sound, all development strategies must be founded on a just economic order, with priority for the world's poor.

We affirm the indivisibility of social justice and justice to the environment. Injustice and environmental destruction have related systemic causes. Present international economic relations oppress the peoples of developing countries and jeopardize the global environment. Industrialized countries virtually confiscate commodities of the South by paying prices nowhere near parity in relation to the products they sell to developing countries. Foreign debt exacerbates this oppression and has led to a net flow of capital and resources from the South to the North. The dominant development model itself is a contributing factor with its emphasis on capital intensive industrialization, megaprojects and economic growth. Women and children bear a particularly heavy share of the burdens of poverty and environmental degradation.

The global economic system must be reordered, as called for by the South, if poverty and environmental destruction are to be effectively addressed. Trade relations must facilitate rather than threaten greater self-sufficiency. We must acknowledge the need for limits to "growth" and a just sharing of resources in the interests of sustainable sufficiency for all. The development of environmentally safe technology, rooted in the needs and experiences of the people who benefit from it, becomes essential in this context. Technologies already in the hands of women and Aboriginal communities provide important insights for a more just and sustainable approach. The transfer of appropriate technology from the North as well as financial resources to address environmental concerns in the South must not be made at the expense of existing development assistance.

3. Lifestyles of high material consumption must yield to the provision of greater sufficiency for all.

The addiction to lifestyles based on possession and high material consumption patterns is a prime cause of social inequity both between the North and the South and within societies throughout the world. These lifestyles also represent a serious threat to ecological well-being because of their excessive use of natural resources and generation of waste and pollution. Industry and government are prime promoters of consumption-oriented lifestyles.

Domestic and international economic policies should be oriented toward helping all people meet their basic needs and enjoy the sustenance of creation. A lifestyle that enhances relationships within communities would foster the spiritual connection between humanity and nature, and prove more spiritually satisfying than the current addiction to material wealth. It would also encourage the pursuit of nourishing activities such as the arts. Learning to live in a new way not based on exploitation and injustice would allow all to flourish in health and wholeness.

4. Environmental destruction must stop and humanity must understand itself to be collectively responsible both for the destruction and for the repair thereof.

The cost of environmental damage, created by lifestyle, technology and industrial activities, is to be borne by all who cause it. Acknowledging that responsibility requires a dramatic shift in lifestyle.

In addition, there are corporate, governmental and international institutions that must be held accountable for particular environmental destruction related to their activities. Not only should they have to bear the costs for clean-up, but also for changing their products and processes to minimize the potential of such damage in the future.

5. The rights of future generations must be protected.

Future as well as present generations of all peoples have a right to existence and to their share in the Earth's sustenance. This right places further responsibilities and limits on the way in which resources may be used in the present. These rights need to be incorporated into legislation and internationally binding agreements.

6. The carrying capacity of the Earth, regionally and globally, must become a criterion in assessing economic development.

In the North, the excessive use of natural resources and the pollution generated by these countries are threatening the sustaining capacity of the Earth's ecological systems. For Southern nations, economic relations organized bilaterally and through international financial institutions have forced them to exploit their own natural resource base. The increase in population within this context adds further stress. Arriving at sustainable patterns of development will only be achieved with dramatic reductions in Northern consumption, the alleviation of poverty in the South and the attainment of reduced rates of population growth.

7. The biodiversity of the Earth must be respected and protected.

The rich abundance of life forms on the Earth is threatened by human activity. The international patenting of biological life forms has led to the exploitation of genetic resources and should be opposed. An alarming number of local food crops and medicinal plants have also disappeared as a result of deforestation, and other assaults against nature.

The diversity of species should be respected and revered as part of the wonder of the Earth. International agreements must be negotiated that provide greater protection for the bio-diversity of the Earth while respecting the sustainable development needs particularly of the South.

8. Militarism must yield to nonviolent approaches to conflict resolution.

Ecological well-being and opportunities for development are hampered by military conflict with its exorbitant drain on financial and natural resources. Despite recent reductions, nuclear weapons and other weapons of mass destruction are still among the most immediate and long-term threats to the Earth community. This threat is exacerbated by other forms of military activity including the arms trade and the transfer of military technology. Military and repression technology are often used to subjugate people. War is ecologically disruptive in various ways. It results in widespread abuse and destruction of both the human and physical environment. The forced migration of peoples and the establishment of refugee camps has a

significant impact on the environment well beyond the war-torn region. Disarmament must be a priority. Tensions must be resolved through peaceful means and strategies for non-violent conflict resolution developed.

9. Decision-making for just and ecologically-sound development must ensure the participation of individuals and groups, especially those most affected by the project.

All persons should have the opportunity to participate, individually and with others, in the formation and implementation of decisions affecting their lives. Governments and institutions must be accountable to their people. The opportunity to participate in decision-making is important for women, indigenous peoples, children and the poor who are particularly vulnerable to the impact of environmental degradation. The expertise of women in environmental concerns, such as food production, has long been ignored and is desperately needed by the global community.

10. Both opportunities for learning and access to knowledge must be assured in order to facilitate sustainable development.

Universal access to opportunities for learning is a fundamental right. Learning can help cultivate personal responsibility and concern for humanity and the Earth. The central role of women as educators and carriers of information and culture should be recognized. People should be assured easy access to information and communication on all issues, including environment and development.

11. Development decisions must emphasize prevention of ecological damage.

Economic responsibility for safety studies concerning activities which may damage the environment should fall on the initiators of such activities. Funds for studies should be managed by a board with representation from the proponent, government, other stakeholders and citizens with no specific investment. Decisions should be based upon adequate environmental, social and cultural impact assessments. The emphasis should be on prevention of damage rather than confidence in after-the-fact technological solutions to environmental problems.

12. Procedures and mechanisms must be established ensuring a transnational approach to environmental issues and disputes.

Since the environmental crisis has global dimensions there is an urgent need for increased mutual accountability of nations. Procedures and mechanisms should be supported that would: prevent environmental damage, settle disputes among nations on environmental issues and hold states accountable for their actions. Internationally accepted standards of environmental performance need to be developed. In order to enforce such standards, an international court or other mechanism should be created.