

## **Nuclear waste disposal: Guaranteed jobs for 250,000 years**

**By Julee Boan**

Most people can appreciate why the Town of Ignace is investigating the economic opportunity associated with becoming a repository for nuclear waste. Times are tough in northern Ontario. The forest industry decline and subsequent mill closures and job losses have left many forestry-dependent communities looking for economic alternatives. And the fact is Canada has nowhere to put the 35,000 tons (2 million used uranium fuel bundles) of nuclear waste we have generated. For more than 30 years, the Federal Government has been eyeing the relatively stable geology of the Canadian Shield as a prime candidate. And for 30 years, the debate has ebbed and flowed.

One might feel that the resolution of the nuclear waste disposal issue has been delayed by design. For Seniors, Baby Boomers and Gen X-ers, the disasters at Chernobyl and Three Mile Island are engrained in our collective memory. When it comes to nuclear, we are cautious and skeptical. However, younger generations, confronted with the reality of carbon emissions and climate change, are facing different and increasingly complicated challenges. It seems that apprehension regarding nuclear fuel and its waste is being lost.

Federal spending has played a significant role in building tolerance and resignation in public opinion. According to Dr. Gordon Edwards, President of the Canadian Coalition for Nuclear Responsibility, the Government of Canada has spent 17 billion taxpayer's dollars promoting nuclear power. Essentially, Canadians have been paying to have ourselves "educated" to support one perspective – a perspective advanced by those who economically benefit from nuclear power generation and a government that has found it nearly impossible to backtrack on short-sighted decisions that have already cost billions of dollars, with billions more in public spending earmarked. However, in spite of attempts to reinvent itself, the facts haven't changed. Nuclear power remains neither environmentally nor financially responsible.

Increased cancer incidence and genetic disorders are among the risks to human health associated with exposure to radiation. In addition, despite Nuclear Waste Management Organization's (NWMO) claims to the contrary, critics, such as Dr. Edwards, argue that the physical, chemical and radiological characteristics of hazards associated with used nuclear fuel are not well-understood. There are 211 radioactive poisons found in a 10-year-old bundle of irradiated nuclear fuel. Only slightly younger than the vintage of waste that northerners could expect to have shipped through our backyard should it be deposited in northwestern Ontario.

The waste is stored in copper and steel containers designed to last more than 100,000 years, on the nuclear industry's assumption that the metal will not fatigue. Based on humanity's poor track record of building things that last, the claim seems irresponsibly arrogant. In addition, penetrating radiation continues to emit from undamaged containers. Based on the U.S. Nuclear Regulatory Commission's exposure limits, a person would receive the equivalent of one chest x-ray for each hour of exposure to an undamaged cask while in transport.

Obviously, there is substantial legislation overseeing the transportation of nuclear waste, both through the Transportation of Dangerous Goods Act and the Nuclear Safety Control Act. Fortunately, there has never been an accident associated with the shipment of used fuel resulting in significant radiological impact; in Canada, there have been over 500 shipments, thousands globally. So far, so good.

However, without a plan to actually phase out nuclear power generation, the wasted fuel shipments will be unrelenting. Based on a projected fuel inventory of 3.6 million fuel bundles, northern communities could expect 53 shipments per month for 30 years. The deep geologic facility will not be sealed until the final shipment has been stowed, a process which could take decades... or longer if Ontario and Canada do not actually phase out nuclear energy. Some advocate that keeping the waste on or near existing nuclear facilities is more responsible in terms of long-term monitoring and transportation costs, including potential environmental and security risks.

Northern communities will be making decisions for generations far into the future, so far into the future it is beyond our comprehension. Nuclear waste remains dangerous for more than 250,000 years. It must be guarded in perpetuity, as there is no known method to destroy it or make it harmless. Do we have the right to burden future generations with this responsibility? Do we have the right to continue the development of an industry that mass-produces persistent, indestructible, highly toxic, carcinogenic materials? Dr. Edwards says no.

It is time for a public process to determine the future role of nuclear energy. A careful examination is required of the full life-cycle of nuclear energy from mining to managing all the waste and comparing the cost and benefits, environmentally, socially and financially, to other energy mix options.

Environment North is hosting a presentation by Dr. Gordon Edwards, President of the Canadian Coalition for Nuclear Responsibility, at 7:30 pm on Friday, April 16<sup>th</sup> at Lakehead University in UC 1017. Admission is free, all welcome. For more information on nuclear power, waste disposal and Dr. Edward's presentation, visit [www.environmentnorth.ca](http://www.environmentnorth.ca) .

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