

This submission is from a personal perspective as a Registered Nurse and a concerned Nova Scotian:
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My submission is targeted towards the area of 'minerals' in Nova Scotia. However I acknowledge the interconnectedness between the four areas (biodiversity, forests, minerals and parks), and how the management of each one of these areas impacts on the others. As a Registered Nurse, I am also acutely aware of all the interconnected determinants of health, from our physical environment, to employment (versus unemployment), to social factors. My thoughts, ideas and concerns reflect these connections, and guide my strong opinion that, as the citizens of this province, we must proceed very carefully with the mining sector.

MY VISION

Although there is a long history of mining in Nova Scotia, I understand that it presently only accounts for one to two percent of employment and gross domestic product for Nova Scotia. However I think it is safe to say that there is an increased amount of interest from mining companies in extracting minerals in Nova Scotia, and that increased mining is expected to be good for our economy. I also understand that the moratorium on uranium mining is restricting the mining companies' ability to proceed with exploration and subsequent economic opportunities. Nova Scotians are obviously going to have to choose between the risks of mining and the benefits of mining.

One benefit of lifting the moratorium on uranium mining is then increased mining activity which is expected to lead to a stronger economy. As I will explain, I do not believe that the benefits of lifting the moratorium on uranium mining outweigh the health risks. Therefore **my vision of Nova Scotia's management of minerals includes accepting that this sector may be limited, and that we should therefore invest in government policy that creates sustainable economic development instead.** Since we are a very small province, with some population scattered through most areas, and watersheds everywhere, the government of this province should proceed with great caution in this sector. The integrity of the long term health of our environment (and therefore our population's health) should not be compromised for short-term economic gain. **We need a leadership that is willing and able of exploring the many economic alternatives.**

The Honourable David Morse has said that uranium mining itself would be good for Nova Scotia's economy. There would be local job creation. However uranium mines generally have a life span of 15 years, and frequently less. Typically local people will be employed during the construction phase, but only experienced hard- rock miners will be wanted to operate the working mine. And then there are all the hidden costs: the cost of properly managing the radioactive tailings for many generations to come, the cost of cleaning up the tailings when critical problems arise, and the cost of the negative health impacts. Again, the long- term economic risks outweigh the short- term economic benefits. **My vision of Nova Scotia's mineral management includes a permanent moratorium on uranium mining.**

The Honourable David Morse has said that “it is clear that it is scientifically safe to mine uranium”. I disagree with his findings. Workers at uranium mines and mills typically receive annual effective radiation doses higher than those considered acceptable for members of the general public. It is generally accepted that there is no level of exposure to radiation which is absolutely safe. Any exposure carries some risk, but the greater the exposure the greater the risk. Stephen Lewis has declared that the Elliot Lake uranium mines in Ontario, where 16 out of every 20 worker deaths were due to radiation- induced lung cancer, were “a moral and human outrage”. **We need a leadership that is willing and able of exploring the many economic alternatives.**

Depending on the winds, water courses and soil around mine sites, radioactive materials can be transmitted long distances. Radioactive substances can be stored in the animals and plants we eat and then deposited into our bodies. Such radiation has been shown to cause or contribute to cancers of the lung, stomach, breast, liver, kidneys, pancreas, thyroid, gonads, lymph nodes, bones ,four types of leukemia, somatic cell death, general aging effects and germ-line tissue damage which results in future mutations and increased sickness. Many of these may not show up until years after the initial exposure. **My vision of Nova Scotia’s mineral management includes a permanent moratorium on uranium mining.**

Nuclear energy has been promoted as a ‘green source of energy’. This is very misleading. Nuclear energy produces huge amounts of greenhouse gases in the early part of its ‘life cycle’. The mining produces carbon emissions and pollutes water and soil; its byproducts are highly toxic, containing 200 known cancer agents. The processing of uranium into fuel, reactor construction and decommissioning, and waste management produce huge amounts of greenhouse gases. “Germany has passed legislation to down-phase and gradually close down its nuclear reactors. It tried storing high-level waste in under ground salt mines in Moresleben. Now huge salt blocks are falling from the shaft’s ceiling. To prevent total collapse, authorities are proposing to fill the shaft with a special concrete, 4 million cubic feet, taking 15 years to complete, at a cost of \$3 billion CDN.” (Taken from Bill Adamson, *Climate Change and Nuclear Power*, ICUC Educational Cooperative, 2006.) “...a U.S. study in 2000, *Federal Energy Subsidies: Not All Technologies Are Created Equally*, which suggests that during its fifteen years of development, nuclear received thirty times the financial support as wind per kilowatt hour, even though wind power provides 5 times the jobs and 2.3 times the electricity per amount of investment” (Harding 2007: p. 213- 214). In Canada, the March 2008 federal Conservative budget gave an additional \$300 million to further develop the Candu reactor. Nuclear energy is expensive, it is not green, and it poses serious health risks. **We need a leadership that is willing and able of exploring the many energy alternatives. My vision of Nova Scotia’s mineral management includes a permanent moratorium on uranium mining.**

THE STRENGTHS

The main strength we have in the mineral sector of Nova Scotia is that it is still not a strong segment of the economy. We have a chance to tread lightly, to move slowly, and

to develop it wisely. **We can still choose to not go down the wrong path. With a permanent ban on uranium mining, we can still choose to not risk long term environmental and human health for short term economic gains.** We can insist on alternatives.

THE ISSUES

I started by pointing out the interconnectedness of the four sectors (biodiversity, forests, minerals and parks), and the determinants of health, such as physical environment, employment and social factors. **The mineral sector, like the other three, affects our health. That is the main issue.** We want to be healthy. We want healthy families. We want healthy communities. There are choices; there are alternatives; we don't need to go down a path that has more risks than benefits. **We need a permanent ban on uranium mining.**

COMMUNITY'S PRIORITIES FOR THE FUTURE

Chester Municipal Council has passed a resolution that they would like to see the provincial government implement a permanent ban on uranium mining. They have agreed that, whatever way mineral exploration develops in our community, it must be done with the uranium moratorium in place. I am obviously concerned about the economy of our community; we need and want our young people to stay. But foremost in mind is that I want a healthy community. The Nova Scotia government has embraced primary health care. Prevention of illness is a key objective of primary health care. Since this area is thought to have deposits of uranium, it is very possible that we will have to look for alternative economic opportunities, away from mining. It is easier to prevent problems, than deal with the economic and health costs of uranium mining.

ESSENTIAL GUIDING VALUES

The most essential guiding values are:

- the protection of the health of the population
- economic growth that is sustainable

When I speak of the health of the population, I am referring to the World Health Organization of health, that is, "...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This definition of health includes all the determinants of health, such as employment, safe workplaces, access to the healthcare system, and a physical environment that does cause illness.

When I speak of sustainable economic growth, I refer to growth that meets the needs of the present without compromising the ability of future generations to meet all their needs.

Uranium mining obviously does not meet these guiding principles. **We need a permanent ban on uranium mining.**