

The Nuclear Waste Management Organization (NWMO) wants to conduct a high-risk experiment within South Bruce



The NWMO does not have the experience required to plan for eternity*

Ontario Power Generation (OPG) acknowledges that these nuclear wastes will remain hazardous for 100,000 years, far exceeding the span of recorded human history. That is a period of time 20 times longer than the age of the Pyramids, and 10 times longer than the age of the Great Lakes themselves. There are no principles of science that can be used to forecast with confidence what will happen over such a long time period, because the computer models, scientific hypotheses and quantitative methods used to predict cannot be tested or verified against experience in any convincing manner.

Actually the risk of radioactive contamination is ... forever!*

It takes 10 half-lives for a radioactive material to diminish by a factor of 1000. The biological hazard from the plutonium-239 inventory in the DGR will require about 240,000 years to subside through three orders of magnitude... Each atom of plutonium-239 that disintegrates is transmuted into another alpha-emitting radioactive material that has a half-life of about 700 million years. Thus, the hazard from plutonium-239 is not bounded in time by 100,000 years as OPG has indicated in its literature. Plutonium has ample time to escape into a nearby body of water, either quickly or slowly, if there is a serious breach of containment in the repository.

Failures at underground storage of low and intermediate nuclear waste in Germany and USA*

The WIPP project near Carlsbad, New Mexico, became radioactively contaminated by the explosion of an underground drum of nuclear waste. The explosion resulted in the contamination of 21 workers at the surface by plutonium-bearing dust that travelled over 650 metres vertically upwards. Nobody predicted in advance that organic kitty litter used as a packing material would chemically react under the influence of ionizing radiation, generating a flammable gas that would cause a low-level radioactive waste drum to explode and turn into a flame-thrower, deep in the bowels of the WIPP repository.

In Germany, two separate underground projects have failed. Low-level wastes were emplaced in the Aase-II Salt Mine for decades before it was revealed that the repository had failed to prevent radioactive releases. Indeed, leakage of radioactive materials had been occurring for almost ten years before government authorities were notified. The German government has now ordered the removal of all radioactive waste from the Aase-II facility, but it is a difficult job that will take 30 years or more to accomplish, at considerable expense. At the same time, the Morsleben DGR in Germany has also shown signs of failing, as the roof is buckling and the entire repository is in danger of collapsing.

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* (From the 2017 Submission by Dr Gordon Edwards, Canadian Coalition for Nuclear Responsibility to the Canadians Environmental Assessment Association Re: Ontario Power Generation's Proposal for a DGR at Kincardine Ontario, for the burial and abandonment of Low- & Intermediate-Level nuclear wastes)

Independent researchers in Sweden question safety of storing nuclear waste in copper canisters

A number of universities experimented with testing copper's susceptibility to corrosion under various environments. It was thus established that copper's corrosion rate observed during experiments was much higher than that cited in SKB's calculations. In particular, corrosion was shown to be accelerated by heat and radiation emitted by the radioactive waste that was expected to be disposed of in copper canisters. These were the first tests of such kind since the issue of copper corrosion over hundreds of thousands of years had simply not been taken up by scientists before (Bellona Foundation).

Rolling Stewardship is preferable to burying nuclear waste

The rolling stewardship method of managing radioactive nuclear waste maintains it in a monitored and retrievable state at all times, with continual improvements to packaging and environmental protection. Ontario Power Generation says above-ground storage in Kincardine is satisfactory and can continue for decades (Dr. Gordon Edwards, Canadian Coalition for Nuclear Responsibility).

"The dry storage containers have a minimum design life of 50 years. They are actively monitored, and studies indicate that with ongoing maintenance and inspections these containers can be safely used for much longer periods of time. After 50 years the life of the container could be extended, or the used fuel could be repackaged. These decisions will depend on a number of factors, including the timeline for implementing Adaptive Phased Management." (NWMO)

More than 1500 residents of South Bruce and more than 11,700 residents of Ontario have signed a petition to oppose hosting a DGR in South Bruce.

Let's keep up the pressure!

- 1 Tell Ben Belfadhel, NWMO's vice-president for site selection: **"WE ARE NOT A WILLING HOST!"**
- 2 Tell Mayor Robert Buckle and South Bruce councillors: **"Hold a clear yes/no community vote on the proposal to site a nuclear waste dump in South Bruce."**
- 3 Tell MPP Lisa Thompson, MP Ben Lobb and Minister Seamus O'Regan: **"Nuclear Waste should NEVER be abandoned deep below the surface."**

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