

**Kebaowek First Nation
Federal Radioactive Waste Policy Review**

Discussion Paper Comments
(final version)

presented to
Natural Resources Canada

31 May 2021

NOTE

This document is the final version of the comments of the Kebaowek First Nation adopted by the Chief and Council the 31st of May 2021.

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Please accept the following comments from Kebaowek First Nation in response to Natural Resources Canada policy review and modernization of Canada's Radioactive Waste Policy discussion paper series.

PART 1-OVERVIEW

Kebaowek First Nation ("KFN"), is an Algonquin Anishinabeg First Nation asserting rights over lands that straddle the Ottawa River basin on both sides of the Québec-Ontario boundary.

Along with Wolf Lake First Nation and Timiskaming First Nation, Kebaowek First Nation jointly released a Statement of Asserted Rights ("SAR"), which summarizes our Aboriginal rights, including title. Copies of the SAR, maps and background documentation were transmitted to the governments of Canada, Québec and Ontario in January 2013. We have not relinquished our Aboriginal rights and title to our traditional territory and we have provided detailed evidence to substantiate it.

Today, the on-reserve population of Kebaowek is about 300, with approximately another 700 members living off reserve, more than half in Ontario. Most Kebaowek members are dispersed among Kipawa, and Témiscamingue Quebec, or North Bay Mattawa and Ottawa Ontario, but all remain connected to the territory as members of our community continue to occupy, manage, safe guard and intensively use our land and water ways as we carry out traditional and contemporary activities. All such initiatives are based on a model of self-determination and a history of Algonquin traditional knowledge, eco-logical sustainability and land governance.

For KFN, the starting point in reviewing and modernizing Canada's Radioactive Waste Policy and the supporting policy framework must be in recognizing that Algonquins, like all First Nations in Canada, began with both rights to their territories and rights as people governed under customary laws. Algonquin historical research supports that mutuality, respect and consultation are integral to Algonquin social and political organization on a number of levels: family to family, band to band, and nation to nation. From an Algonquin perspective, the current radioactive waste policy review process and the resulting policies and policy framework must be harmonized with this expectation. We are an order of government with rights and jurisdiction to our lands to be addressed from a "Nation to Nation" perspective.

Natural Resources Canada announced the review of Canada's radioactive waste policy in November 2020.ⁱ While the Minister's announcement clearly indicated that the Government of Canada would be engaging with Indigenous peoples throughout the process, Natural Resources Canada (NRCan) was slow to engage with Kebaowek First Nation regardless of our early requests to the Minister's office. It was not until May 05, 2021 that NRCan reached out to the Alognquin Anishinabeg Nation Tribal Council about the consultation and subsequently approached Kebaowek First Nation on May 14, 2021. Unfortunately, this review process has been marred by short notice periods, insufficient funding and timing for Indigenous communities like Kebaowek First

Nation to comment. This is unacceptable as it marginalizes First Nation communities ability to participate in this important matter of modernizing Radioactive Waste Disposal policy that could potentially implicate Indigenous communities across the country.

In the absence of NRCAN-initiated Indigenous engagement sessions held on a government to government basis between Indigenous Nations and Canada, Kebaowek First Nation participated in four public roundtables as observers on March 4th, 2021 (Principles of Radioactive Waste Management and Waste Minimization), March 24th (Waste Disposal), May 4th (Waste Storage) and May 18th (Decommissioning).

Keabowek First Nation has reviewed the four Discussion Papers provided along with the roundtables, considered comments made during the Roundtable sessions and NRCAN's responses provided at that time, and have consulted with experts and community members on best policy options going forward. This submission is a summary of that review and the input received.

Kebaowek First Nation plans to review the Government of Canada's "What We Heard Report" and provide formal input representing Kebaowek First Nation perspectives, and provide further input on the draft policy options when they are released by Natural Resources Canada later this year.

PART 2 – OVERARCHING PRINCIPLES

Context

Natural Resources Canada did not provide a discussion paper on principles that will drive radioactive waste policy. Information on guiding principles are limited to the following points:

Guiding values and principles of a modernized for Radioactive Waste Policy
Going into the engagement process, the core values and principles to the policy that are important to Canadians and Indigenous peoples must be part of the new forward-looking, modernized Radioactive Waste Policy. These principles include:

- Safety of People and the Environment
- Openness, Transparency and Public Consultation
- Indigenous Reconciliation

The core principles of **Safety of People and the Environment, Openness, Transparency and Public Consultation** and **Indigenous Reconciliation** represent a few tenets of what the revised policy will entail.

See: NRCAN website <https://www.rncanengagenrcan.ca/en/content/about-policy-review>

Comments

As an Algonquin First Nation government Kebaowek First Nation has a duty to protect our lands, waters and environment for our present and future generations. Therefore, Canada's Radioactive Waste policy must first and foremost respond to the question of

whether radioactive waste generation and storage will undermine the health and safety of future generations. This concern must be a central driver of sustainability and sustainable development in Canada and addressed by the requirement of full radioactive waste need assessments within the policy.

Kebaowek accepts and supports the core principles of Safety of People and the Environment, Openness, Transparency and Public Consultation and Indigenous Reconciliation as put forward by Natural Resources Canada as a starting point for elaborating on a joint statement of principles and values for the radioactive waste policy.

Future guiding principles and values must both reflect and drive actual commitments and must embody a profound commitment to the recognition of the Indigenous knowledge, laws and rights of the Algonquin Anishinabeg and other Indigenous Nations, and interacting on a government to government basis.

A section of the Nuclear Waste Policy should reference the Canadian and international requirements for consultation and obtaining the Free Prior and Informed Consent (FPIC) of Indigenous Peoples. We recommend the policy demonstrate how nuclear waste proposals meet the obligations for the Duty to Consult as per Section 35 of the Constitution, and the extent to which it has met requirements of the UN Declaration on the Rights of Indigenous Peoples, including Article 32 regarding obtaining the Free Prior Informed Consent of Indigenous Peoples *"prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources."*²

While the NRCan explanation of the "principle" of "Indigenous Reconciliation" speaks of the Government of Canada being "deeply committed to advancing reconciliation and a renewed relationship with Indigenous peoples, based on the recognition of rights, respect, co-operation, and partnership" the radioactive waste policy must direct the operationalizing of that professed commitment in co-operation with Indigenous Nations' definition of "Indigenous reconciliation" not just Canada's. Given there are many First Nations and Peoples across Canada there is not one size fits all definition of reconciliation.

For Kebaowek, reconciliation flows from the land, waters and teachings. Also Anishinabeg reconciliation will be somewhat different than Haudeneshone because each Nation has its own thoughts and ways to address reconciliation. This must be respected and not imposed.

Federal radioactive waste policy must align with the following expectations and aspirations of Kebaowek First Nation:

- Incorporate direct reference to the United Nations Declaration on the Rights of Indigenous Peoples (UN Declaration).
- Recognize Indigenous governing bodies exercising jurisdiction
- Affirm that engaging in Government of Canada processes or joint processes is without prejudice to the Aboriginal rights and title of those Indigenous communities being represented, including their constitutional and international rights of self-government;
- Require mandatory consideration of Indigenous Knowledge
- Recognize that the exercising of our rights is inextricably linked to healthy ecosystems and the species that depend upon them
- Protect the ability of future generations to exercise and benefit from their rights

The existence of nuclear facilities and the carrying out of nuclear activities, including transportation, in and around Algonquin Anishinabeg lands and waterways have great potential to impact the unceded, inherent and Section 35 rights of Algonquin Anishinabeg Peoples in perpetuity. The radioactive waste policy framework must recognize the authority of the Algonquin Anishinabeg Nation to protect these rights and the exercising of these rights, and a commitment on the part of the Government of Canada to moving forward on a government-to-government policy development basis.

In addition to the above expression of the expectations from Kebaowek First Nation in terms of how the principles will be expressed, we also recommend to you the Joint Declaration between the Anishinabeg Nation and the Iroquois Caucus on the transport and abandonment of radioactive wasteⁱⁱ and the five principles embodied in that Declaration:

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.
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.
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.

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.
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 down-blended 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.

PART 3 - COMMENT ON NATURAL RESOURCES CANADA DISCUSSION AREAS

Natural Resources Canada has produced four discussion papers which they employed as a focus for seeking comments through an online “discussion forum” built into their web site, through a series of online meetings including the public Roundtables which Kebaowek participated in as an observer (there were no Indigenous Roundtable sessions as originally offered), and through written submissions.

Many topics that are of great interest and concern to Kebaowek First Nation were not included in the four papers titled: waste minimization, waste storage facilities, decommissioning and waste disposal. Important topics such as transportation, environmental monitoring, and waste characterization and inventories – all related to one or more of the four discussion paper topics – were not addressed. Given that the process to date has not solicited input into radioactive waste policy for these areas, it is unclear how the policy basis for strategies related to transportation, environmental monitoring, and waste characterization and inventories will be developed.

Kebaowek First Nation shares the concerns and disagreement expressed by others during the roundtable sessions over the Nuclear Waste Management Organization having been assigned the lead role in the development of radioactive waste management strategies. The narrow scope of this policy review raises the level of concern, particularly given the lack of attention in the discussion papers to such important topics as transportation, environment monitoring, and waste

characterization and inventories. There must certainly be policies and strategies related to each of these areas: how will the policies and strategies be developed, given their absence from this review?

The Algonquin Nation holds a rich legacy deep within the Ottawa River watershed. The *Kitchi sibi* (*great river*) as we know it, or Ottawa River as settlers have since renamed it, has been our home and transportation highway since time immemorial. For centuries Anishinabeg peoples have relied on our lands and waterways for our ability to exercise our inherent rights under our own system of customary law and governance, known as *Ona'ken'age'win*. This law is based on mobility on the landscape, the freedom to hunt, gather and control the sustainable use of our lands and waterways for future generations. Policy must advance and incorporate Indigenous knowledge and *Ona'ken'age'win* offering clear and coherent strategies that protect the rights and interests of Algonquin Anishinabeg Peoples in perpetuity.

Migizi Kiishkaabikaan (in Anishnaabemowin), also called "Oiseau Rock" or "Bird Rock" is a rock face that rises 150 meters above the Kitchi sibi across from Chalk River Laboratories, on the north side of the river. It is recognized as a sacred site by our peoples. Anishinabeg peoples left a legacy of ancient pictographs painted in red ochre several hundred and possibly several thousand years ago on the rock that have been since defaced by modern graffiti. We provide this information to emphasise the importance and centrality of the Chalk River laboratories site and the desecration and destruction of sacred sites within our territory.

It is important for our community to note that before the Government of Canada completed construction of the Chalk River Laboratories (CRL) in 1944, no assessment was undertaken to determine how the nuclear complex might affect upstream or downstream areas of the Kitchi sibi. No thought was given to how the nuclear complex might affect the members of the Algonquin Nation, our dependence on the then plentiful watershed resources of the Kitchi sibi, or our multi-generational socio-cultural connection to the places and customs associated with the Kitchi sibi. No thought was given to whether the promises of the Royal Proclamation could be upheld if the complex was built. No thought was given to Algonquin jurisdiction around the Kitchi sibi.

Article 10 Of UNDRIP states: Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.

Largely through the lens of historical displacement and development concerns related the Algonquin Anishinabeg Nation and Chalk River Laboratories site on the Kitchi sibi, please find Kebaowek First Nation's comments on the four discussion papers.

Paper 1. Waste Minimization

The Chalk River Laboratory is the site of multiple projects, some of which illustrate concerns related to the topics set out in the waste minimization paper.

Recycling / Reprocessing

The discussion paper does not explicitly identify reprocessing as one of the waste “minimization” strategies, but makes multiple references to “recycling”, which in recent months has been a stand-in term used by both government and industry for reprocessing of irradiated nuclear fuel (spent fuel or fuel waste).

The Chalk River laboratory site operator, the Canadian Nuclear Energy Alliance, has invited developers of small modular reactors to site “demonstration” small modular reactors at the Chalk River laboratory site.ⁱⁱⁱ Four different designs / proponents are engaged in the “invitation process” currently, and the process remains open to additional potential proponents. While the four vendors to date have not identified reprocessing or pyro-processing as part of their design, designs / proponents associated with other sites in Canada have done so.

Of particular note: CNL's largest new planned capital expenditure at Chalk River is a new hot cell facility, which CNL is referring to as an "Advanced Nuclear Materials Research Centre.". According to Atomic Energy of Canada Limited *“this new facility will allow further advancements in the nuclear science and technology program including in support of small modular reactor development and nuclear safety and security. It will also enable ongoing work in support of utilities as they look at reactor life extension and reliability.”*^{iv} The 28,000 square facility will include the installation of 16 new nuclear hot cells, 36 radioisotope laboratories, and office space to accommodate 176 staff. Construction, according to the MERX listing, is anticipated to be complete in 2022.^v

Kebaowek First Nation has not been given notice and has certainly not been engaged or consulted with regard to many of the developments underway at the Chalk River site. Namely, KFN has not been consulted with respect to the purpose or operation of the “Advanced Nuclear Materials Research Centre”. Through CNL’s promotional materials, KFN is aware that CNL is pursuing “recycling” and reprocessing of irradiated nuclear fuel at the Chalk River site.^{vi}

Kebaowek First Nation does not support the siting of new reactors at the Chalk River site, or anywhere in our territory. With equal vigour we **oppose reprocessing of nuclear fuel waste** and the extraction of plutonium.

Free Release

As the discussion paper notes, decommissioning generates large quantities of radioactive waste in various forms such as solids, liquids and gases. This is among the concerns of Kebaowek First Nation, given the decommissioning work underway and planned for the Chalk River laboratory site. What the paper overlooks is the practice of applying “clearance levels” to materials with low levels of radioactivity and then

releasing them into water systems or waste disposal sites (such as solid waste landfills), overlooking that these materials are still radioactively contaminated.

As caretakers and rights holders who are exercising our rights in proximity to the Chalk River Laboratory site, Kebaowek First Nation is seeking a policy direction that would **protect against the release of even low levels of radioactively contaminated materials** – liquid or solid – within our territory. Waste minimization should be achieved by avoiding the creation of the waste, not by relabeling the waste as if non-radioactive. As the maxim goes, “dilution is not the solution to pollution”.

Protection of the Kitchi-sibi is fundamental to our Algonquin identity and wellbeing as the waterway has supported Algonquin Peoples for millennia via our ability to harvest traditional foods, tell stories and pass on stewardship knowledge that strengthen and affirm our connections to customary laws, identity and our continued place in the watershed.

Waste Tracking and Inventories

It is not clear from available information whether the variability in reported inventories of radioactive wastes at the Chalk River laboratory site is due to a practice of waste clearance / free release, but there is enough variability in the data to raise questions, including questions around the cause for the considerable differences in waste volumes moving from inventory to another, and a question as to whether a reclassification of some waste volumes to make them eligible for “free release” might be at least partial cause.

Every three years Canada produces a national report under the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* which includes an inventory of radioactive wastes in Canada. There are important discrepancies or differences between waste volumes at the Chalk River site, as reported in the Sixth and Seventh National Reports. For example, one major change in the 7th report relative to the 6th report is the 59% decrease in the reported volume of LLW in the form of “Contaminated soils” at Chalk River - from 382,842 m³ in 2017 to 156,276 m³ in 2020 (Table D.8). No explanation is given for this decrease of 226,566 m³ in the reported volume of contaminated soils. While there may be other – and potentially even more problematic – explanations, in the context of the general permissiveness and regulatory acceptance of applying clearance levels to free release radioactively contaminated materials, this very large discrepancy creates a concern that these materials are being reclassified and future management will be in facilities or systems not designed for radioactive wastes.^{vii}

The starting point for responsible management of radioactive waste is knowing fully and in detail the volume and characteristics of the wastes that must be managed. The radioactive waste policy must require **detailed inventories and tracking of all radioactive wastes**. Algonquin Rights and Title holders – and the public more generally – should have full access to this information, via waste inventories that are

available and accessible as part of an overall radioactive waste management regime that **is open and transparent**.

Paper 2. Waste Storage Facilities

The Chalk River laboratory site has more than 70 per cent of all the radioactive waste ever produced by Atomic Energy of Canada Ltd. (AECL) and its predecessor, the National Research Council of Canada in some form of storage on the 37-square-kilometre site. An estimated half of these federal nuclear legacy liabilities are the product of Cold War activities in the 1940s, '50s and '60s, with the remainder generated through research and development activities and other programs at the Chalk River Laboratory. ^{viii}

Documents produced by the Canadian Nuclear Safety Commission and Canadian Nuclear Laboratories during the 2018 licence renewal process provide some examples of waste storage challenges on site including:

- tile holes (below-grade vertical cylindrical concrete pipes sitting on a poured concrete base and backfilled with sand) located in the Waste Management Area B hold spent fuel rods used in research reactors and as prototypes, with approximately 100 tile holes having shown signs of degradation (e.g., fuel corrosion, production of hydrogen gas); CNSC reported at the time of relicensing that CNL intended to retrieve the spent fuel from specific tile holes and store them in a better controlled and monitored facility and designed to current standards, but provided no information on progress made in retrieving / transferring the wastes or the timeline going forward, or whether conditions were as anticipated; no update was included in the most recent regulatory oversight report
- The Fissile Solution Storage Tank (FISST) was one of a number of aging tanks storing liquid radioactive waste and which have been identified as areas for priority action in addressing the CRL's nuclear legacies; CNSC identified it as an area of risk, and an "area of focus for CNSC staff". However, the CMD purports that "based on ongoing CNSC staff inspections and review, there is no safety concern on a near term basis and CNL is engaged in a long term solution of emptying the FISST via repatriation to the United States".
- There are several groundwater and surface water contaminant plumes on the Chalk River site extending from Area B (Area B is also a "special burials" for two reactor vessels, one from NRX in 1970 and the other from the National Research Universal reactor in 1973, and other highly radioactive equipment). One is dominated by strontium-90 that has leached from the unlined sand trenches. Another plume contains tritium; the staff CMD noted some gradually increasing concentration of tritium at some locations in the southern and southeastern region of WMA-B and a plume of tritium and Sr-90 which discharges

The 2019 Annual Compliance Monitoring Report for CRL describes in considerable detail the radioactive groundwater contaminant plumes at CRL and their monitoring and treatment systems. To summarize briefly, in the Perch Lake basin, strontium-90 plumes from the Liquid Dispersal Area and Waste Management Areas A and B require continuing operation of three groundwater treatment systems. In the Maskinonge Lake basin, a “Wall and Curtain” passive groundwater treatment facility intercepts and treats the strontium-90 plume arising from the Nitrate Plant. Contaminant plumes from the NRX and NRU reactor facilities (the fuel bays) were for years leaking tritium and strontium-90. The resulting contaminant plumes now discharge directly into the Ottawa River untreated.

In contrast to the examples cited above, Natural Resources Canada states in the waste storage discussion paper that “In Canada, all radioactive wastes are currently managed in interim storage facilities that are safe, secure and environmentally sound.”

Clearly, at least in the case of the Chalk River site, Canada’s radioactive waste policies to date have failed. Policies and practices have failed to effectively isolate the radioactive wastes from the environment, and in that failure have encroached upon the rights of the Algonquin Anishnabeg to exercise their rights without fear or concern of harm from the nuclear contamination in the Ottawa River watershed.

The radioactive policies emerging from the current review must remedy this by directing that radioactive waste storage **minimizes risk and maximizes protection of human health and the environment**, and ensuring that there is **full and effective monitoring** of the radioactive wastes in storage, with monitoring results being maintained in an open and transparent information system.

Algonquin Anishnabeg Peoples should be **fully engaged in the design and licensing** of radioactive waste facilities and in **monitoring the performance of these facilities** in our territory.

Paper 3. Decommissioning

Decommissioning planning and decommissioning strategies – planned and employed – illustrate very well the need for **transparency and traceability** as cornerstones in radioactive waste policy.

To illustrate, consider four key documents prepared for or related to decommissioning at the Chalk River Laboratory:

- Preliminary Decommissioning Plan - COMPREHENSIVE PRELIMINARY DECOMMISSIONING PLAN CPDP-508300-PDP-001 Revision 2, prepared by Atomic Energy of Canada Limited in 2014
- Canadian Nuclear Laboratories 2016- 2026 10-Year Integrated Plan Summary^x
- Commission Member Document 18-H2, dated 10 NOVEMBER 2017 and prepared by CNSC staff for the Chalk River site licence review and hearing which took place in January 2018
- Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2019, prepared by CNSC staff for presentation at a Commission meeting in December 2020

Each of these documents discusses decommissioning, the first in considerable detail. However, while there are many indications that the decommissioning plan is “evolving” over time, there is no direct reporting in any of the documents on how the decommissioning plan or strategy may have shifted, and the documents lack detailed reporting on implementation to date.

CNL’s 10-Year Integrated Plan Summary presents as if a stand-alone document, without reference to the comprehensive preliminary decommissioning plan that was put into effect just a few years prior. The Commission Member Document 18-H2 does provide a one or two word status update on various decommissioning activities that had been mapped out in the 2014 comprehensive strategy, but makes no effort to reconcile significant differences between AECL’s 2014 decommissioning plan and CNL’s 2016 “integrated” plan, such as the emergence of a proposed “Near Surface Disposal Facility” with a key function in the dispositioning of decommissioning wastes at the Chalk River site.

Problematically, the 2019 Regulatory Oversight report provides only minimal information about decommissioning progress or plans at the Chalk River site, either as stand-alone information or in reference to the activities set out in the license issued in 2018, the CNL strategy of 2016, or decommissioning plan of 2014.

As rights holders in the territory that has been so heavily imprinted by the Chalk River Nuclear Laboratory property and activities, Kebaowek First Nation would expect that a fundamental obligation of the licensee would be to make **information accessible and available** and decision-making and implementation related to decommissioning would **be transparent and traceable**. Kebaowek has not found this to be the case.

End state

In the 2014 comprehensive preliminary decommissioning plan a “*final end-state vision is that most areas of the site will qualify for industrial use as a minimum. Some areas of the site may be able to go one step further and qualify for unrestricted use*”. There are multiple references to end-state criteria, but no end-state criteria are put forward.

CNL’s 2016 strategy indicates that a goal for 2016 is that the National Research Experimental reactor is “decommissioned to an agreed end state” and highlights that it will be “decommissioned to an end state agreed with the Canadian Nuclear Safety Commission” and further indicates that a “Cleanup Plan is expected to be approved in 2020” and that one step in the Cleanup Plan will be to “identify existing end-state objectives”. The strategy goes on to state:

“Stakeholder engagement throughout the planning process is critical to ensure that the path to liability closure for each site is acceptable to property owners, regulators and other directly impacted parties. The uncertainty of stakeholder acceptance may result in significant delays to the retirement of these liabilities, and can significantly increase the cost to achieve the desired end state.”

Kebaowek First Nation has not been “engaged” in any discussion with respect to the determination of end-state objectives for the Chalk River laboratory of the Rolphton NPDP sites.

Similar to AECL’s 2014 decommissioning plan and CNL’s 2016 integrated plan, Commission Member Document 18-H2 and the Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2019 both reference end-states or end-state criteria, but neither set out the end-state criteria or the method or process through which end-state criteria will be developed.

As set out earlier in this submission, the operation of these nuclear facilities in and around Algonquin Anishinabeg Nation lands and waterways have had adverse impacts on the unceded, inherent rights of the Algonquin Anishinabeg Nation as well as exercising Section 35 rights, through restricting the ability of Algonquin Anishinabeg Nation to exercise our rights in those parts of our territories that have been occupied and contaminated by nuclear facilities.

AECL, CNL and CNSC create an impression through the above noted documents that the definition of “end-state” objectives is for them strictly a matter of designation, i.e. whether the area remains under regulatory control or is transitioned to unrestricted use.

For Kebaowek First Nation while we would welcome “unrestricted use” in the sense that we would again be able to exercise our rights throughout our territory, the

acceptable “end state” must be determined wholly in the context of the decommissioning work and environmental remediation that must be undertaken. The outcomes of the remediation, and the achievement of an “end state”, must be measured in terms of the restored health of the land and water, and its ability to sustain life without harm, or even fear of harm.

The policies resulting from this current review must clearly set out that decommissioning **end-state objectives and criteria are to be based on ecological and human health** and that the **rights-holders will be engaged in developing these criteria** and in **monitoring decommissioning progress and determining if those end state objectives have been met.**

In situ

Kebaoewek has been concerned by Natural Resources Canada presentation of “in situ decommissioning” as if it is an acceptable practice in either Canada or internationally throughout this consultation process, both in the discussion paper on decommissioning and in the introduction to the roundtable discussion which KFN was an observer.

The operating practices at the Nuclear Power Demonstration Project at Rolphton are a concern for the Algonquin Anishinabeg Nation. Experts advising the Algonquin Anishinabeg Nation have found disturbing evidence of a decades-long practice of dumping untreated water which is heavily contaminated with radionuclides as well as potentially hazardous non-radiological contaminants into the Ottawa River. This was not previously disclosed to the Algonquin Anishinabeg Nation, and was learned only in the course of the beginning stages of the environmental assessment review of the Nuclear Power Demonstration Closure Project.

CNL is now proposing that the decommissioning of the Nuclear Power Demonstration Closure Project by leaving the radioactive structures in place, filling it with concrete, and calling the approach “in situ decommissioning”.

Internationally, the practice of “in situ” decommissioning is only permitted in the case of an emergency or an accident, and this reason does not apply in the case of the Nuclear Power Demonstration Closure Project.

Canada’s radioactive waste policy must be at least as **protective of our lands and waters** as the international standards. The policy should require that decommissioning be carried out to achieve **the highest standard of care, enabling the Algonquin Anishinabeg to fully exercise both inherent and Section 35 rights.**

Paper 4. Waste Disposal

The discussion paper prepared by Natural Resources Canada on waste disposal seems to be divorced from reality, and certainly from the reality of the waste “disposal” projects currently being promoted by Canadian Nuclear Laboratories for delivery on Algonquin Anishinabeg Nation territory in Chalk River and Rolphton, Ontario.

For example, the paper describes a multi-step process that for the development of a “disposal facility”, beginning with site selection. There was no site selection process for the proposed “in situ” decommissioning of the Nuclear Power Demonstration Project at Rolphton, and there was no broader site selection process beyond the 37 square kilometres of the Chalk River laboratories site for CNL’s proposed “Near Surface Disposal Facility”.

The discussion paper states that disposal “refers to the placement of radioactive waste without intention of retrieval. Its aim is to safely contain and isolate the waste by means of natural and engineered barriers for adequate protection of people and the environment.”

The Canadian Nuclear Safety Commission definition speaks only to the intention to not retrieve the waste:

disposal (evacuation or elimination) The placement of radioactive waste without the intention of retrieval.

Both termed “disposal” projects, the proposed “in situ” decommissioning of the Nuclear Power Demonstration Project at Rolphton and CNL’s proposed “Near Surface Disposal Facility” are both could be presumed to be consistent with the CNSC’s very limited definition of “no intention to retrieve” but are inconsistent with the discussion paper’s claim that a disposal project would “safely contain and isolate the waste by means of natural and engineered barriers for adequate protection of people and the environment.”

The Draft Environmental Impact Statement for the Nuclear Power Demonstration Closure Project documented that CNL does not expect the project to isolate the wastes. For example, under the “Normal Evolution Scenario” the document describes how the facility would operate with the facility being closed as planned, with no unforeseen events, i.e. according to plan. The document includes the following three statements, all of which indicated that the wastes would not be isolated, and the radionuclides would not be safely contained, even in the relatively short term:

- Parts of the NPDWF that lie below the water table will gradually resaturate. It is expected that re-saturation may take several decades to complete. Once saturated, the soluble contaminants in the facility will begin to be released into the groundwater... The primary point of potential contaminant release into the biosphere is taken to be the riverbed close to the shore of the Ottawa River (pages 9-6 and 9-7)
- It is assumed that the grout will gradually degrade as the cement constituents are slowly leached out upon contact with groundwater... (page 2-24)
- It is assumed that the cap starts to degrade 100 years after its emplacement and is assumed to have fully degraded (in terms of hydraulic performance) by 1,000 years after decommissioning is complete.... (page 2-24)

The radioactive releases from the “decommissioned” facility will be into the Kitchi sibi, upon whom our Algonquin Anishnabeg Peoples have depended upon since time immemorial for the plentiful watershed resources and our multi-generational socio-cultural connection to the places and customs associated with the Kitchi sibi.

The Draft Environmental Impact Statement for the Near Surface Disposal Facility project documented that CNL does not expect the project to isolate the wastes. The document includes multiple indications, including the following three statements, all of which indicated that the wastes would not be isolated, and the radionuclides would not be safely contained, even in the relatively short term:

- Radioactive wastes being added to the mound would be exposed to rain and snow which will leach radioactive contents down through the mound; radioactively contaminated leachate will be collected in a system of pipes and pumped uphill to a water treatment plant but not all radioactive contaminants will be removed prior to releasing the treated leachate into wetlands that drain into the Ottawa River.
- Tritium as radioactive water would leach in very large amounts from the mound; the draft EIS estimates that tritium in leachate could emit as much as 9 million beta particles per liter per second
- Untreated tritium would be discharged to wetlands, move freely towards the Ottawa River, be incorporated in fish and other aquatic life, and enter drinking water supplies; large quantities of tritium would also be released from the dump as water vapour.
- The capacity of storm-water ponds would be exceeded during extreme rainfall events or snowmelts; for example the draft EIS (page 9-2) states that pond overflow “would be conveyed by inlet and emergency outlet structures adjacent to the surface water management ponds,”
- Table 5.2.3-8 on page 5-155 of the draft EIS estimates that plutonium (Pu) isotopes (Pu-239 and Pu-240) would exit the dump at 21.4 million and 32.4 million Becquerels per year, respectively.

Once again, the radioactive releases from the proposed Near Surface Disposal Facility will be into the Kitchi sibi, upon whom the Algonquin Anishnabeg Peoples have depended upon since time immemorial for the plentiful watershed resources and our multi-generational socio-cultural connection to the places and customs associated with the Ottawa River.

These two projects are “state of the art” proposals for waste “disposal” and they are both proposed to be carried out in the heart of the Algonquin Anishnabeg Nation, where Kebaoewek First Nation exercises our rights and carries out our traditional and contemporary activities, many of which rely on a the health and well-being of Ottawa River to maintain the health of the Anishnabeg Peoples and all municipalities along its shores. By design these “disposal” projects will harm the Ottawa River and both human and non-human beings in the watershed.

Kebaoewek First Nation appreciates that this is policy review, and not a forum for the

debate of specific proposals and project assessments . However, it is inarguable that the two “disposal” projects currently being promoted within our territory illustrate the disconnect between the concept of “disposal” put forward in the NRCAN discussion paper and the reality of these projects should they be implemented. Not even in the environmental impact assessment documents does the proponent claim that these projects will “safely contain and isolate the waste”.

While the concept of “disposal” may have political appeal in that it suggests the terrible problem of radioactive waste can be – and has been – solved, policy and strategies for radioactive waste and its management should deal in reality.

The experience of Kebaowek First Nation in learning about and responding to the two “disposal” projects currently being put forward by Canadian Nuclear Laboratories had demonstrated the **need for Indigenous Peoples to be engaged in policy and project development and review** and that policy and regulation must have **protection of people and the environment** as the first priority.

We are unconvinced that the concept of waste disposal is anything more than a sleight of hand, intended to make the slow release of radionuclides into the environment sound reasonable. These wastes require **long term care** to be kept separate from the environment, and from the water and land that sustains us all.

PART 4 – ADDITIONAL COMMENTS

To put the importance of all these related nuclear topics in perspective; Algonquin Anishinaabeg Peoples have both rights and responsibilities to protect our unceded lands and waterways for future generations. For Kebaowek First Nation (KFN) this raises serious questions concerning unsound nuclear industry practices, environmental reviews and policy related to the dumping of nuclear waste next to and into the Ottawa River.

We understand from NRCAN’s public consultation sessions on a modernized nuclear waste policy that a guiding principle in this conversation is “Indigenous Reconciliation” We are unclear on how nuclear waste policy relates to Indigenous reconciliation? Certainly, we do not view our lands particularly next to the Ottawa River waterway as a marketplace for domestic and international nuclear waste disposal. This issue in our view should be for national political debate whether or not to go forward.

PART 5 – CONCLUDING REMARKS

We are committed to continuing this important conversation as it relates to the Algonquin Nation’s connection to lands and waterways and Canada’s modernized Nuclear Waste Policy. We look forward to reviewing the NRCAN “What we Heard” report document when it becomes available.

RESOURCES

- ⁱ <https://www.canada.ca/en/natural-resources-canada/news/2020/11/canada-launches-radioactive-waste-policy-engagement.html>
- ⁱⁱ <https://www.anishinabek.ca/2017/05/02/joint-declaration-between-the-anishinabek-nation-and-the-iroquois-caucus-on-the-transport-and-abandonment-of-radioactive-waste/>
- ⁱⁱⁱ <https://www.cnl.ca/clean-energy/small-modular-reactors/siting-canadas-first-smr/>
- ^{iv} <https://www.aecl.ca/science-technology/chalk-river-revitalization/>
- ^v <https://www.merx.com/cnl/solicitations/Advanced-Nuclear-Materials-Research-Centre-Call-for-Expression-of-Interest/0000130641>
- ^{vi} <https://www.youtube.com/watch?v=cpXdTEI4JpY>
- ^{vii} Personal communication, Concerned Citizens of Renfrew County and Area
- ^{viii} “Chalk Rivers toxic legacy”, Ian MacLeod, The Ottawa Citizen, Friday, December 16, 2011
- ^{ix} https://www.cnl.ca/wp-content/uploads/2020/08/Long_Term_Strategy_2017April18.pdf