

August 16, 2017

From: Deborah Powell

To: Nicole Frigault, Environmental Assessment Specialist  
Canadian Nuclear Safety Commission

By email: [cncs.ea-ee.ccsn@canada.ca](mailto:cncs.ea-ee.ccsn@canada.ca)

Re: Comments on the draft Environmental Impact Statement CEEA #80122]

CEAA Reference number: 80122

Good Afternoon,

Please find attached the file containing my comments on the draft Environmental Impact Statement for the proposed near-surface disposal facility at Chalk River.

Deborah Powell

August 16, 2017

Re: Comments on the draft Environmental Impact Statement CEAA #80122

Dear Ms. Frigault,

I am writing to you regarding the proposed near-surface nuclear disposal facility at Chalk River. While I am not an expert in the matter and fully recognize the need for a safe method of disposal of these highly toxic materials, I am concerned that the plan as presented has many shortcomings. "Disposal" is indeed a misleading term for the storage of materials that are toxic for many, many generations.

As an Ottawa Riverkeeper volunteer riverwatcher, I have confidence in the assessment of the draft Environmental Impact Statement done by that organization that are shared, in many respects, by the Concerned Citizens of Renfrew County and the Fort William Cottagers' Association.

I have included here the short summary of some of the critical information that is missing from the EIS, as identified by the Ottawa Riverkeeper. These deficiencies make it impossible to assess the full range and severity of impacts on our groundwater, surface water and aquatic ecosystems.

- There is no justification or evaluation regarding the decision to include intermediate level waste (ILW) in the disposal facility.
- There is insufficient information regarding the waste that will eventually be accepted for disposal into the NSDF. It is impossible to assess ecological risk without a complete understanding of the composition and amounts of the wastes that will be placed in the dump.
- There is no consideration given to the existing groundwater and surface water contamination at the site, yet is critical for assessing cumulative effects of the NSDF on Perch Lake, Perch Creek and the Ottawa River.
- The monitoring plan is severely deficient in details. There is no explicit timeline for monitoring and no budget.
- There are no details regarding how CNL will prevent tritium concentrations in Perch Creek from exceeding 7,000 Bq/L. The concentration of tritium in the wastewater effluent is predicted to be 9,100,000 Bq/L, orders of magnitude greater than regulatory limits. Since there is no way to remove tritium from the effluent, it appears that the plan is to slowly release and dilute the tritium, which, of course, is of great concern.
- There is no assessment provided regarding the impacts of tritium on aquatic biota.
- Although there are several pages in the EIS about the proposed wastewater treatment plant (WWTP) they are lacking details and references to provide confidence that the very complex treatment process will work. Treating

liquid nuclear waste is extremely complex and a quick search of the literature is not reassuring. We would like to see examples of where these wastewater treatment technologies are being used, how effective they are and how difficult it is to operate a WWTP designed to remove radionuclides and hazardous waste. There are no details on risks/impacts associated with power outages. There are no details on a monitoring plan for the WWTP effluent.

- There is mention of a 300-year “post-closure control period”, yet no details on what that would look like and why the 300 year time frame was chosen. It is unclear whether this period will involve monitoring of downstream surface water quality.
- There is insufficient information on how the proponent will reduce the risk of human or animal intrusion into the mound for the thousands of years the mound will remain radioactive and hazardous.
- There are discrepancies regarding species at risk inventories and no detailed plans for mitigation of endangered species such as the Blanding’s Turtle.
- An ecological risk assessment has not been conducted to estimate whether risks are acute or chronic, to estimate the severity of the effects to a variety of species, the number of organisms that are at risk and the time period over which we can expect the risks to continue. For example, what are the risks to migratory waterfowl that eat fish or amphibians from Perch Lake? Or the risk to the humans who eat the waterfowl who ate the fish who ate the frog?
- Cumulative impacts have not been adequately addressed. There is already significant groundwater pollution at the site and the EIS clearly states that contaminated leachate will be released into the nearby surface water that is directly connected to the Ottawa River.

I would ask that these deficiencies be addressed in the final Environmental Impact Statement.

Sincerely,

Deborah Powell