



June 11, 2025

The Honorable Tim Houston
Premier of Nova Scotia
7th Floor, One Government Place
1700 Granville Street
Halifax, NS B3J 1X5
premier@novascotia.ca

RE: The many human health risks of uranium exposure, exploration, and mining

Dear Premier Houston,

As a follow-up to our February 19, 2025 letter, we are writing again on behalf of the Nova Scotia committee of the Canadian Association of Physicians for the Environment (CAPE) to implore you to urgently reinstate the Uranium Exploration and Mining Prohibition Act repealed by Bill 6 in March of this year.

CAPE is a non-partisan, physician-led organization concerned with the health of Nova Scotians. There is clear evidence that uranium exploration, mining, processing, and the resulting waste create significant and long-lasting damage to human health.

Since March, your government has issued requests for proposals to promote uranium exploration in three rural areas of Nova Scotia. This opens the province to serious health and environmental harms posed by uranium exploration and mining. These dangers were clearly documented four decades ago by the McCleave Commission of Inquiry on Uranium,¹ and reiterated in 2008 by expert witnesses who provided evidence for the 2009 legislation prohibiting uranium exploration and mining.²

The physics of uranium have not changed in the intervening years, nor have the health risks that are posed when it is disturbed.

The ban on uranium exploration and mining was not “lazy public policy.” Rather, it was wise, cost-saving, well-studied, and critically important public health policy. We are deeply concerned that it was overturned without proper consultation with healthcare experts. As physicians and healthcare providers, it is our duty to call your attention to the health dangers this decision has unleashed.

¹ <https://novascotia.ca/natr/meb/pdf/ofr612.asp>

² https://nslegislature.ca/sites/default/files/legc/bills/61st_1st/3rd_read/b039.htm

Uranium is a heavy metal that poses health dangers because it is chemically toxic, and also because it is radioactive, its decay by-products even more so.

Uranium exploration, mining, and processing are associated with a wide range of adverse human health problems. These are most pronounced among workers in the industry who are directly exposed to uranium and its by-products, but they also affect the general population exposed through water- or airborne contaminants mobilized or released from these activities.

Peer-reviewed studies from around the world confirm that mining and contaminated groundwater, which mining can exacerbate, are the primary sources of uranium contamination exposure.³

Uranium exposure can cause kidney failure, diminished bone growth, organ and genetic damage, infertility, birth defects, and increased infant mortality. Because it is radioactive, it is also linked to lung cancer, along with several other kinds of cancer.⁴ Radiation disproportionately harms children and females, and uranium exposure is particularly dangerous during pregnancy.

Please refer to CAPE's accompanying fact sheet on health risks of uranium for more detailed information from peer-reviewed scientific and independent medical/expert sources.

Proponents of uranium mining claim – falsely – that we need to mine uranium for medical isotopes used in diagnostic tests. These days, medical isotopes are produced in research reactors that don't require uranium, and are most safely made in devices called cyclotrons.

The proponents fail to mention that the tailings and waste from uranium mines, estimated to remain radioactive for 100,000 years, need to be contained and cared for in perpetuity.

There are only two uranium mines in operation in Canada. Both are in Saskatchewan. Proponents of uranium mining in Nova Scotia claim that Saskatchewan shows us it can be done "safely and environmentally responsibly."⁵ These claims are not supported by Health Canada or Environment and Climate Change Canada.

The Saskatchewan context is not like Nova Scotia's. Saskatchewan is nearly 12 times the size of Nova Scotia, with a population density of just two people per square kilometre (km²).⁶ The Saskatchewan mines are located more than 600 km from any towns or cities.⁷ Nova Scotia, by

³ <https://www.sciencedirect.com/science/article/pii/S0160412020320626>

⁴ <https://link.springer.com/article/10.1007/s10552-010-9669-4>

⁵ <https://tmans.ca/images/End%20the%20Uranium%20Ban%20Report%202025.pdf>

⁶ <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810000101>

⁷ <https://www.cnscc-ccsn.gc.ca/eng/uranium/mines-and-mills/#OperatingUraniumMinesandMills>

contrast, is the second most densely populated province in Canada, with 18.4 persons per km². Uranium mines in Nova Scotia would be situated much closer to towns and within rural communities.

Furthermore, Nova Scotia's average annual precipitation is more than three times that in northern Saskatchewan.⁸ This is especially important to know as uranium is highly soluble in water, making exploration and mining riskier in areas with high precipitation.

Nova Scotia's Department of Natural Resources (DNR) has published detailed maps⁹ showing uranium deposits and an interactive map¹⁰ of uranium risks to well water in the province. In 2020, DNR published an extensive review of private well contaminants, including uranium.¹¹ They noted that about 42% of Nova Scotians depend on private wells, and that up to 6.5% of them (25,100 people) already have dangerous levels of uranium in their well water, the ingestion of which can cause kidney disease,¹² and other serious health issues.

In 2018, DNR scientists reported on 40 years of activities related to uranium in well water in the province.¹³ Crucially, DNR scientists observed that the way we use land can introduce changes to groundwater flow and chemistry, which can mobilize uranium stored in the aquifer. Drilling or mining increases exposure of water to potential contamination.¹⁴ Uranium exploration can also be very disruptive and contribute to these risks.

The U.S. state of Virginia, which like Nova Scotia has known deposits of uranium, banned its exploration and mining in 1982, because of the health and environmental risks associated with these activities. Virginia's uranium ban withstood a challenge in the U.S. Supreme Court in 2019. Uranium exploration and mining are not permitted in British Columbia and Quebec, and in many other countries.¹⁵

As physicians and healthcare professionals whose priority is human health, we ask you and your government to look to these examples, and to the medical and scientific research on uranium contamination.

⁸ <https://www150.statcan.gc.ca/n1/pub/38-20-0001/2021001/I03-eng.htm>

⁹ https://www.researchgate.net/publication/338867646_A_Uranium_in_Well_Water_Risk_Map_for_Nova_Scotia_Based_on_Observed_Uranium_Concentrations_in_Bedrock_Aquifers

¹⁰ https://fletcher.novascotia.ca/DNRViewer/index.html?viewer=Uranium_Risk

¹¹ https://novascotia.ca/natr/meb/data/pubs/20ofr04/ofr_me_2020-004.pdf

¹² <https://ehp.niehs.nih.gov/doi/abs/10.1289/ehp.02110337>

¹³ https://novascotia.ca/natr/meb/data/pubs/18ofr06/ofr_me_2018-006.pdf

¹⁴ <https://pmc.ncbi.nlm.nih.gov/articles/PMC3653646/>

¹⁵ <https://www.wise-uranium.org/uregmr.html>



When you campaigned for re-election in the fall of 2024, you did so on a platform of making the province more “livable,” promising to improve healthcare. Mining uranium is not improving healthcare; it is imperiling it. Uranium exploration and mining will have immediate and long-term negative impacts on the health of Nova Scotians, disproportionately affecting those living in rural areas where the activities are being carried out. Women and young children, including the unborn, face the greatest health risk among the nearby populations.

Uranium mining will add yet more strain on the province’s overburdened healthcare system, particularly as it grapples with an influx of rare cancers and diseases associated with uranium contamination. We can reasonably foresee that this will significantly add to health care costs, and just as importantly, make it harder to attract and retain physicians and nurses to work in the province; healthcare providers will understandably be concerned about the effects of uranium contamination on their own health and the health of their families.

Along with our duty to act in the best interests of our patients, we recognize that as Nova Scotians, we are all treaty people, bound by the Treaties of Peace and Friendship. We are in solidarity with the Assembly of Nova Scotia Mi’kmaw Chiefs, who wrote to you on March 4, saying, “It is unacceptable that the government is fast-tracking the extraction of natural resources that will permanently devalue and damage our unceded lands and adversely impact the exercise of our section 35 rights.”¹⁶

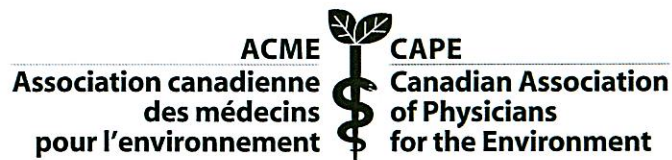
CAPE is a non-partisan, physician-led organization with over 36,000 supporters across the country. It plays a unique role at the intersection of health and the environment, bringing an evidence-based perspective delivered by the trusted voices of doctors, other health professionals, and researchers to support community and planetary health and enhance equity. CAPE Nova Scotia represents more than 100 physicians and other healthcare providers across the province.

We are requesting an opportunity to meet with you as soon as possible to further discuss the dangerous health implications of uranium exploration and mining in Nova Scotia.

Sincerely,

Laurrette Geldenhuys, MBBCH FFPATH MMED FRCPC MAEd
on behalf of CAPE Nova Scotia, ns@cape.ca

¹⁶ https://www.facebook.com/story.php?story_fbid=960202099620709&id=100068927840682



c.c. Honourable Tory Rushton, Minister of Natural Resources
Honourable Tim Halman, Minister of the Environment and Climate Change
Honourable Michelle Thompson, Minister of Health and Wellness
Honourable Trevor Boudreau, Minister of Energy
Karen Gatien, Deputy Minister of Natural Resources, Deputy Minister of Energy
Honourable Kent Smith, Minister of Fisheries and Aquaculture
Honourable Greg Morrow, Minister of Agriculture
Honourable Becky Druhan, Attorney General and Minister responsible for the Office of Equity and Anti-Racism
Honourable Twila Grosse, Minister of African Nova Scotian Affairs
Honourable Dave Ritcey, Minister of Communities, Culture, Tourism and Heritage
Honourable Nolan Young, Minister of Labour, Skills, and Immigration
Honourable Leah Martin, Minister responsible for L'nu Affairs
Claudia Chender, Leader of the Opposition
Derek Mombourquette, Leader of the Liberal Party
Janice Zinck, Executive Director of Geoscience and Mines
Kim Doane, Executive Director of Energy Resource Development