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Supplementary Information

Renseignements supplémentaires

Presentation from the Ottawa Chapter of the Council of Canadians

Présentation du Conseil des Canadiens, chapitre d'Ottawa

In the Matter of the

À l'égard des

Canadian Nuclear Laboratories (CNL)

Laboratoires Nucléaires Canadiens (LNC)

Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility

Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d'une installation de gestion des déchets près de la surface

Commission Public Hearing
Part 2

Audience publique de la Commission
Partie 2

May 30 to June 3, 2022

30 mai au 3 juin 2022

Canada

The Council of Canadians Ottawa Chapter

SUBMISSION RE:

CANADIAN NUCLEAR LABORATORIES' APPLICATION TO AMEND CHALK RIVER SITE LICENCE FOR CONSTRUCTION OF A NEAR SURFACE DISPOSAL FACILITY

SUMMARY

- The Canadian Nuclear Laboratories' (CNL) proposed construction of a near surface disposal facility (NSDF) at Chalk River Laboratories (CRL) raises serious environmental concerns.
- The current application before the Canadian Nuclear Safety Commission (CNSC) fails to meet the standards set in several regulations governing nuclear safety.
- The licence should be denied.

Issue 1 - Section 3(1) of General Nuclear Safety and Control Regulations

- 3 (1) An application for a licence shall contain the following information:

- (c) the name, maximum quantity and form of any nuclear substance to be encompassed by the licence;

- (j) the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste;

What is found in NSDF application?

- Reference Inventory and Licensed Inventory

Table 3-22
NSDF Reference Inventory and Licensed Inventory

Radionuclide	Reference Inventory [3-82]		Licensed Inventory [3-62]	
	Total Activity (Bq) at Placement	Total Activity (Bq) at Closure	Maximum Activity (Bq) at Placement	Maximum Activity (Bq) at Closure
Ag-108m	2.73E+10	2.62E+10	2.73E+10	2.62E+10
Am-241	6.04E+10	9.74E+10	6.04E+10	9.74E+10
Am-243	5.26E+07	5.24E+07	5.26E+07	5.24E+07
C-14	1.71E+12	1.70E+12	1.71E+12	1.70E+12

- Does not satisfy section 3(1)(j) – name, quantity, form, origin and volume required
- Table 3-23, Non-Radiological Constituents – contains only lower and maximum ‘Estimated Leachable Quantity’

- 3.3.2 Safety Case: “The following aspects contribute to the uncertainties associated with the NSDF waste inventory:

- The quality and accuracy of information recorded in the CNL waste database.
- Waste characterization process used.
- The CNL waste database for package radioactivity represents a package’s radioactivity at the time of generation and decay is not applied to package radioactivity records…
- The CNL waste database records only represent packages generated from 1995 to 2015 [3-82].
- The use of “hot-spot” measurements to represent the average radioactivity of an entire package…
- Gross alpha and beta measurements were used to estimate concentrations of alpha and low energy beta emitting radionuclides.”

Section 3(1)(j) not respected

- Required information is essential to knowing the environmental and health risks the project poses.
- As the regulations are mandatory, failure to adhere to them requires that the licence be denied.

Issue 2: Transportation Regulations

- Insufficient evidence before the Commission as to how CNL will adhere to the Transportation of Dangerous Goods Regulations

- CNSC EA report does not assess transportation risks:

  "CNL clarified that the transportation of waste from external sites to the NSDF is outside the scope of the EA and is managed by Transport Canada's Transportation of Dangerous Goods Regulations and CNSC's Packaging and Transport of Nuclear Substances Regulations." (p. 362 – CMD 22-H7)

Issue 3: Record Retention Requirement of the Class I Nuclear Facilities Regulations

- Records to Be Kept and Retained:

  14 (2) Every licensee who operates a Class I nuclear facility shall keep a record of... (d) the nature and amount of radiation, nuclear substances and hazardous substances within the nuclear facility

- CNL claims this does not apply to NSDF: “14 - Records to be kept and retained - Not applicable to the NSDF Project.” Table B-1, p. 569 *Safety Case*

Issue 3: Record Retention Requirement of the Class I Nuclear Facilities Regulations

- Does CNL have required records for waste at the CRL and already shipped from Whiteshell Laboratories to Chalk River?
- Is CNSC enforcing Class I Nuclear Facilities Regulations?
- "Class I nuclear facility means a Class IA nuclear facility and a Class IB nuclear facility…Class IB nuclear facility means any of the following nuclear facilities:…(e) a facility for the disposal of a nuclear substance generated at another nuclear facility."

Remedies

- The immediate remedy available to the CNSC is denial of the licence.
- This would ensure a potentially dangerous project does not continue until issues of safety and regulatory compliance are addressed.
- Additionally, the matter can be submitted to Cabinet pursuant to section 52 of the Canadian Environmental Assessment Act.

CEAA – Environmental Effects

- **5 (1)** For the purposes of this Act, the environmental effects that are to be taken into account… are **(a)** a change that may be caused to the following components of the environment that are within the legislative authority of Parliament:
  - **(i)** fish and fish habitat as defined in subsection 2(1) of the *Fisheries Act*,
  - **(ii)** aquatic species as defined in subsection 2(1) of the *Species at Risk Act*,
  - **(iii)** migratory birds as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*, and
  - **(iv)** any other component of the environment that is set out in Schedule 2;

- Given the proposed location for the NSDF, a leak or spill would easily reach the Ottawa River and have devastating consequences to fish, their habitats, and a number of aquatic species.

CEAA – Environmental Effects

- **(b)** a change that may be caused to the environment that would occur
  - **(i)** on federal lands,
  - **(ii)** in a province other than the one in which the act or thing is done or where the physical activity, the designated project or the project is being carried out, or
  - **(iii)** outside Canada; and
- **(c)** with respect to aboriginal peoples, an effect occurring in Canada…

- As the Ottawa River divides Ontario and Quebec, any contamination of the Ontario side will undoubtedly adversely affect the Quebec side.
- The Act refers to changes that may be caused.

Conclusion

- The federal government has implemented several series of mandatory regulations which must be adhered to.
- In the case of the NSDF application, CNL has failed, and will continue to fail, to meet these requirements:
  - 1) General Nuclear Safety and Control Regulations - name, maximum quantity and form of any nuclear substance to be encompassed by the licence
  - 2) Transportation of Dangerous Goods Regulations
  - 3) Record Retention Requirement of the Class I Nuclear Facilities Regulations

Conclusion

- The standard of review for administrative decisions is not perfection, but rather reasonableness. (*Canada v Vavilov*, 2019 SCC 65)
- Considering the lack of compliance with mandatory regulations, it would be unreasonable for the CNSC to grant a licence at this time.
- Instead, the licence should be denied, and the matter referred to Cabinet.