

BRIEFING NOTE: NATURAL RESOURCES CANADA DISCUSSION PAPER ON “WASTE DISPOSAL”

As part of the review of radioactive waste policy announced by Natural Resources Canada (NRCan) in November 2020, NRCan has produced four discussion papers and created online forums for comment.

The NRCan discussion paper on Waste Disposal combines background information, description of current concepts adopted by the federal government as waste “disposal” and references international policy and practices. See more at www.nuclearwastewatch.ca about the review and other topics.

General Comments on the Discussion Papers

- the linkages between the discussion papers are not acknowledged or identified
- the discussion paper descriptions present a non-critical approach to current practices
- the discussion papers lack references or links to support the statements and content

Summary of NRCan’s Waste Disposal Discussion Paper

The paper begins with a number of general statements about radioactive waste “disposal”, including describing disposal as being “the final step in the management of radioactive waste” and defining it as “the placement of radioactive waste without intention of retrieval”. The paper describes the *Policy Framework for Radioactive Waste* (which is at the centre of the current review) and lists “a number of approaches to the disposal of radioactive waste” including near-surface disposal, below ground caverns, borehole disposal, geological disposal and “*in-situ*” disposal, many of which have not been done in Canada and some of which have not been done anywhere in the world. It goes on to list phases for a disposal facility (site selection, site preparation, construction, operation, closure and decommissioning of ancillary facilities, and post-closure) as if these stages have actually been applied in Canada (application has been inconsistent or absent). It makes claims that all of Canada’s radioactive wastes are currently being safely managed and refers to the Nuclear Waste Management Organization’s “*Adaptive Phased Management*” plan to bury all of Canada’s high-level waste in one location (not yet determined or accepted) and the *Port Hope Area Initiative* as if they are examples of successful “disposal” projects. It ends with a very generalized paraphrasing of select IAEA principles and policies.

What’s Missing from the NRCan Discussion Paper on Waste Disposal

- Descriptions or even acknowledgement of the radiological and chemical hazards of different types or categories of radioactive waste
- Definitions of terms used which are fundamental to the paper, including “in situ” disposal and “institutional control”
- Discussion or acknowledgement of the conceptual nature and the large number of technical and scientific uncertainties associated with some of the options they list, such as borehole disposal or geological disposal
- Clarification as to when options generally considered to be storage options – such as vaults or silos – would be considered “disposal” options
- Sufficient definition to statements such as “environmental, social and economic factors may also need to be considered depending on the approach chosen” and what the role of science and social factors are in selecting sites and systems for “disposal”
- Discussion of the role of retrievability in a “disposal” option
- Linkages between the Radioactive Waste Policy Framework which it describes and the current review of radioactive waste policy and strategies (which was initiated in response to an international review which found the Radioactive Waste Policy Framework to be inadequate)
- References or links to policy or regulatory items that the paper implies are in place, such as “Canada’s national policy requirements” and “regulatory framework for safety”
- Analysis or links to analysis of current programs cited by the paper, such as the NWMO’s siting program for a deep geological repository for nuclear fuel waste or the Port Hope Area Initiative projects, both of which are problematic and are either still in the design / development stage or are in flux during implementation
- Examples of relevant policies from other countries, such as Scotland’s Proximity Principle which directs that radioactive waste is managed as close to the point of generation as possible, or France’s policy on retrievability which requires all “disposal” plans to include means of retrieving the wastes after placement

Natural Resources Canada poses two questions to those commenting on the Waste Disposal paper

NRCan Discussion Questions on Waste Disposal	Sample Comments in Response
<p>1. What do you feel are important policy considerations that should influence the choice of disposal approaches by waste owners and should be considered as part of Canada’s radioactive waste policy?</p>	<p>The notion presented of “disposal” should be replaced by an approach of long-term management. All management options – whether short, medium or long term – should be designed to accommodate detailed monitoring, measures of how the containment system is performing, and means to replace or remediate system failures (such as failed containers or barriers, or failures in monitoring systems). Transportation should be avoided or minimized, security of the wastes should be maximized, and the absolute containment of the wastes realized.</p>
<p>2. What should be the roles and responsibilities of government, the regulator, and waste owners with regards to radioactive waste disposal facilities, including:</p> <ul style="list-style-type: none"> • Funding, • Closure of a disposal facility and its institutional control, and • Indigenous and Public Engagement and involvement in site selection and post-closure? 	<p>Independence and transparency are the central principles in determining and defining roles and responsibilities. To meet these principles:</p> <ul style="list-style-type: none"> - An independent agency that is arms-length from government and industry should be established for the management of radioactive wastes - Independent scientific, technical and social advisory groups should be established to support the independent agency - A regulatory body which licenses nuclear facilities should report to Parliament through Environment Canada - Waste management should be funded by the waste owners and generators, but how the funds are used should be directed by the independent agency - Indigenous peoples and the public should be engaged in policy and project development and review, with funded access to legal and technical advisors and all relevant documentation

Additional Reading

ENGO Backgrounder on Principles of Radioactive Waste Management

[Know Nuclear Waste](#) web site about NWMO’s nuclear waste burial project

[Nuclear Waste: Abandonment versus Rolling Stewardship](#), paper by Canadian Coalition for Nuclear Responsibility

Securing the Future - A Risk-Reduced Approach to Nuclear Fuel Waste Management (draft), Northwatch, 2021

Concerned Citizens of Renfrew County and Area’s [web page about CNL’s “Near Surface Disposal Facility”](#)

[Rock Solid report by GeneWatch](#) reviewing technical and scientific uncertainties of deep geological repositories

[MKG’s web site about the SKB](#) nuclear waste burial project

Beyond Nuclear page about [deep borehole disposal](#)

Presentation on the Port Hope Area Initiative by the Port Hope Community Health Concerns Committee, March 2021

CNSC Regulatory Documents related to radioactive waste management and ENGO critiques (still have to build this)

Visit www.nuclearwastewatch.ca for additional information about the current review of Canada’s radioactive waste policy, including notices of upcoming events, comment opportunities and information to support public participation.

To read the NRCan discussion paper click [HERE](#). To comment on the NRCan discussion paper click [HERE](#)