Questions submitted for Bob Watts & Jessica Perritt – December 3rd, 2020 CLC Meeting

Provided with Answers

Q. I have a document on the Five Principles of Radioactive Waste Management by the Anishinabek/Iroquois Alliance. Please elaborate on this for our audience and discuss these 5 principles.

A. In a Joint Declaration by the Anishinabek Nation and the Iroquois Caucus on May 2, 2017, five (5) principles were agreed upon as guidelines for the long-term management of radioactive waste.

The five (5) principles are:

1. No Abandonment: Radioactive waste materials are damaging to living things. Many of these materials remain dangerous for tens of thousands of years or even longer. They must be kept out of the food we eat, the water we drink, the air we breathe, and the land we live on for many generations to come. The forces of Mother Earth are powerful and unpredictable, and no human-made structures can be counted on to resist those forces forever. Such dangerous materials cannot be abandoned and forgotten.

   NWMO Response: One of the reasons we are engaging with communities is to find a way to communicate to future generations and explain that the deep geological repository exists. We want to ensure it continues to be monitored and that we are standing by our mission to protect people and the environment.

2. Monitored and Retrievable Storage: Continuous guardianship of nuclear waste material is needed. This means long-term monitoring and retrievable storage. Information and resources must be passed on from one generation to the next so that our grandchildren's grandchildren will be able to detect any signs of leakage of radioactive waste materials and protect themselves. They need to know how to fix such leaks as soon as they happen.

   NWMO Response: Adaptive Phased Management addresses this. Used nuclear fuel transportation, handling and placement operations in the repository will occur over a period of about 40 years or more. The timeframe will depend on the amount of used fuel to be managed. After that, the repository will be monitored for an extended period of time before decommissioning, closure and post closure monitoring.

3. Better Containment, More Packaging: Cost and profit must never be the basis for long-term radioactive waste management. Paying a higher price for better containment today will help prevent much greater costs in the future when containment fails. Such failure will include irreparable environmental damage and radiation-induced diseases. The right kinds of packaging should be designed to make it easier to monitor, retrieve, and repackage insecure portions of the waste inventory as needed, for centuries to come.

   NWMO Response: Canada's plan puts safety first and foremost. It calls for used nuclear fuel to be safety contained and isolated in a deep geological repository using a

combination of engineered and natural barriers to protect people and the environment indefinitely.

In Canada, this method emerged through years of dialogue with Canadians and Indigenous Peoples and is consistent with international best practice. The public said clearly that our generation, which has benefited from nuclear power, must put in place a long-term management approach for used fuel and not leave it as a legacy for future generations.

A deep geological repository will be actively managed and monitored for as long as society wishes to do so. It can also be sealed at a future date, when the community, the NWMO and regulators agree that it is appropriate. The repository would then be passively safe, meaning it would not rely upon human institutions and active management in order to contain and isolate used fuel over the long term.

This responsive and prudent approach is consistent with what Canadians said is required to ensure safe management of the used fuel for tens of thousands of years. Canada's plan also calls for used fuel to be transported from current storage facilities to a new centralized site. In transit, a robust transportation package will contain and shield the used fuel.

4. Away from Major Water Bodies: Rivers and lakes are the blood and the lungs of Mother Earth. When we contaminate our waterways, we are poisoning life itself. That is why radioactive waste must not be stored beside major water bodies for the long-term. Yet this is exactly what is being planned at five locations in Canada: Kincardine on Lake Huron, Port Hope near Lake Ontario, Pinawa beside the Winnipeg River, and Chalk River and Rolphton beside the Ottawa River.

   NWMO Response: We have been and continue to do extensive land and environmental studies to ensure our waterways remain safe and clean, now and for future generations. We understand water is a sacred for First Nations and we are committed to protecting it and the communities that surround it. We have created a presentation called the Journey of Water that emphasizes the relationship that water has to each part of our project.

   The repository would be built at least 500 metres below the surface within the very deep rock, rather than on the surface next to the Great Lakes where it is currently stored. This provides added protection for water, watersheds and sensitive ecological environments over the long term.

5. No Imports or Exports: The import and export of nuclear wastes over public roads and bridges should be forbidden except in truly exceptional cases after full consultation with all whose lands and waters are being put at risk. In particular, the planned shipment of highly radioactive liquid from Chalk River to South Carolina should not be allowed because it can be downblended and solidified on site at Chalk River. Transport of nuclear waste should be strictly limited and decided on a case-by-case basis with full consultation with all those affected.

   NWMO Response: While we work with International partners to learn from their research, our mandate does not allow the NWMO to become a host for nuclear waste generated by other countries. The NWMO is bound by the mandate provided to it by the

Government of Canada in the *Nuclear Fuel Waste Act* to implement the solution to Canada's used nuclear fuel waste.