

Deep Geologic Repository for Low and Intermediate Level Radioactive Waste

Registry Reference #: 06-05-17520

From: Peter Ormond, Concerned Citizen,
President, Hamilton Centre Riding, Green Party of Canada

Imagine that you were in charge of something very, very dangerous; something that threatens all creatures on earth that contact it. What would be the first that you'd do, create a shroud of secrecy around it, perhaps? Yes of course.

Well, **humanity has created this material**, and it's called nuclear waste. The first step is to acknowledge publicly that the uranium cycle including mining, enrichment, power generation, reprocessing, nuclear weapons generation and nuclear waste storage are a threat to all of humanity.

Einstein was highly concerned about the proliferation of nuclear technologies in the hands of human beings if the critical responsibility necessary to manage such a powerful technology was not also advanced.

The responsibility lies with awareness and acknowledgement of the impact of our technologies on the greater planet. The challenge is that radiation cannot be seen. Sophisticated gadgets are necessary to detect it. Hence management of radioactive materials is a huge undertaking.

We also have that **shroud of secrecy** in the Canadian Nuclear Safety Commission, the Nuclear Waste Management Organization, Atomic Energy Canada Limited, the military complex and other countless highly-paid agents.

What is the second thing that you'd do? Try to get rid of this deadly material somehow, and if it can't be destroyed, hide it, right? Correct.

Historically, much of the nuclear waste legacy has been dumped quietly on Mother Earth's surface.

Mounds of radioactive materials on military zones in Lewiston, NY, near Niagara Falls, New York are a testament to this, as they slowly seep into Lake Ontario. There are many other sites in the US. Likely there are many more that we aren't aware of today.

In Canada, we also have our legacies. Chalk River has had major releases, with radioactive waste now lying buried along waters that ultimately feed into the Ottawa River. Abandoned uranium mine tailings in Elliot Lake and Bancroft are forgotten, yet slowly contaminate the innocent communities. Most other formal nuclear release 'events' have likely been kept below the radar.

Deadly nuclear waste has been used to enrich military munitions with catastrophic effects for:

- 1) military targets,
- 2) soldiers exposed to radioactive dust which is now being linked to PTSD (post traumatic stress disorder), and:

- 3) citizens and communities that experience ongoing exposure to radioactive materials through birth defects, cancers and other health impacts.

Digging a hole and burying nuclear waste does not make sense for several reasons.

The Deep Geological Repository (DGR) is Ontario Power Generation's proposed solution to managing our nuclear waste legacy. On the shores of Lake Huron, OPG proposes to blast a 680 metre deep hole, 1 km from the surface of Lake Huron, and dump all of their low and intermediate level intermediate irradiated waste into it, and then walk away.

I understand that this includes all nuclear waste except for spent fuel rods, which are referred to as high level radioactive waste. We understand that high level waste cannot be stored in a cavern because they create too much heat, destroy the integrity of the surrounding material, cause fractures to form, and ultimately will release radioactivity. The high-level waste must be stored in cooling ponds for 10 years, and then encased in cement again and again for centuries more.

THE DGR is supposed to have a design life of 500,000 years.

Seriously? This is only the year 2,000 AD, and think of all of the changes that have occurred just within our own lifetimes. Assuming a new generation every 25 years, 500,000 years is equivalent to 20,000 generations. We don't know what will happen on the earth between now and then.

Therefore, I am deeply concerned for the danger caused by burying this low and mid-level radioactive waste because over such a long-design life, we don't know what will happen. The DGR risks the contamination of Lake Huron and all of Canada's heartland. Water from Lake Huron feeds into Lake Erie and Lake Ontario, so tens of millions of human beings downstream will also be affected.

The potential risks of a concentrated nuclear waste depot come from many angles including mechanical failure, human error, sabotage / terrorism, and force majeure.

Do the right thing, please. Store the waste above ground so that it can be managed and monitored responsibly. Don't hand a buried problem over to future generations.

On earth we strive for a balance between material and spiritual aspects. Every creature has goodness inherent within us, however, since the splitting of the atom, the material / mechanical / technological side has been developed, while the spiritual awareness has lost resonance. This is why the mechanical side is given high value and priority in today's economy, while the softer sides of kindness, honesty and love receive less value in our world.

It's ironic that we celebrate the spiritual side at someone's eulogy, yet are separated from this important perspective for most of our active lives, when we could contribute to a better planet.

In the grand scheme of things, we're all a blip in time. The earth and the miracle of nature have been handed to us temporarily by previous generations. Naturally then, it is our inherent responsibility to protect Mother Earth during our presence on earth, and to preserve this legacy for future generations.

Let us heed the words of those that have witnessed the wrath of nuclear technologies:

Robert Openheimer, Manhattan Project Director, after 1st A-Bomb test: "Now, I am become death, the destroyer of worlds."

Japan's Emperor Hirohito surrendering after the Hiroshima and Nagasaki bombings: "... the enemy now possesses a new and terrible weapon with the power to destroy many innocent lives and do incalculable damage. Should we continue to fight, not only would it result in an ultimate collapse and obliteration of the Japanese nation, but also it would lead to the total extinction of human civilization."

Albert Einstein: "Our task must be to free ourselves... by widening our circle of compassion to embrace all living creatures and the whole of nature and it's beauty."

Albert Einstein: "The Human Spirit must prevail over technology".

Albert Einstein: "Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius -- and a lot of courage -- to move in the opposite direction."

We had Chernobyl in 1986, and today's Fukushima nuclear crisis is still one to be monitored and managed with the utmost concern by our world. Please let's do the right thing here. Look in the mirror, and ask yourself: "What would my grandchildren appreciate?"

The uranium cycle and related byproducts, including radioactive waste are the earth's greatest threat. Yet, all debts are paid for by the public, and profits are guaranteed for corporations. Right now, the insurance liability in the case of nuclear catastrophe is only a paltry \$75 Million. This is extremely low, and validates that fact that with radioactivity, the risks are so great and the consequences incalculable.

Peter Ormond
<personal information removed>