



# NOCANDU



## Northern Ontario Coalition Against Nuclear Dumping Underground (NOCANDU)

### Panel Report Criteria for Safety and Acceptability Review

NOCANDU is a community based response to the threat of nuclear dumping underground and seeks to prevent and ward off significant damage and threats to the intergenerational source water supplies of the hydrologic region and connecting waterways.

The Nuclear Waste Management Organization (NWMO), as a proponent and an industry lobby group, is not the organization recommended by the Environmental Assessment Panel Report. The Panel Report required that an NFWMA (Nuclear Fuel Waste Management Agency) be established quickly, at arm's length from the utilities and AECL, that it be subject to multiple oversight agencies and be subject to regular reviews by parliament i.e. The People.

Don't confuse the Panel Report requirements with the industry lobby fiasco - the NWMO fiasco that has evolved in place of the arm's length and accountability requirements prescribed by the Panel Report. The NWMO is not a stable and trustworthy proponent and has shown a propensity to avoid the tough questions and pay off influencers to purchase consent from First Nations and municipalities.

The NWMO is seeking an illegitimate and inequitable pathway to establishing a nuclear fuel dumping, re-processing and distribution ground, not just for spent fuel storage but for reactor decommissioning waste and the reprocessing of nuclear fuel as well. Re-processing of nuclear fuel is about the most toxic, deadly and inter-generationally impactful activity conducted by human beings.

Rather than seeking a regional consensus of all communities and major water users within the hydrologic region, the Nelson Watershed, the NWMO strategy has been to identify an economically depressed community, and subject to the influence of millions of dollars, create a façade of acceptability and a so-called "host community", wrongly presuming that their creation will have authority to speak for and accept the downstream radiological impacts on behalf of all downstream communities in the watershed for a period of 50,000 generations in time.

It is presumptuous and predatory of the NWMO to assume a small cohort of politicians could give them a red-herring permission to potentially contaminate the watershed of hundreds of thousands of people downstream for 50,000 generations forward in time. Incidentally, the candidate site is not within the Town of Ignace but rather in the Wabigoon First Nation traditional territory. The candidate site is a stone's throw from Sioux Lookout where a significant earthquake occurred in February of 1984, revealing a previously unknown live regional fault zone throughout the area.

A regional consensus model would be an otherwise much more universally acceptable public intergenerational source water protection consultation mechanism and a communication strategy that might even demonstrate logic and participatory fairness rather than the NWMO illegitimate "acceptance scheme" of payola for consent, undue influence, secrecy and surprise.

The following is a comparison between the Environmental Assessment Panel Review requirements for the deep geological disposal of nuclear waste and the NWMO fiasco as it has unfolded:

Acceptability Requirement: # 1) “have broad public support”;

Status: In order to meet the requirement, the NWMO, rather than act honestly and transparently about the risks involved in perpetually moving highly radioactive waste across the country, and the significant earthquake and intergenerational source water contamination risks, has chosen to attempt to buy, with money, the influence of political influencers and scam the population into accepting hot radioactive waste that will remain deadly for 50,000 generations – not 7 generations as First Nations caution but 50,000 generations (1,000,000 years).

The scheme does not have wide public support and the misinformation broadcast and targeted against the population is nuclear industry propaganda by the NWMO, a nuclear industry lobby group. The group is not at arm’s length from the industry and is not accountable to Parliament, requirements set out by the Panel Report for acceptability.

Acceptability Requirement # 2) “be safe from both a technical and social perspective”;

Status: The NWMO concept and disposal plans are unsafe from both a social and a technical perspective.

Social Safety

Fear, terror and insecurity are the hallmarks of attempts by AECL and NWMO to push hot nuclear waste on the unwitting population in order to continue to produce dirty nuclear power for their profit – without sufficient consideration of the 50,000 generations that will have to store, monitor and manage the industry’s waste that the industry is producing now.

The NWMO are agents of terror against the Northern Ontario population and rather than practice “Rolling Stewardship” at the production sites, the industry needs to get their waste out-of-sight in order that they can continue to produce, for profit, more dirty power and the dirtiest waste stream known to humankind.

The selling of nuclear waste to impoverished communities rather than taking a regional consensus approach is an activity producing fear, insecurity and terror in the regional and local populations;

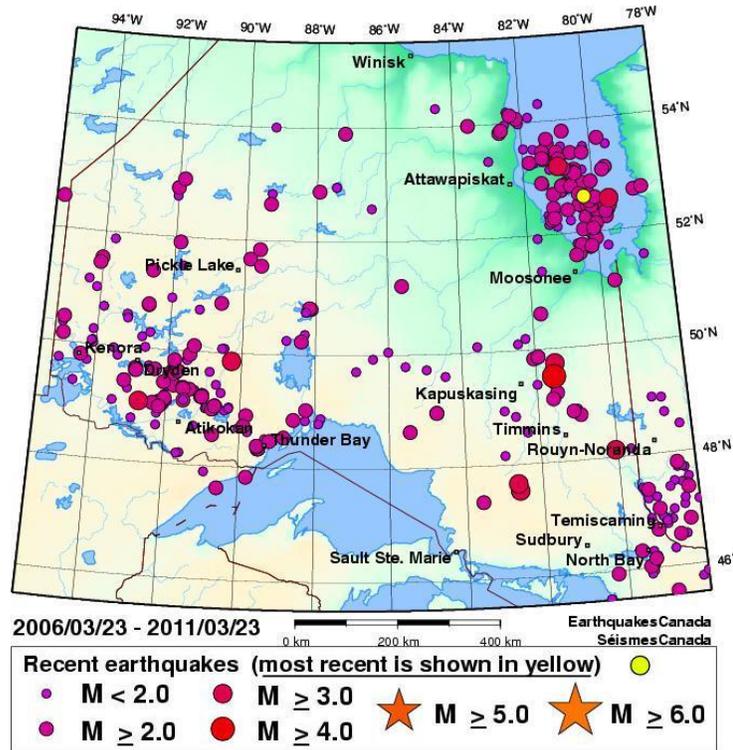
The tactics employed by the NWMO employ deception, secrecy and manipulation of the population by offering large amounts of money to potential influencers. The lack of transparency belies the misinformation, propaganda, deception and scam being attempted against the population of Northwest Ontario.

The nuclear industry is attempting to secure its own dirty future by selling out the future of the Northwestern Ontario population.

## Technical Safety

**Earthquake Risk:** The political sales strategy of the NWMO currently targets small impoverished communities in a geographic area of greater earthquake activity than other areas of the province as is shown by Earthquake Canada in their seismic monitoring.

There is a cluster of frequent seismic events and activity along the route of the populated areas from Thunder Bay to Kenora including Ignace, Wabigoon, Dryden and Sioux Lookout (see Earthquake Canada insert).



### **EARTHQUAKE RISK - ONLY ONE OF MANY SERIOUS RISKS**

A February 14, 1984, Sioux Lookout Daily Bulletin newspaper article reported the following:

*“ Early Saturday morning a minor earthquake shook the Sioux Lookout area. The Ministry of Energy, Mines and Resources in Ottawa were able to determine that the earthquake was centred in the area of the Lac Seul Post. ... It is presumed that the effects of the surface waves generated travelled along a major fault system that underlies this whole area. It was believed that this was a dead fault and geologists are amazed to find that it may be alive. The earthquake measured 3.9 on the Richer Scale. The seismograph at the Radar Base had it's needle broken only twenty seconds into the quake and was not able to register the deep bounce waves through the crust.*

*Quite a few husbands were sent scurrying to the basement to check the furnace, others thought a heavy truck had passed by or that something had hit the house. One man thought an airplane must have gone down close to his house.*

*On Drayton Road, it sounded like heavy machinery moving in the distance, rattling windows as it passed the house and then faded into the distance. Others reported a loud boom or bang before the rumbling.*

*This is a very rare occurrence in the area, according to the geologist, although he said they believe that any part of Canada could have an earthquake. This would be one of the areas least expected to have one.” (Emphasis added)*

Clearly there is an active earthquake zone throughout the area which the NWMO has failed to acknowledge in their assertions. This is a serious and fatal technical flaw in the work of the NWMO.

While the earthquake of February, 1984, was measured at 3.9 on the Richer scale and broke the seismograph needle at the Radar Base, it is assessed at VI on the Modified Mercalli Scale in that it was felt widespread throughout the area and resulted in numerous reports from concerned citizens of perceptible impacts and effects, waking up people and causing minor damage such as cracked walls.

AECL's publication, "An Evaluation of Potential Effects of Seismic Events on a Used-Fuel Disposal Vault, July, 1995, Y. Ates, D. Bruneau, W.R.Ridgeway", concluded:

"3) Damage to underground openings cannot be avoided if the underground opening is intersected by a fault on which a significant earthquake occurs. Therefore, potentially active faults should be avoided when siting a disposal vault.

4) Major regional fault zones should be avoided when siting a disposal vault. The large areas of the Canadian shield should enable this, considering the small area (about 4 km<sup>2</sup>) needed for a disposal vault."

It is unwise and ill-advised to try to site a disposal vault in an earthquake zone. There are significant areas of the Canadian Shield within Ontario which do not experience the significant number and intensity of earthquakes as the area between Thunder Bay and Kenora with a concentration of earthquake occurrences near the proposed disposal vault on Wabigoon First Nations territory.

One wonders about the mindset of NWMO in proposing such an obvious technically flawed strategy in light of the Panel Report requirements and in light of the AECL Technical information. This suggests that the motivations of the NWMO may be towards more political and opportunistic targets rather than identifying the best and safest technical and equitable options to be considered.

Nuclear power has never been a technically sound technology since the industry was not able to solve the open cycle nature of the process and the production of accumulating volumes of high level radioactive waste which have no real place in the terrestrial or aquatic biology of the global environment.

For the reason that the nuclear industry has never solved its main problem, and because of new technology, the nuclear industry is now becoming a sunset industry which has little economic justification against the renewable and alternate forms of energy production in the 21<sup>st</sup> century. Costs of those alternatives are already much more economic, clean and scalable than the continued reliance on nuclear sources of electricity.

Catastrophic groundwater contamination may occur in the event that an earthquake breaches any of the containers in the vault. The entire Nelson Watershed is at risk in that event. Radiological contamination is almost impossible to remediate, particularly dire since the populations of Northwestern Ontario and Manitoba depend completely on that watershed for their lives, health and their economy.

Consider the mercury poisoning of Grassy Narrows and the failure to this date of regulators and governments to clean up the environmental damage from decades ago. The

people are still sick, fish are still contaminated and inedible and the community has to bear the burden of failed government policy and deadly industry practice. The First Nation's own industry has been destroyed by the contamination.

Imagine that kind of damage, and worse, with radiological contamination, over 50,000 generations of human life downstream (all the communities to Manitoba and north to Hudson's Bay) if a serious breach of the ill-sited repository in an earthquake zone were to occur.

### Transportation

There are significant health, safety and environmental issues as well as catastrophic accident and contamination potentials related to the transportation and storage of high level nuclear waste.

Tens of thousands of truckloads of high level nuclear waste are proposed to traverse thousands of miles of populated areas with significant gamma exposures and restrictions to the general public including significant risks of accidents and terroristic actions.

### Terrorism

The NWMO's plan presents any nefarious actor, sophisticated or not, affiliated or not, with extraordinary opportunities for nuclear terrorism. Any lone wolf or group would find derailing a train or causing a road accident very easy and low risk for the public terror and disruption return on their investment. The NWMO is intent on putting tens of thousands of radioactive sources and targets on the roads and the railroads.

Conversely, "Rolling Stewardship" virtually eliminates all those risks, costs and damages.

### Acceptability Requirement # 3) "have been developed within a sound ethical and social assessment framework";

Status: The NWMO is unethically seeking an illegitimate and inequitable pathway to establishing a nuclear dumping ground (not just spent fuel but reactor decommissioning waste and reprocessing of nuclear fuel as well) within the Nelson Watershed.

Rather than implement obvious long term solutions such as "Rolling Stewardship" at the place of production, the NWMO seeks to impose a wide variety of serious risks on the population across the province and particularly across the Nelson Watershed to Manitoba and north. The NWMO has failed to implement a "Regional Consensus Model" across the watershed to ensure a fair and inclusive forum for every community to be secure in the far reaching decisions being made.

A regional consensus model of all communities and major water users within the hydrologic region is an otherwise much more universally acceptable public intergenerational source water protection consultation mechanism and a communication strategy that might even demonstrate logic and participatory fairness rather than the NWMO illegitimate "acceptance scheme" of payola for consent, undue influence, secrecy and surprise.

As one local person involved stated "It's a done deal" as he smiled at his good fortune. Some people seem to know more about what's going on than the general public. Has the NWMO

already bought the consent they need to pretend they have “public acceptance? Have they already tainted and prejudiced the process so as to make it a mockery of public administration and management? To its illegitimate and inequitable pathway we say NOCANDU!

To fail to implement the “Regional Consensus Model” is a form of nuclear terrorism imposed by the NWMO on all the communities within the watershed. The preferential persuasion money thrown around by the NWMO is perceived as a con job by powerful people to further their business interests to proliferate nuclear fuel and waste for profit. While some short term thinking politicians and paid influencers may take the money and run, they cannot be considered rational or objective players in the larger issue of intergenerational source water protection.

In fact there is no regional consensus and certainly no public acceptance within First Nations and municipalities. Every community within the watershed is concerned about intergenerational source water protection. Where is their uninfluenced voice? The paid voices are untrustworthy stewards of our collective future.

It is not ethical for the NWMO to offer money for loyalty and blind acceptance, exactly the approach the NWMO is taking to secure its prize, the unfettered ability to continue to produce the most toxic materials on Earth and to further their business ambitions of distributing re-processed nuclear fuel widespread across the country. They have chosen the nuclear option – the one that will do the most harm to this and future generations.

It is unethical for a politician or small cohort of politicians to make irrevocable decisions impacting hundreds of thousands of people and their source water supplies into the future for 50,000 generations in time.

No single community or small cohort of politicians within a regional hydrologic system, through its singular voice, has a right to attract an inter-generational liability or threat to that region’s water supplies and resources.

Every politician and cohort of politicians has an intergenerational duty to protect the future hydrologic resources of the regional watershed and the sustainability of those intergenerational source water supplies.

Transparency is ethical. The NWMO needs to release the names of all the recipients of NWMO persuasion money (public money whether through government or rate payers) and the amounts of the payoffs to those individuals, politicians and groups.

NWMO is conducting a con job on the population and attempting to secure the nuclear industry’s own dirty future by selling out the future of the Northwestern Ontario population. THAT’S OUR FUTURE!

#### **Acceptability Requirement # 4) “have the support of Aboriginal people”;**

**Status: Purchasing Consent and Wilful Blindness:** In order to meet the requirement, the NWMO, rather than act honestly and transparently about the risks involved in perpetually moving highly radioactive waste across the country, and the significant earthquake and intergenerational source water contamination risks, has chosen to attempt to buy, with money, the influence of political influencers and scam the population into accepting hot radioactive

waste that will remain deadly for 50,000 generations – not 7 generations as First Nations caution but 50,000 generations (1,000,000 years).

The scheme does not have wide public support and the misinformation that has been broadcast and targeted against the population is nuclear industry propaganda by the NWMO, a nuclear industry lobby group. The group is not at arm's length from the industry and is not accountable to Parliament, requirements which were set out by the Panel Report for acceptability.

First Nations caution about looking 7 generations ahead. These radioactive wastes will be deadly for 50,000 generations.

Many FN communities and their representing groups have voiced their total opposition to the concept of deep geological nuclear dumping into the northern environment.

**Acceptability Requirement # 5) “be selected after comparison with the risks, costs, and benefits of other options;” and,**

Status: After consideration of the risks, costs, questionable benefits and the intergenerational debt and uncertainty associated with the various options, Rolling Stewardship, rather than the deep geological burial of nuclear waste, appears to be the safest and most acceptable long term storage option for high level nuclear waste.

The NWMO cannot justify the social and technical risks, the health and safety risks and costs as well as the environmental sacrifice areas they are intending to create through their half-baked proposals and we challenge them to try to justify their approach against the Rolling Stewardship Option.

**Acceptability Requirement # 6) “be advanced by a stable and trustworthy proponent and overseen by a trusted regulator”.**

Status: The Proponent and industry lobby group, the NWMO is not the organization recommended by the Panel Report. The Panel Report required that an NFWMA (Nuclear Fuel Waste Management Agency) be established quickly, at arm's length from the utilities and AECL, that it be subject to multiple oversight agencies and be subject to regular reviews by parliament ie. the People).

The NWMO is not a stable and trustworthy proponent and has shown a propensity to pay off influencers to purchase consent from First Nations and municipalities.

The NWMO is seeking an illegitimate and inequitable pathway to establishing a nuclear dumping ground (not just for spent fuel but reactor decommissioning waste and the reprocessing of nuclear fuel as well), rather than seeking a regional consensus of all communities and major water users within the hydrologic region. A regional consensus model would be an otherwise much more universally acceptable public intergenerational source water protection consultation mechanism and a communication strategy that might even demonstrate logic and participatory fairness rather than the NWMO illegitimate “acceptance scheme” of payola for consent, undue influence, secrecy and surprise.

To the idea that “everyone has a price” we say NOCANDU. To its illegitimate and inequitable pathway we say NOCANDU!

The NWMO is not a trustworthy proponent.

The Regulator, the Nuclear Regulatory Commission (NRC) is just as committed to ensuring the deep geological disposal of nuclear waste as is the industry lobby, the NWMO. They are a bias part of the NWMO team and promote the NWMO and the concept of deep geological burial despite the obvious alternative of “Rolling Stewardship” which would be the safest, securest, least expensive and least impactful on the Ontario people and the global environment. The NRC is a participant in the nuclear terrorising of the population of Northern Ontario. They give out rubber doggies and an array of nuclear promotion items and contribute to the contrived festival atmosphere put on by the industry lobby and their dirty money. The NRC is not directly accountable to the people and to the Parliament as was required by the Environmental Assessment Panel Report. The NRC is not a trusted regulator. In addition, the Panel Report required the NFWMA be subject to multiple oversight mechanisms.

Clearly the NRC failed to pick up on the earthquake risk here at this late stage of the process – its unimaginable. The NRC is supposed to keep us safe but they are in support of the most dangerous option of nuclear fuel management. And, in addition, they seem to be OK with a repository in an earthquake zone.

Now here in Sioux Lookout we all know about the significant earthquake zone proven by the February, 1984, earthquake here. Why has the NRC not redirected the NWMO to conform to the AECL recommendations not to site a nuclear disposal vault in an earthquake zone? Is it inexperience, incompetence or something else? Does that suggest the NRC is “trustworthy”?

The scheme does not have wide public support and the misinformation broadcast and targeted against the population is nuclear industry propaganda by the NWMO, a nuclear industry lobby group. The group is not at arm’s length from the industry and is not accountable to Parliament, requirements set out by the Panel Report for acceptability.

Neither the NWMO nor the NRC can be trusted stewards of the high level nuclear waste in perpetuity. The industry is indemnified by government and mistakes will accrue that will be overlooked and underfunded leading to mismanagement, operational drift, inevitable neglect and accidents over time.

Nuclear material / ionizing radiation is unforgiving, virtually impossible to clean up and is progressively accumulating in the environment, increasing background levels which, with other sources and releases may impact the habitability of the planet for human and other biological life.

And, further confounding the process of having future generations clean up our mess, proponents and governments change over time. In fact, there may be as many as 250,000 changes of government based on four year terms within the management term of 1,000,000 years while the material remains deadly. What will arrive first, the end of the management term or the end of biological life on the planet? The AECL and NWMO are betting a life span of 500 years for container’s life is adequate for the human future.

It is folly to think humans could really pull this off and that the Earth won’t move like it did in February, 1984, damaging property and shocking the population and researchers alike. Researchers and geologists were amazed that a significant live fault existed where they previously thought it was impossible.

The NWMO and the so-called regulator, the NRC, have ignored this earthquake risk and tried to minimise it. Money, in the final analysis appears to be their driver – the inefficient and toxic

continuation of the business of turning atoms into dollars for a few, regardless of the mess they leave behind.

Researchers and nuclear proponents like to think they have all the bases covered. They may think themselves too smart to fail but their technology is certain to fail. They really have no idea of what will happen during the life-span and death-span of nuclear waste, a product of human beings previously unknown to the natural environment on the Earth. 50,000 generations is beyond even the biggest brain to imagine, let alone promise anything.

It's a crap shoot and a con job - for money. And the industry has the almost full indemnification of the government if they screw up. No risk to them. Why not spread it around - proliferate and make more money and ignore the real risks that are likely to materialize. The tax payers can cover it.

We say NOCANDU!

### Nuclear Proliferation

Each volume of nuclear waste stored and out-of mind permits the production of new nuclear waste by the continued use of nuclear energy, a flawed and ever more toxic and expensive power generation alternative to the ever safer, cleaner and less expensive alternatives that can be incrementally scaled to demand.

There is a serious risk of being the first global jurisdiction to accept the flawed methodology of underground burial and intergenerational abandonment of high level nuclear waste underground. This will attract other national jurisdictions to participate once a facility has been sited and committed to.

To nuclear proliferation and re-processing of nuclear fuel we say NOCANDU!

### Recommendations

To "Rolling Stewardship" we say YES!

To a full and immediate withdrawal of NWMO's plan to proceed with their campaign to site a deep geologic nuclear fuel storage and reprocessing site in the earthquake zone between Thunder Bay and Kenora - We say absolutely - NWMO MUST WITHDRAW.

Northern Ontario Coalition Against Nuclear Dumping Underground. NOCANDU, June 27, 2022

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