

Federal Provincial Indigenous Review Team Technical Review of CNL’s October 11, 2024 Revised Draft EIS submission for the proposed Nuclear Power Demonstration Closure Project

Annex 1
FPIRT Review of CNL Information Request Responses

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
General					
1	Canadian Nuclear Safety Commission (CNSC)	General	Not Accepted	Page 3-31, Table 3.6-1 Table of Concordance, row “4. Project Description” – “Environmental Protection” is stated twice and “policy” should be “Principles” REGDOC-2.9.1, <i>Environmental Protection: Environmental Protection: Environmental Policy, Assessments and Protection Measures</i>	
2	CNSC, Environment and Climate Change Canada (ECCC), Health Canada	General	Accepted (ECCC, HC)		
3	Government of Quebec	General	Accepted		
4	Environment and Climate Change Canada (ECCC)	General	Not Accepted	The Proponent provided Attachment 1 which discusses the uncertainties, sensitivity, and reliability within the main modeling documents, but significant gaps remain unresolved. Most of the analysis on the treatment/management of model uncertainties provided in Attachment 1 is qualitative. While a qualitative analysis is useful at a conceptual level, without a numerical analysis it is not possible for ECCC to assess whether the conclusions in Attachment 1 are acceptable.	ECCC recommends that the Proponent: Provide quantitative data and detailed analysis to address the propagation of uncertainties, as most of the Proponent’s response is qualitative
5	CNSC	General	Accepted		
Main EIS					
1. Glossary					
6	CNSC	N/A	Accepted		
2. Executive Summary					

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7	CNSC, AOPFN	Table 2.1-1	CNSC-Accepted AOPFN – Not Accepted	AOPFN notes that in its response to CNSC IR #7, CNL refuses to provide an estimate of how long it would take for the ISD facility to reach regulatory clearance levels (i.e., the point at which regulatory control would no longer be necessary due to the relative lack of radiological risk). CNL argues that this is because this should not apply to a waste disposal facility. AOPFN also notes that CNL should have enough information to provide an estimated date by which this clearance could theoretically apply, that this information is relevant to AOPFN and other Indigenous groups because such a measure is at least a rough proxy for the time period it will take with ISD before a regulator would no longer be required to have a degree of oversight of the facility, and this is a useful metric for AOPFN to understand how long AOPFN would need to be thinking about the ISD facility into the future.	AOPFN requests that CNL respond to the original CNSC IR #7 with an estimated date when the ISD site would reach regulatory clearance levels, notwithstanding that such may not actually be applied to the site. Indigenous people deserve to know this information.
8	Government of Quebec, AOPFN	Section 2.2.1 Purpose	Gov of Quebec – Accepted AOPFN – Not Accepted	<p>AOPFN echoes the Government of Quebec’s critique over the proposed Project’s lack of adherence to IAEA guidance, which does not recommend in situ decommissioning except in emergency situations. Canada irresponsibly allowed the NPD’s original siting to proceed without waste management plans (and without AOPFN consent) and now expects AOPFN to accept a non-preferred solution that would continue to have detrimental effects to its members, present and future. We note that failure to develop a purpose-built permanent waste repository to date does not qualify as an emergency situation warranting the storage of radioactive waste on AOPFN territory in perpetuity. We also note that progress has been made in developing a strategy for intermediate level waste to be stored in deep geological repositories, and AOPFN rejects Canada’s unilateral exemption of NPD from that Integrated Strategy for Radioactive Waste, as we were not consulted on that potential exemption by Canada. We note as well that fundamentally, retrofitting the current facility to store radioactive waste will inevitably be less effective in containing the waste than a purpose-built repository.</p> <p>In addition to the absence of a necessitating emergency situation, the ISD approach is proposed in the context of an original siting done without AOPFN involvement and consent as well as historic and ongoing impacts to members’ access and use of the land, culture, and health and wellbeing of members. Now, Canada expects AOPFN to host the radioactive waste in perpetuity and without consent. While the past cannot be changed, Canada and its agents need to learn from the past, and apply it to make better future decisions, including fully committing to upholding the principles of the UNDRIP Act and AOPFN’s right to FPIC. AOPFN has stated previously and will state again here that AOPFN has asserted that this permanent hazardous waste disposal facility must be subject to a positive FPIC requirement from AOPFN, as per section 29.2 of UNDRIP.</p>	<p>AOPFN finds that CNL has not provided a satisfactory response to the Government of Quebec IR #8 and the question of the preferability of ISD over other decommissioning options, and as a follow up requests additional information:</p> <ul style="list-style-type: none"> A. In its response, CNL states “It is therefore concluded that entombment is not being used as a decommissioning strategy for the decommissioning of the NPD reactor.” ISD is indeed entombment, so what is CNL trying to say with this statement? B. CNL to respond directly to the issues flagged by the Government of Quebec as raised in Laraia (2014), which are problematic for ISD. C. CNL to identify whether, if as per the 2023 Integrated Strategy for RadioactiveWaste DGRs for intermediate level waste are constructed, this would be a viable option for the intermediate level waste from the NPD site. D. CNL to identify in detail how, if the entombed ISD facility released contaminantsto groundwater in higher than predicted amounts (or for any other reason wasrequired to move to full removal), it could dismantle the facility in a safe andtimely fashion
9	Government of Quebec	Section 2.2.1 Purpose	Accepted		
10	Government of Quebec	Section 2.2.3 Wastes and Emissions	Accepted		

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11	ECCC	Section 2.2.3 Wastes and Emissions Also applicable to Section 4.4.1 Waste Types, p.4-25	Accepted		
12	ECCC	Section 2.2.3 Wastes and Emissions Also applicable to Section 2.2.5 Government Communications (p.2-5), Section 4.4.1 Waste Types (Table 4.4-2), and Section 8.3.3 Surface Water Releases (Table 8.3-3)	Accepted		
13	Government of Quebec, AOPFN	Section 2.3 Scope of EA	Gov of Quebec – Accepted AOPFN – Not Accepted	AOPFN has not been actively engaged in examining any sites of heightened radiological or non-radiological contamination at the larger NPD site.	The Neyagada Wabandangaki Guardian Program (NWGP) will need to have access to the sites mentioned in CNL’s response to the Government of Quebec’s IR #13 as part of an overall need for a “whole of site inventory” for the larger NPD site. CNL to identify its commitment to complete this whole of site inventory with NWGP prior to the filing of the final EIS and integrate the results as appropriate into the final EIS.
14	CNSC	Section 2.5 Aboriginal Engagement	Not Accepted	In the response to the Information Request, CNL indicates that the Algonquins of Ontario (AOO) was provided the opportunity to participate in archaeological field studies. CNSC notes that CNL has not indicated if other Nations were offered opportunities to participate in the archaeological assessment. CNL also indicates that archaeological reports were provided on request to any interested Indigenous Nation, community or organization, but the IER only reports sharing a summary of the assessment with AOO and the Métis Nation of Ontario (MNO). CNSC requests additional clarity on which Nations were offered opportunities to participate in the archaeological assessments and which reports were shared with interested Nations and communities.	Please provide additional clarity on which Nations were offered opportunities to participate in the archaeological assessments and which reports were shared with interested Nations and communities.

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15	CNSC	Section 2.5 Aboriginal Engagement	Accepted		
16	Government of Quebec	Section 2.6.1 Atmospheric Environment (Baseline Environment)	Accepted		
17	CNSC	Section 2.6.4 Geological and Hydrogeological Environment Also applicable to the Updated Groundwater Modeling Report	Accepted		A minor inconsistency remains in section 2.6.4 of the EIS which retained the previous nomenclature
18	Government of Quebec	Section 2.8.2 Why are there No Adverse Residual Effects? Also applicable to Section 4.1.1 Robustness of the System, p. 4-2	Accepted		
19	Government of Quebec	Section 2.8.3 Natural Analogues	Accepted		
20	CNSC	N/A	Accepted		
3. Introduction					
21	CNSC	Section 3.1 Location of the Project	Accepted		
22	CNSC	Section 3.1 Location of the Project	Not Accepted	Figure 3.1-2 and 3.1-3 are still not clear – recommend increasing font sizes substantially, employing a background/mask on labels, and thickening boundary lines.	

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23	Government of Quebec	Section 3.3 NPD Site and Facility Description	Accepted		
24	ECCC	Section 3.3.1 Structures at the NPD site	Accepted		
25	Government of Quebec	Section 3.3.2 NPDWF Description, Figures 3.3-1 and 3.3-2	Not Accepted	Le réacteur aurait été vidé de son combustible usé. Ce serait une matière radioactive d'activité haute et elle serait entreposée temporairement à Chalk River.	Les LNC doivent préciser les conditions d'entreposage du combustible usé à Chalk River et les mesures prises pour la protection de la santé humaine et de l'environnement, en particulier la rivière des Outaouais
26	ECCC	Section 3.5.3 Additional Regulatory Authorities & Legislation (Environment Canada) Also applicable to Appendix A, p.A-1	Accepted		
27	ECCC	Section 3.5.3 Additional Regulatory Authorities & Legislation (Fisheries and Oceans Canada)	Accepted	The Proponent's response is acceptable, however ECCC recommends that the Proponent revise the EIS to include that ECCC administers the pollution prevention provisions of the Fisheries Act (including subsection 36(3)).	
28	CNSC	Section 3.5.3 Additional Regulatory Authorities & Legislation (Canadian Standards Association)	Accepted		

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4. Project Description					
29	Government of Quebec	Section 4.1 Purpose of Project	Accepted		
30	CNSC, ECCC	4.1.2 Natural Analogues	Not Accepted	CNSC staff is not satisfied with CNL response with respect to the concrete, grout, cementitious materials and corrosion aspects. The technical content related to CNL response is significantly too wide to be assessed through this IR only and is therefore also being addressed through new requests to CNL.	See new IRs #329-349 and 431
31	Government of Quebec	Section 4.1.1 Robustness of the System	Accepted		
32	Government of Quebec, AOPFN	Section 4.1.1 Robustness of the System	Gov of Quebec – Not Accepted AOPFN – Not Accepted	Gov of Quebec: Nous avons pris connaissance de l’argumentaire autour de l’inexistence de marquage ou de végétation spécifique sur le site après la période institutionnelle. Cependant, nous sommes d’avis qu’il faut tout de même maintenir un plan d’archivage et de conservation des informations pertinentes sur le site et hors site, afin d’assurer que si pour une raison ou une autre on éprouvait le besoin de creuser à cet endroit on puisse savoir ce qui se trouve dans le sol. AOPFN: After reviewing the proponent’s response to the Government of Quebec’s IR #32, AOPFN has additional information needs on the topic of Institutional Control. Regarding the proposed timeframe (i.e., 100 years), AOPFN notes that it may have a different vision for an appropriate timeframe, regardless of which decommissioning strategy is ultimately implemented. As a general rule, the more radioactive waste left at the site, the higher the “liability” for AOPFN in our unceded Algonquin territory, and as such, the longer the institutional control period required by AOPFN. Further, as part of its request for meaningful roles in decision making, AOPFN needs to be involved in reviews of when the transition from institutional control to post institutional control would be initiated and on what basis the transition would occur.	Gov of Quebec: Thématique: Communication et conservation de l’information dans la phase post-institutionnelle Référence: Section 4.1.1 (EIE V4, version anglaise) Les LNC doivent préciser quel est le plan d’archivage des données associées au site et au projet de déclassement prévu pour documenter et assurer la pérennité de l’information dans le futur, incluant la période post-institutionnelle. AOPFN: As a follow up to IR #32, AOPFN requires further information: A. CNL to provide information on what level of radioactivity remaining in the ground and other factors would warrant ending monitoring after institutional control, from the proponent’s perspective. B. AOPFN is requesting to have further discussions with CNL on the topic of the institutional control duration, alongside the outstanding issue of AOPFN’s level of involvement on land use and end state planning. AOPFN needs to have meaningful roles in decision making regarding both these issues. C. CNL to identify whether and how it is committed to work with AOPFN to develop thresholds to guide reviews regarding the continuation of institutional control, and to joint decision making

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					between AOPFN and CNL regarding the removal of institutional control.
33	CNSC	Section 4.1.1 Robustness of the System	Not Accepted	<p>While CNSC staff understand the narrative related to the application of a graded approach to determine the scope, extent and level of detail of the design of the barriers, the outcomes of the graded approach are not sufficiently well justified and documented. Of particular interest is the conservativeness of the assumptions made and the consideration of the uncertainties: assumptions need to be more conservative when a smaller level of detail is accounted for in the design and analyses. Some of the concerns identified are listed below:</p> <ol style="list-style-type: none"> 1. The conclusions of the condition assessment of the existing structure (AECOM 2018b) are based on assumptions. These conclusions have not been demonstrated nor justified whatsoever. In addition, the degradation of the structure is assumed to begin after 100 years, which, in addition to not having been demonstrated nor justified, is unrealistic and unconservative. 2. Some of the assumptions made in CNL assessments may not be considered to be conservative and may even not be representative of the current condition of the existing structures, which does not provide confidence in the results of CNL analyses and in CNL's ensuing conclusions. In particular, CNL is referred to the new IRs where specific requests to CNL are made in those regards. 3. The Cementitious Materials Synthesis Report (Arcadis 2018) provides a non-exhaustive literature overview of some potential degradation mechanisms of cementitious-based materials at the microstructural scale, instead of fulsomely examining the degradation mechanisms at the NPDDF at nano, micro, meso and macro scales. Therefore, the document may not be considered as being sufficient to support the demonstration of the ability of the cementitious-based materials barriers to efficiently perform their function over the lifetime of the facility. 4. CNL mentions in their response that an exposure of 1 mSv is considered to be negligible. A dose level of 1 mSv may not be considered as being negligible, given that it is actually the dose limit per calendar year for the general public (Section 1(3) of the Radiation Protection Regulations). 5. CNL mentions that "Layers of defence in depth can provide additional mitigation and do not always have to be systems relied on for safety". This is not in line with the CNSC requirements for defence in depth (DiD) as outlined in Section 5.3 of REGDOC-3.5.3: "With DiD, more than one level of defence (i.e., protective measure) is in place for a given safety objective, so that the objective will still be achieved even if one of the protective measures fails" and "no potential human or mechanical failure relies exclusively on a single level of defence". 6. A key point on corrosion assessment, "<i>The alkalinity leads to formation of insoluble oxides on the surface of the metal protecting it from further corrosion</i>", may not be accurate. The oxides on the surface of stainless steels and Zr alloys are dense and protective. However, oxides on the surface of carbon steels or low alloy steels are porous and cannot fully protect the metals from corrosion. Moreover, 	CNL is requested to provide clarity / justifications with regards to items 4, 5 and 6. Please refer to new IRs 329-349 for the other items.

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				when the pH is higher than 12, iron oxides may be dissolved, and iron corrosion rate may increase significantly in a reducing environment.	
34	Government of Quebec	Section 4.1.1 Robustness of the System	Accepted		
35	CNSC	Section 4.1.2 Natural Analogues Also applicable to Section 4.5 Potential Project-Related Releases to the Environment, Table 4.5-1 Also applicable to the Alkaline Plume Modeling Report	Not Accepted	See IR 30 and new IRs 329-349	
36	CNSC	4.1.2 Natural Analogues	Not Accepted	See IR 30 and new IRs 329-349	
37	Government of Quebec	4.1.2 Natural Analogues	Accepted		

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38	Government of Quebec, AOPFN	Section 4.2 Alternative Means of Carrying out the Project	Gov of Quebec – Not Accepted AOPFN – Not Accepted	<p>Gov of Quebec: La démarche de sélection de l'option retenue méritie d'être davantage justifiée afin de démontrer qu'elle répond bien aux recommandations établies dans le domaine.</p> <p>AOPFN: AOPFN has concerns with the criteria used by CNL in its evaluation of alternative means for the Project, and our review of CNL's response to IR #38 finds that CNL has not provided an adequate response. As communicated to CNL in our comments submitted on the original draft EIS, AOPFN remains concerned that CNL has been incentivized (e.g., through fee reductions) by the federal government to choose a decommissioning option that has the lowest potential risks of short-term (i.e., plan implementation) safety, security or environmental incidents, at the expense of that option transferring longer-term risks to the immediate receiving environment, which happens to be next to the Kichi-Sibi (Ottawa River) in unceded Algonquin territory.</p> <p>This implies that Canada and its agents are not willing to pay the financial price necessary to comply with the best practices of willing host and DGR and not willing to pay the financial price to comply with their commitments (e.g., UNDRIP, FPIC, reconciliation), nor AOPFN's preferences, which should be a critical consideration in determining what is an "acceptable design." We find this to be unacceptable.</p> <p>Also as communicated to CNL in the comments submitted on the original draft EIS, AOPFN disagrees with the use of the 'timely reduction of Canada's nuclear legacy liability' as a criterion for selecting in situ disposal, when for AOPFN, leaving the materials in the ground means that the nuclear legacy is literally cemented into place in AOPFN territory, leaving that legacy for future generations to deal with. This is given even greater primacy given CNL's recognition that the contaminants will eventually leach out from the grouted enclosure into surrounding groundwater and make its way to the Kichi-Sibi.</p> <p>AOPFN also finds inappropriate, CNL's "over-weighting" of occupational risks as a criterion (which are still very low under all viable alternative means, as indicated by the very low accident rates at AECL facilities and in the nuclear sector in general, and as indicated in the draft EIS for the consideration of injury risks for all the viable alternative means). This has skewed the outcome towards a less costly alternative that "externalizes" and underestimates the weighting of longer-term negative impacts onto AOPFN.</p>	<p>Gov of Quebec: Les LNC doivent fournir la démarche qu'ils ont utilisée pour créer la pondération de chacun des éléments techniques et des quatre périodes concernées. De plus, les LNC devraient donner une valeur numérique totale pour chacune des alternatives. Dans le cas spécifique du risque radiologique, les LNC doit fournir une évaluation de la dose populationnelle pour le groupe de personnes habitant le site en période postinstitutionnelle de façon cohérente avec le scénario d'occupation proposé.</p> <p>AOPFN: CNL is requested to identify whether the CNEA's contractual relationship with the Government of Canada includes any incentives or penalties associated with either of the following considerations:</p> <ul style="list-style-type: none"> • How long the decommissioning process for the NPD site takes; and • How much the decommissioning process for the NPD site costs.
39	Government of Quebec, AOPFN	Section 4.2 Alternative Means of Carrying out the Project	Gov of Quebec – Not Accepted AOPFN – Not Accepted	<p>AOPFN: AOPFN has raised similar concerns as the Government of Quebec re: ISD not necessarily being less risky for the environment in the long term than other technically and economically feasible alternatives. One of the factors CNL raises for ISD preferability is worker safety, in its response to Government of Quebec IR #39. CNL uses what appears to be a gross metric of a collective dose estimate in person mSVs. This calculation should be clarified on a per worker basis over a defined temporal time period; it is hard to understand or compare what is being stated here otherwise. In addition, this would need to be</p>	<p>Gov of Quebec: Voir réponse au commentaire 38 ci-dessus.</p> <p>AOPFN:</p>

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				<p>compared to regulatory limits for workers in such environments; it also unclear whether the full removal scenario would see any nuclear safety limits for workers being exceeded. AOPFN does note that CNL has said that full dismantling can be done safely for workers, the environment and people around the facility.</p>	<p>a. CNL is requested to convert the collective dose estimate numbers provided in IR #39 response to a per worker basis and identify whether the time scales forexposure differ between full dismantling and ISD.</p> <p>b. CNL is requested to compare the dose estimate numbers per worker in the fulldismantling scenario to regulated worker safety thresholds.</p>
40	Government of Quebec, AOPFN	Section 4.2 Alternative Means of Carrying out the Project	<p>Gov of Quebec – Not Accepted</p> <p>AOPFN – Not Accepted</p>	<p>Gov of Quebec: Dans le tableau 4.2.6 de l’EIE, lorsque les scénarios de démantèlement et enlèvement (options 2 et 3) sont comparées au confinement sur place, les risques sont jugés équivalents après la période de contrôle institutionnel des mesures de confinement. Cela ne nous semble pas cohérent avec les recommandations générales de la SIDR, en particulier celles pour la gestion des matières radioactives d’activité moyenne qui est l’élimination dans un dépôt géologique en profondeur.</p> <p>AOPFN: AOPFN echoes the Government of Quebec’s request for a clear demonstration by CNL that ISD is the preferable option for the NPD decommissioning. While CNL claims in its response that disposal capabilities for the reactor components of the NPD facility are limited, it is AOPFN’s understanding that such facilities have recently been recommended by federal policy and are built into Canada’s overall Integrated Strategy for Radioactive Waste. As such more information is needed on the federal government’s overall plans for LLW and ILW disposal facility development, including timelines. This information is important to understand, as full removal of the radiological inventory from NPD has been identified as a technically and economically feasible alternative means to decommission the site, and CNL has flagged as a supporting rationale for ISD, the absence of purpose-built facilities for the safe, deep disposal of ILW.</p>	<p>Gov of Quebec: Le tableau 4.2.6 de l’EIE doit être revu pour la période post-contrôle institutionnel afin de refléter que les options 2 ou 3 sont généralement privilégiées dans la SIDR. Cette révision de l’estimation des risques a-t-elle une incidence sur le choix de confiner sur place en permanence les matières radioactives ?</p> <p>AOPFN:</p> <p>A. AOPFN requests information from CNL and AECL on the federal government’s overall plans for LLW and ILW disposal including as identified in the 2023 Integrated Strategy for Radioactive Waste, including timelines for developing facilities for permanent disposal of these wastes. Should CNL and AECL not have this information, they are requested to engage with the NWMO, NRCAN and other members of their “federal family” to provide this information.</p> <p>B. How long could the existing “storage with surveillance” (SWS) approach currently being applied at NPD be maintained without substantial loss of radioactive materials due to existing facility erosion? E.g., according to CNL’s available data, how much of the current radiological inventory would be lost to the outside environment under SWS in the next 20, 35 or 50 years?</p>
41	CNSC, AOPFN	Section 4.2 Alternative Means of Carrying out the Project	<p>CNSC - Not Accepted</p> <p>AOPFN – Not Accepted</p>	<p>CNSC: The first sentence that CNL indicates has been added to EIS Section 4.2.4.1 is not present.</p> <p>AOPFN considers an effects assessment to be a serious endeavour that takes suitable rigour, whether on the preferred alternative or other technically and economically feasible</p>	

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				alternatives. Our concern, that CNL has not done a fulsome assessment of effects of each alternative on all VCs, remains outstanding.	
42	Government of Quebec, AOPFN	Section 4.2 Alternative Means of Carrying out the Project, Tables 4.2-2 to 4.2-4 Also applicable to Section 2.2.2 Alternatives, p.2-3 to 2-4	Gov of Quebec – Not Accepted AOPFN – Not Accepted	Gov of Quebec: Thématique: Analysis of Alternative MeansRéférence: Section 4.2.4 (EIE V4, version anglaise) “Analysis of Alternative Means”, section 4.2.4.1 Methodology, section 4.2.4.2 “Relative Risk of Alternative Means” et Tableaux 4.2-4 à 4.2-6 (pages 4-24 à 4-28) Commentaire: Dans l’EIE V4, le contenu des tableaux 4.2-4 “Summary of Relative Risk for Decommissioning Execution Timeframe”, 4.2-5 “Summary of Relative Risk for Institutional Controls Timeframe” et 4.2-6 “Summary of Relative Risk for Post-Institutional Controls Timeframe” a changé par rapport à la version antérieure de ces tableaux dans l’EIE V0 (2017). Les catégories utilisées ont changé. Le niveau de risque a aussi changé pour plusieurs variables. Peu de détails sont présentés à ce sujet dans l’EIE. AOPFN: The Government of Quebec comment and IR #42 echoes AOPFN's concerns that risk is being "pushed down the temporal road" by CNL with its ISD proposal, primarily to reduce costs and speed up the process of having a final solution in place. AOPFN notes that pushing risk into an uncertain future, when we cannot be sure that the risk can be characterized or acted upon (versus today) is extremely poor planning and goes against the responsibility that Indigenous people have to care for and protect the land today so that it can be utilized and available for the next Seven Generations.	Gov of Quebec: Les LNC doivent expliquer ces changements plus clairement dans l’EIE.
43	Government of Quebec, AOPFN	Section 4.2 Alternative Means of Carrying out the Project, Tables 4.2-2 to 4.2-4	Gov of Quebec – Not Accepted AOPFN – Not Accepted	AOPFN: Again (see also IR #39), the Government of Quebec is echoing AOPFN's concerns about focusing on workers, who are fully trained and well compensated for their safe work, versus later users of the area, who may or may not be aware of the risks.	Gov of Quebec: Voir réponse au commentaire 38 ci-dessus AOPFN: AOPFN has requested “per worker, per time period” and “risk as against regulated worker safety thresholds” updates to worker radiological exposure in full dismantling vs. ISD scenarios, in a follow-up to IR #39 above.
44	Ontario Ministry of the Environment and Climate Change (MOECC)	Section 4.3.1 Project Components and Activities	Accepted		
45	CNSC, Government of Quebec	Section 4.3.1 Project	Accepted		

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		Components and Activities			
46	Government of Quebec	Section 4.3.1 Project Components and Activities	Accepted		
47	MOECC	Section 4.3.1 Project Components and Activities	Accepted		
48	Government of Quebec	Section 4.3.1 Project Components and Activities	Gov of Quebec – Not Accepted		Voir réponse au commentaire 38 ci-dessus.
49	CNSC	Section 4.3.2 Project Schedule, Table 4.3-1	Accepted		
50	CNSC	Section 4.3.2 Project Schedule, Table 4.3-1	Accepted		
51	CNSC	Section 4.3.2 Project Schedule, Table 4.3-1	Not Accepted	Table 4.3-2 revised to “at least 100 years” though Table 3.2-1 specifies “100 years” for institutional control. Change text in table 3.2-1 to “at least 100 years”.	
52	CNSC	Section 4.3.2 Project Schedule, Table 4.3-1	Accepted		
53	CNSC	Section 4.3.2 Project Schedule, Table 4.3-1	Accepted		
54	Government of Quebec	Section 4.3.3 Scope Changes	Accepted		
55	Government of Quebec	Section 4.3.3 Scope Changes	Accepted		
56	Government of Quebec	Section 4.4.1 Waste Types	Gov of Quebec – Not Accepted	Le réemploi ou le recyclage de certaines matières ne semblent pas avoir été évalués en application de la hiérarchie des 3RVE (réduction, réemploi, recyclage, valorisation ou élimination dans un lieu autorisé). Environ 225 tonnes métriques de plomb seraient laissées en place. Une partie de ce plomb serait difficile à enlever parce qu’il est intégré dans la	LNC doit évaluer et discuter des possibilités suivantes: a) Recyclage du plomb; si ce plomb est contaminé en surface, son nettoyage et lavalorisation doivent être envisagés. Par exemple, indiquer si

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				structure de l'installation. Cependant, il y aurait du plomb qui pourrait être plus facile à enlever. Environ 165 m ³ d'amiante aurait déjà été enlevé, sorti du bâtiment et entreposé dans des conteneurs à Rolphton. Du mercure se trouverait également dans certains instruments.	le réemploi de briques ou feuilles de plomb qui servaient d'écran dans d'autres installations nucléaires peut-être envisagé. b) Gestion durable de l'amiante hors site. c) Valorisation du mercure contenu dans des instruments dans un lieu autorisé même s'il s'agit d'une faible quantité (moins de 10 g).
57	Government of Quebec	Section 4.4.1 Waste Types	Accepted		
58	Government of Quebec, AOPFN	Section 4.4.1 Waste Types	Gov of Quebec – Accepted AOPFN- Not Accepted	AOPFN is concerned about the terminology CNL is using to talk about the NPD facility. CNL's unilateral name change seems to suggest that somehow it is already a waste facility rather than a no longer active reactor under storage and surveillance awaiting a decision of a proper decommissioning pathway.	A. When did CNL decide to change the name of the NPD retired reactor facility to the NPD Waste Facility? B. Were Indigenous groups consulted prior to changing the name of the facility? C. Does CNL recognize that the NPD retired reactor facility is currently a storage with surveillance facility and not a permitted permanent hazardous waste disposal facility? If so, why the name change?
59	Government of Quebec	Section 4.4.1 Waste Types, Table 4.4-1 (a and b)	Accepted		
60	Government of Quebec	Section 4.4.1 Waste Types, Table 4.4-1 (a and b)	Accepted		
61	Government of Quebec	Section 4.4.1 Waste Types, Table 4.4-1 (a and b)	Accepted		
62	Government of Quebec	Section 4.4.1 Waste Types	Accepted		
63	CNSC	Section 4.4.1 Waste Types	Accepted		
64	Government of Quebec	Section 4.4.2 Waste Characterization	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
65	Government of Quebec	Section 4.5 Potential Project-Related Releases to the Environment, Table 4.5-1	Gov of Quebec – Not Accepted	Référence: Section 4.5 (EIE V4, version anglaise) Potential Project-Related Releases to the Environment, Table 4.5-1Thématique: Référence à Alkaline Plume Study Commentaire: Le document de l'EIE fait référence à l'étude de panache alcalin "alkaline plume study" à plusieurs endroits, sans préciser la source de cette information. (Par exemple: Section 4.5 Potential Project-Related Releases to the Environment et Tableau 4.5-1 (pages 4-63 to 4-66); Section 9.3.3.3 Effects after mitigation, page 9-41; etc.) Dans le Tableau 4.5-1, il est notamment mentionné que "The alkaline plume study shows essentially no alkaline plume forming for at least 100,000 years post-closure."	Est-ce que la référence utilisée est Wilson (2020), Wilson (2017) ou encore un autre rapport? - Wilson, J. 2020. Alkaline Plume Modelling – Grout Leaching. NPD Closure Project. 64- 508760-REPT-015. Revision 0. Prepared by Arcadis and Quintessa for CNL. - Wilson, J. 2017. Alkaline Plume Modelling Report. NPD Decommissioning. 64-508760- REPT-004. Revision 0. Prepared by Arcadis, Quintessa and Geofirma Engineering for CNL. La source de l'information sur le panache alcalin doit être précisée dans l'EIE. De plus, LNC doit donner un peu plus de détails sur cette étude de panache alcalin dans le texte de l'EIE.
66	CNSC	Section 4.5 Potential Project-Related Releases to the Environment, Table 4.5-1	Accepted		
5. Scope of the Environmental Assessment					
67	CNSC	Section 5.1 Factors to be Considered	Accepted		
68	CNSC	Section 5.2 Scope of Factors, Table 5.2-1	Accepted		
69	Health Canada, AOPFN	Section 5.2.1 Spatial and Temporal Boundaries, Figure 5.2-2	AOPFN – Not Accepted HC - Accepted	AOPFN is echoing Health Canada's request for the rationale behind the proponent's selection of the study area boundaries for its health impact assessment. With regard to assessment of the Indigenous socioeconomic and health value, it is concerning that CNL insists on using the same assessment boundaries for both human health and Indigenous health. Our review of the EIS reveals that despite the title, the Indigenous health section is essentially a duplication of the human health assessment. This is clear indication that CNL's assessment has not considered the unique and full range of factors that affect Indigenous health, despite the large amount of data provided by affected Indigenous groups including AOPFN. The section detailing baseline conditions very poorly describes existing conditions and components relevant to Indigenous peoples. Similarly, the scope of the assessment is narrow and fails to capture issues and values of relevance to AOPFN, ignoring extensive input shared by AOPFN through Project engagement. For instance, while the EIS identifies wellbeing - which it correctly states " <i>includes perceived health, mental health and life stress</i> " - in the characterization of baseline conditions for human health this is not carried forward into the effects assessment. AOPFN notes that since	As a follow up to IR #69 AOPFN requests: A. CNL to re-assess and address impacts to all Indigenous determinants of health and wellbeing identified by AOPFN, prior to the completion of the final NPD EIS. B. CNL to provide information on what data has been collected by the proponent on potential changes in mental health in the Project Case, and where (if anywhere) in the EIS effects on mental health are assessed. If they are not, this is considered a gap in the assessment by AOPFN. C. AOPFN knows through discussions with Sagkeeng Anicinabe First Nation in Manitoba that CNL has for several years possessed a psychosocial impact study conducted by that Nations for the very similar, also AECL-owned and CNL operated WR-1 reactor facility at

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				mental health is part of baseline conditions, and as repeatedly emphasized by AOPFN, it follows that mental health should be part of the health effects assessment.	the Whiteshell Laboratories in Manitoba. That study examined differential psychological effects on Indigenous peoples of different economically and technically feasible alternative means to decommission an underground, near surface research reactor, near a major river. What has CNL learned from that analogue case and how are those findings reflected in the NPD decommissioning EIS?
70	CNSC	5.2.1 Spatial & Temporal Boundaries	Not Accepted	CNL response is based on the conclusions of the analyses performed, for which the scope, extent and level of details have been established through a graded approach. While CNSC staff understand the narrative related to the application of a graded approach to determine the scope, extent and level of detail of the design of the barriers, the outcomes of the graded approach are not sufficiently well justified and documented. Of particular interest is the conservativeness of the assumptions made and the consideration of the uncertainties: assumptions need to be more conservative when a smaller level of detail is accounted for in the design and analyses. CNSC staff have identified that several assumptions in CNL analyses, including in the sensitivity analyses, are far from being conservative and are even not representative of the current condition of the existing structures and of the actual expected condition of the barriers, which does not provide confidence in the results of CNL analyses and in CNL's ensuing conclusions. In particular, CNL is referred to the new IRs # where specific requests to CNL are made in those regards.	See new IRs #329-349
71	CNSC	Section 5.2.3 Constituents of Potential Concern Also applicable to Section 9.2.3 Identification of Residual Effects (Atmospheric Environment), p.9-19 to 9-20	Accepted		
72	CNSC	Section 5.2.3 Constituents of Potential Concern	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
73	MOECC	Section 5.2.3 Constituents of Potential Concern	Accepted		
74	CNSC	Section 5.2.4 Valued Components, Table 5.2-3 (d) Also applicable to Section 9.5 Geological and Hydrogeological Environment, p.9-55	Accepted		
75	CNSC, AOPFN	Section 5.2.4 Valued Components, Table 5.2-3 (g) and (i)	CNSC – Not Accepted AOPFN – Not Accepted	<p>CNSC: CNL’s IR response indicates that the draft EIS, with additional section 9.10, was shared with Indigenous Nations, communities and organizations in May 2020 for further feedback and input, but does not provide adequate information on whether comments were received, how engagement with all Nations on these topics informed the EIS. CNSC notes that there appear to be outstanding socio-economic concerns from Nations, and it is not clear how CNL will be moving forward to address these concerns.</p> <p>AOPFN: As a follow up on CNSC’s IR #75, AOPFN’s review of the proponent’s response and relevant EIS sections find that the topic has not been addressed adequately. The evaluation of effects on Indigenous socio-economic conditions from the Project remains narrow, despite previous input and feedback from AOPFN in our comments on the original draft EIS. The evaluation has been restricted to “nuisance effects” from Project implementation activities and traffic concerns and fails to delineate how the Project itself (the creation of a permanent radioactive waste disposal facility on the banks of the Kichi-Sibi) will impact on AOPFN members’ socio-economic values and interests. The EIS contains a scanty description of baseline conditions, without an appropriate depth of analysis of social components, such as considerations of social/ family/ intergenerational relationships, food security, sharing relationships, or standard socio-economic considerations such as cost of living or quality of life. Neither has the assessment accounted for AOPFN’s future plans and interests in re-establishing traditional economic ventures, in line with our right to self-determination, that would be impacted by the Project.</p>	<p>CNSC: Please provide details on how Indigenous Nations, communities and organizations were consulted on the health and socio-economic conditions of Aboriginal peoples resulting from a change to the environment, what comments were received, and how CNL will be addressing ongoing issues and concerns.</p> <p>AOPFN: Some areas where improvement is required in the identification of socio-economic effects include:</p> <ul style="list-style-type: none"> A. There needs to be an evaluation in the Project Case of the continued disruptions to member’s ability and willingness to engage in traditional land and resource use, and the practice of traditional land-based economy leading to the erosion of cultural identity and affecting the abilities and opportunities for future generations of members to connect with Algonquin culture and way of life that involves traditional economic systems. B. The evaluation of effects on the Decision-Making VC needs to assess CNL, AECL and CNSC consultation and engagement with AOPFN within the framework of the existing regulatory environment and AOPFN governance issues. For instance, the effectiveness of engagement and consultation with AOPFN on decision making regarding the Project needs to be explored, by determining to what extent input, including AOPFN Algonquin Knowledge has informed decision making, and extent to which applicable regulations and protocols (namely, <i>UNDRIP Act</i>, <i>AOPFN Principles and Requirements for Nuclear Sector Projects</i>) have been adhered to.

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
					<p>C. CNL is requested to re-assess potential effects in the Project Case, using appropriate guidelines for Indigenous-specific socio-economic impact assessment (SEIA). A few examples of what this re-assessment will require include:</p> <ul style="list-style-type: none"> i. The assessment will take into account AOPFN community economic and socioeconomic goals, values and aspirations, relying on appropriate VCs, criteria, and indicators. The assessment will not only address areas that are easiest to delineate (e.g, employment, income, education), but focus on “what matters most” in the AOPFN context, where there are community-specific determinants and expectations as to what it means to have a good quality of life. For instance, the ability to pass on Algonquin Knowledge, ability to access traditional land use resources without fear of contamination or need to avoid certain areas, among other considerations, would need to be explored. ii. The assessment will stem from a proper assessment of traditional land use effects, informed by the land users themselves as well as Algonquin Knowledge, with the understanding that the social and economic implications of the Project are tied to effects on traditional land use. We note that this initial layer of properly assessing impacts on traditional land use has not occurred. iii. The SEIA will include a component that assesses potential effects on income related food security. iv. Assessment will use a “Net Gains” approach to evaluate any potential benefits against adverse effects in the Project case, to determine whether there is an appropriate balance over all relevant time scales (including prior to the siting of the permanent hazardous waste disposal facility and into the far future, and in light of any futures that may be foregone in the Project Case).

6. Public and Stakeholder Engagement

Note: The order of EIS sections has been changed in the 2021 revised draft EIS with Indigenous Engagement coming first in Section 6 followed by Stakeholder Engagement in Section 7. This change reflects the importance and priority of CNL’s relationship with Indigenous peoples.

Reference Number	Federal / Provincial Department/ Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
76	Government of Quebec	Section 6.2 Engagement Methods and Activities	Accepted		
77	CNSC	Section 6.2.7, Participant Funding Also applicable to Section 5.0 Participant Funding of the Stakeholder Engagement Technical Supporting Document, p.5-1	Not Accepted	<p>CNL should ensure that the links, description, and terminology used to describe the CNSC’s Participant Funding Program is consistent across the EIS, stakeholder engagement report, and other supporting documentation where appropriate, specifically:</p> <ul style="list-style-type: none"> • Include the context as to why the PFP is important to CNL’s stakeholder engagement on page 5-1 of the stakeholder engagement report. • Update the link on page 5-1 of the stakeholder engagement report to reference the 2019 funding opportunity to be consistent with the link in the EIS (https://www.cnsccsn.gc.ca/eng/the-commission/participant-funding-program/opportunities/pfp-funding-for-nuclear-power-demonstration-closure-project/). • Ensure that terminology around Indigenous Nations and communities is consistent between the EIS and stakeholder engagement report (i.e. use of Indigenous vs. Aboriginal). 	Please revise the EIS and stakeholder engagement report accordingly.
78	Government of Quebec	Section 6.3.4 Planned Future Engagements	Not Accepted	<p>Thématique: Public and Stakeholder Engagement – Mise à jour Référence:</p> <p>Section 7 (EIE V4, version anglaise) Public and Stakeholder Engagement, section 7.4 Planned Future Engagements</p> <p>+ section 5 (Planned Future Engagements, page 69 à 71) et section 6 (Conclusions, page 72 de 280) dans le Rapport sur la participation des intervenants. Stakeholder Engagement TSD: Chenette, R. 2024. Nuclear Power Demonstration (NPD) Stakeholder Engagement Report. 64-513440-REPT-002 Révision 1.</p> <p>Stakeholder Engagement TSD: Chenette, R. 2024. Nuclear Power Demonstration (NPD) Stakeholder Engagement Report. 64-513440- REPT-002 Révision 1.</p> <p>Nous comprenons que: “Les activités de mobilisation à mener à cette étape [de contrôle institutionnel] du projet ne sont pas encore définies en détail. Les plans de surveillance définitifs et la décision prise en fonction des résultats de l’EE peuvent inclure des exigences précises en matière de communication. Les LNC continueront à adapter leurs activités de mobilisation afin que la collaboration se poursuive à l’étape de contrôle institutionnel dans une mesure proportionnelle aux autres activités des LNC.”</p>	<p>Dans la version finale de l’EIE, LNC doit inclure les éléments suivants :</p> <p>a) une mise à jour des activités de mobilisation réalisées depuis janvier 2024.</p> <p>b) le détails sur les activités de mobilisation envisagées à l’étape du contrôle institutionnel.</p> <p>c) une mise à jour sur les activités de mobilisation du public prévues ou envisagées à l’étape de contrôle institutionnel du projet afin d’informer la population avoisinante de l’avancement du projet et des résultats de suivi environnemental.</p> <p>Ces éléments devront aussi être mis à jour dans le Document technique complémentaire “Stakeholder Engagement Report”.</p>

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
7. Aboriginal Engagement					
Note: The order of EIS sections has been changed in the 2021 revised draft EIS with Indigenous Engagement coming first in Section 6 followed by Stakeholder Engagement in Section 7. This change reflects the importance and priority of CNL's relationship with Indigenous peoples. This is the reverse of the Section order in the 2017 draft EIS.					
79	CNSC	Section 7.5 Engagement Activities Completed, Table 7.5-1	Accepted		
8. Description of the Existing Environment					
80	CNSC	Section 8.1 Baseline Characterization Approach	Accepted		
81	Government of Quebec	Section 8.1 Baseline Characterization Approach, Table 8.1.1	Accepted		
82	CNSC	Section 8.1 Baseline Characterization Approach	Accepted		
83	CNSC	Section 8.2 Atmospheric Environment	Not Accepted	CNL explained the meteorological component but has not proposed any changes to the EIS to explain if the CNL project at Chalk River or other projects in the area could result in cumulative effects.	
84	CNSC	Section 8.2.2 Climatic Data	Not Accepted	The climatic data presented in section 8.2.2 is outdated with information from 2011 to 2015 and from 1981 to 2010.	It is recommended that CNL update the climatic data in section 8.2.2 with current values.
85	CNSC	Section 8.2.2 Climatic Data	Accepted		
86	ECCC	Section 8.2.2 Climatic Data (Precipitation), Tables 8.2-3 and 8.2-4	Not Accepted	The Proponent has identified that precipitation is the primary source of groundwater for the Project. Groundwater at the NPD location is sensitive to the rainfall amounts. Increases in rainfall may contribute to increased groundwater recharge at the proposed project site. It is possible that increased recharge could expedite re-saturation of the facility, leading to the creation of a plume earlier than estimated. This plume could subsequently move earlier and more quickly to the Ottawa River. Under this potential scenario, radiological contaminants will have had less time to decay and therefore have the potential to increase risk and/or amount of radiological contamination to the Ottawa River.	ECCC recommends that the Proponent: <ul style="list-style-type: none"> Update the precipitation infiltration and impact on groundwater flow models if there are significant changes to the precipitation risk assessment. Describe with rationale how an increased groundwater recharge rate could affect the creation of a plume and how this would affect the risk of radiological contaminants from entering the Ottawa River.

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				<p>It is stated in Section 8.2.2 of the Draft EIS, “Precipitation data at CRL for the period 2011 to 2015 were available as total precipitation (i.e. including both rain and snowfall). Table 8.2-3 presents a summary of precipitation data from the Chalk River AECL station for the 2011 to 2015 period.” and “Table 8.2-4 summarizes the 30-year precipitation normals for 1981 to 2010 from the same station provided by Environment Canada. The monthly average is the average amount of precipitation in the identified month over the course of the entire 30-year period.”</p> <p>Table 8.2-3, shows a similar pattern and seasonal distribution as the climate normals for 1981 to 2010, Table 8.2-4. In the long term, chances for an extreme event are increasing. There is significant variation in the monthly data and there are differences between the 5-years series and the 30- year series. For example:</p> <ul style="list-style-type: none"> • For August, the monthly average precipitation is 95.3 mm (from the 5-years series) and 80.7 mm from the 30 -years series. • For February, the monthly average precipitation is 24.7 mm from the 5-years series and 43.7 mm from the 30 -years series. <p>The high degree of variability between the 5- and 30-year precipitation series suggests a high potential for an extreme event given enough time for realization of those probabilities. The “one in 200 years” event is substantially greater in magnitude than the “one in 100 years” event and a more reliable estimate. In the long-term run, the frequency of extreme event increases. Averages may be misleading when trying to infer an extreme event. A detailed precipitation risk assessment should be conducted with the entire data on record.</p> <p>References:</p> <p><i>Coelho, Ferro, Stephenson and Steinskog. 2008. Methods for Exploring Spatial and Temporal Variability of Extreme Events in Climate Data. American Meteorological Society Journal of Climate. 21: 2072-2092.</i> http://journals.ametsoc.org/doi/abs/10.1175/2007JCLI1781.1</p> <p><i>Sankovich, England and Caldwell. 2012. Need to Document Extreme Precipitation Events and Revisit PMP for Federal Nuclear Power Plants and Dam Design. 92nd American Meteorological Society Annual Meeting, New Orleans, January 25, 2012.</i> https://ams.confex.com/ams/92Annual/webprogram/Paper201865.html</p>	<ul style="list-style-type: none"> • Apply a specific methodology to the NPD precipitation data (and/or its proxy) to substantiate the discussions about the probabilities, frequency and magnitudes of extreme events relevant to the proposed NPD project. • Apply an extreme event methodology to the precipitation analysis at the NPD location and use the entire record of data. • Substantiate results with relevant context including identify the methodology used, list any associated limitations and providing assumptions or inferences; and provide a rationale relevant to the NPD proposed project. • Describe with rationale the variability in short duration events for longer periods of time, 300-to-500-year return events and longer. For a longer indefinite duration of time leading to structural deterioration of the in-situ monolith, PMP values are recommended
87	CNSC	Section 8.2.2 Climatic Data Also applicable to Appendix C (Atmospheric	Not Accepted	No specific discussion of uncertainties has been included in Section 8.2.2.3. CNL should update the section or point to the relevant section(s) in the report where the uncertainties are discussed.	

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Dispersion Modelling) of the Decommissioning Safety Assessment Technical Supporting Document, p.C-11 to C-12			
88	CNSC	Section 8.2.4 Air Quality	Not Accepted	Section 8.2.4 Air Quality contains outdated monitoring data. For example, section 8.2.4.2 presents tritium activity concentrations measured at CRL between 2010 and 2015.	It is recommended that CNL update the monitoring data in section 8.2.4 with current values.
89	CNSC, ECCC	Section 8.2.4 Air Quality Also applicable to Appendix F (Air Quality Assessment for the NPD Project) of the Decommissioning Safety Assessment Technical Supporting Document	Accepted		
90	CNSC, Health Canada	Section 8.2.4 Air Quality	Not Accepted	<p>HC - Use baseline nitrogen dioxide (NO₂) levels that are representative of the Project area conditions in the air quality assessment and follow-up monitoring.</p> <p>Baseline NO₂ levels were established using National Air Pollution Surveillance (NAPS) data from an urban setting (i.e., City of North Bay, Ontario; Table 8.2-12, EIS). Given the Project's location in a rural area (Section 3.1, EIS), the surrogate NAPS data may have overestimated the baseline NO₂ levels of the local and regional study areas. For example, the baseline 1-hr and annual NO₂ levels have already reached 31% and 50% of the Canadian Ambient Air Quality Standards (CAAQS)¹ values, respectively [Table F-7, Decommissioning Safety Assessment Report (DecomSA)]. Follow-up monitoring of NO₂ could potentially mask the incremental health risks by attributing project contributions to baseline levels, thus underestimating the actual impacts due to the Project.</p>	<p>Health Canada recommends the following comments be addressed in future Project documents:</p> <ul style="list-style-type: none"> a) Include discussion on how urban/suburban characteristics of the surrogate baseline NO₂ data may influence the assessment of incremental health effects and interpretation of follow-up monitoring results. b) Alternatively, establish baseline NO₂ levels based on monitoring data from other NAPS stations that can better represent the Project area conditions or based on on-site measurements of NO₂ concentrations prior to the commencement of any Project activities.

¹ Canadian Council of Ministers of the Environment (CCME). 2019. Canadian Ambient Air Quality Standards. Available at: <https://www.ccme.ca/en/air-quality-report#slide-7>

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
91	CNSC	Section 8.3.2 Hydrology, Figure 8.3-3	Accepted		
92	CNSC	Section 8.3.3 Surface Water Releases Also applicable to Section 8.3.4 Surface Water Quality and Section 8.3.5 Sediment Quality	Accepted	Note: Section 8.3.3 Surface Water Releases contains radioactive release monitoring data from 2009 to 2017 but does not provide more current monitoring data. It is recommended that CNL update the monitoring data in Section 8.3.3 with more current data available.	
93	CNSC	Section 8.3.3 Surface Water Releases	Accepted		
94	MOECC	Section 8.3.3 Surface Water Releases	Accepted		
95	MOECC, AOPFN	Section 8.3.4 Surface Water Quality	MOECC - Accepted, AOPFN – Not Accepted	Testing, as reported in the EIS (sections 9.3, 9.4), shows the certainty that groundwater will come into contact with radiological contaminants which will flow out and eventually into the Kichi-Sibi at some point during institutional control and post-institutional control. This is essentially saying not only that CNL cannot guarantee that radiological and other contaminants will stay in the grouted enclosure forever, but that indeed they will inevitably leach out. This recognition is echoed in a number of different places in the revised draft EIS. AOPFN's position is that removing all the radiological components would remove this risk entirely. This facility was not designed as a waste facility and is now subject to an awkward retrofit when alternatives to remove all the risk and place it in "designer" waste facilities are now planned to be available within reasonable timeframes, as part of Canada's overall Integrated Strategy for Radioactive Waste.	
96	CNSC, AOPFN	Section 8.3.4 Surface Water Quality	CNSC – Accepted, AOPFN – Not Accepted	CNSC notes "Section 8.3.4.1 states that chemical levels in surface water in the part of the Ottawa River located in the Site and Local Study Areas are not available. If these data have not been obtained, how can follow-up monitoring of the surface water environment be reliably conducted and contrasted during the undertaking and completion of the project in order to demonstrate chemical contaminants are not entering the Ottawa River?"	CNSC - Ensure to track implementation of baseline collection at beginning of project

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				In its response, CNL suggests it will gather the baseline data “before the Project begins”. AOPFN considers the absence of this data right now as a deficit in the EIS. Knowing what the current conditions are in the receiving environment, especially for a value as critical as the waters of the Kichi- Sibì, should be non-negotiable.	AOPFN - CNL is requested to gather that baseline data on surface water identified in its response to CNSC IR #96, prior to the end of the EA process, for integration into the final EIS.
97	ECCC	Section 8.3.5 Sediment Quality	Not Accepted	The Proponent provided Figure 8.3-11 that identifies sampling locations; however, the Figure is illegible due to the low resolution	ECCC recommends that the Proponent provide an updated Figure 8.3-11 with a higher resolution.
98	CNSC	Section 8.3.5 Sediment Quality, Tables 8.3-8 and 8.3-9 Also applicable to the Postclosure Safety Assessment Technical Supporting Document, Table 5-5, p.5-14	Accepted		
99	CNSC	Section 8.3.5 Sediment Quality, Tables 8.3-8 and 8.3-9	Accepted		
100	Health Canada, MOECC	Section 8.3.5 Sediment Quality	Accepted		
101	Health Canada	Section 8.3.5 Sediment Quality	Accepted		
102	Health Canada	Section 8.3.5 Sediment Quality	Accepted		
103	CNSC	Section 8.5.2 Geology	Accepted		
104	CNSC	Section 8.5.2 Geology	Not Accepted	While CNL has provided a significant amount of additional descriptions of the geological environment, section 8.5.2 of the most recent version of the EIS draft is still lacking essential information. In accordance with REGDOC 2.9,1, narrative descriptions should be	CNL is requested to:

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Also applicable to the Postclosure Safety Assessment Technical Supporting Document		<p>accompanied by appropriate figures to facilitate the evaluation of the sufficiency of the data provided according. For instance, CNL only provided text descriptions of local and regional structures (faults, fractures, fabrics, lineaments, etc.) but do not present any maps to show the locations and spatial distributions of these features.</p> <p>Several statements regarding the geosphere in the EIS (and in the geosynthesis) are based on a limited number of references, which provide an incomplete perspective of the area’s geological environment. For example, in section 8.12.2, CNL cites McCrank (2016b) and Geofirma (2019) as basis for describing a low likelihood of geological disturbances and reactivation associated with neotectonics and earthquakes. The EIS, however, does not consider an abundance of research that was available during the drafting of the most recent 2024 version that provides a different perspective.</p> <p>For instance, work by Rimando and Peace (2021) (https://doi.org/10.1029/2021EA001825) has described the reactivation potential under the contemporary tectonic stress field of NW-SE-striking structures (including the proximal Mattawa fault), that are relevant to the NPD site.</p> <p>Additionally, a study by Steffen and Steffen (2024) (https://doi.org/10.1029/2024JF007705) shows that glacial stresses, which can contribute to deformation in Ontario, can vary greatly over timescales of 1000 years, and must be considered in the design of nuclear waste disposal sites in the region.</p> <p>The accuracy of some geologic descriptions should also be checked. Figure 8.5-3 states that the average ground surface is 111 meters. However, it is not clear how this is possible given that the lowest elevation on the DEM legend is 120 meters. This is crucial as CNL states that topography was considered in its air dispersion modelling.</p> <p>CNL description of the geological environment is divide into two subsections: 8.5.2.1 Site/Local Study Area and 8.5.2.2 Regional Study Area. However, the current presentation of information is confusing, as the description of the local study area precedes the regional study area, and a substantial amount of information pertinent to the Local Study Area is included in the description of the Regional Study Area, and vice versa.</p>	<ol style="list-style-type: none"> 1) provide the following: <ol style="list-style-type: none"> a. figures to accompany the narrative descriptions of the geological environment and b. a more complete characterization of the geotechnical and geophysical hazards by carefully considering all the relevant, recent peer-reviewed scientific literature. 2) check the accuracy of its geologic descriptions. 3) reconsider its order of presentation/ organization of regional and local study area geological information.
105	CNSC	Section 8.5.2 Geology	Partially Accepted	Staff acknowledge the significant improvement in the amount and quality of new information provided by CNL.	Remaining issues are described and can be followed up through IR #104.
106	ECCC, AOPFN	Section 8.5.3 Soil Quality	ECCC – Accepted, AOPFN – Not Accepted	The Neyagada Wabandangaki Guardian Program (NWGP) will need to have accessto all potentially contaminated locations mentioned in CNL’s response to theECCC’s IR #106 as part of an overall need for a “whole of site inventory” for thelarger NPD site.	CNL to confirm that this access will be provided prior to the completion of the final EIS and that the advice of the NWGP will be considered prior to CNL making a final decision on whether soil remediation is required.

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		Also applicable to the Baseline Report (Wills 2013), Section 5.2.5 Soil, Tables 5-26 to 5-28		Initial site surveys by AOPFN in 2022 and 2023 covered significantly less than 20% of the NPD site.	
107	Government of Quebec	Section 8.5.5 Hydrogeology	Accepted		
108	Government of Quebec	Section 8.5.5 Hydrogeology	Accepted		
109	CNSC	Section 8.6.5 Regional Provincial Parks and Protected Areas, Figure 8.7-1	Not Accepted	Figure 8.6-1 – clarity of the figure is poor, recommend increasing font sizes for labels and adding a background/mask for labels.	
110	CNSC	Section 8.9.2 Traditional Land Use	Accepted		
111	CNSC, AOPFN	Section 8.9.2 Traditional Land Use	CNSC - Accepted AOPFN – Not Accepted	AOPFN: Regarding CNSC’s IR #111 on trapping rights, AOPFN has outstanding concerns with the proponent’s consideration of AOPFN rights in relation to the Project EA. The EIS description of traditional trapping (section 8.9.2.3) needs to clearly recognize that trapping supports a rights-based traditional economy for AOPFN, producing both financial and cultural benefits, and food security. Also missing in the section is the fact that there are at least four site specific trapping locations within the AOPFN AKLUS RSA. The AOPFN AKLUS additionally indicates that members participate in commercial trapping activities within 25 km of the NPD site. The importance and occurrence of trapping around the NPD site are not sufficiently captured by the baseline description provided in the EIS and more importantly, potential impacts to AOPFN members’ trapping (subsistence or commercial) activities have not been factored into the assessment of Project effects.	AOPFN: CNL to update Section 8.9.2 to deal with the issues flagged.
112	CNSC	Section 8.9.2 Traditional Land Use	Accepted		
113	CNSC	Section 8.9.2 Traditional Land Use	Not Accepted	CNL has described adequate engagement with certain Nations on fishing in the regions around the NPD site (e.g. Métis Nation of Ontario, Algonquins of Pikwakanagan First Nation, Algonquins of Ontario, Wolf Lake First Nation). In the response to the IR, CNL states that “CNL has assumed fishing is occurring by Indigenous peoples on the Kichi-Sibi (Ottawa River). To date, no one from any of these communities has suggested anything different.” CNSC notes that taking the	Please clarify how CNL has made efforts to engage with all potentially impacted Indigenous Nations and Communities with respect to VCs of interest to Aboriginal peoples, including fishing resources in the Ottawa River.

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				<p>precautionary approach, and simply assuming that all Nations in the region fish in the Ottawa river is not an approach that displays meaningful engagement with all potentially affected Indigenous Nations and Communities. CNL should clearly demonstrate the efforts they've made to engage with all potentially affected Indigenous Nations and Communities, specifically regarding fishing as a traditional land use, and how CNL has addressed the concerns raised about fishing and fish resources in the Kichi Sibi.</p> <p>CNL also indicates in their IR response that KZA and KFN have expressed interest in protecting the Kichi-Sibi (Ottawa River), but that feedback did not relate to fishing, and that CNL would capture any additional feedback on this topic in the IER. It is not clear in the IR response if CNL has followed-up directly with KZA and KFN about this topic to engage directly on fishing and fish resources.</p>	<p>Sufficient information should be provided in the EIS to demonstrate that CNL has made efforts to discuss, receive feedback, consider, respond to and validate the concerns of the identified Indigenous Nations and communities. If needed, CNL should provide a rationale where information was not obtained for some of the identified Indigenous Nations and communities.</p>
114	CNSC	Section 8.9.2 Traditional Land Use	Not Accepted	<p>CNL has described adequate engagement with certain Nations on gathering in the regions around the NPD site. However, In the response to the IR, CNL notes that they have assumed that certain traditional activities, such as gathering, likely occur on the nearest Crown Land, and that CNL has exercised the precautionary approach of where these activities might occur in relation to the NPD site. CNL has also assumed that certain Nations are conducting gathering activities in proximity to the site.</p> <p>CNSC notes that taking the precautionary approach, and simply assuming that all Nations in the region are practicing certain activities in the area is not an approach that displays meaningful engagement with all potentially affected Indigenous Nations and Communities. CNL should clearly demonstrate the efforts they've made to engage with all potentially affected Indigenous Nations and Communities and how CNL has addressed the concerns raised by these Nations in regards to Land Use in the Area.</p>	<p>Please clarify how CNL has engaged with all potentially affected Indigenous Nations and Communities with respect to VCs of interest to Aboriginal peoples, including gathering activities in the Ottawa Valley and near the project site. CNL should provide a clear demonstration of the engagement activities and related efforts undertaken with all the potentially affected Indigenous Nations and communities and how the concerns raised by these Nations and communities have been directly addressed.</p> <p>Sufficient information should be provided in the EIS to demonstrate that CNL has made efforts to discuss, receive feedback, consider, respond to and validate the concerns of the identified Indigenous Nations and communities pertaining to these VCs. If needed, CNL should provide a rationale where information was not obtained for some of the identified Indigenous Nations and communities.</p>
115	CNSC, AOPFN	Section 8.9.3 Cultural Resources and Ceremonies	CNSC - Accepted AOPFN – Not Accepted	<p>AOPFN: AOPFN would like to follow up on CNSC's IR #115, as we have found the proponent's response to the IR as well as previous requests by AOPFN, to be lacking in depth. The NPD EIS has not adequately assessed impacts to AOPFN culture and has only considered the presence of ceremonies and access to physical archaeological resources within the NPD site. The proponent has chosen to dismiss other cultural values of importance to AOPFN such as transmission of Algonquin Knowledge, cultural landscapes, trails and the Kichi-Sibi as a cultural value unto itself. The proponent has ignored these other cultural values and failed to collect specific AOPFN cultural baseline data. In the description of the RSA, the EIS reports that there are "no known cultural sites on the NPD property and the NPD Closure Project is proposed for the NPD site, so there is no potential for a blocking of access or other potential impact to this or other cultural sites." AOPFN finds fault with this conclusion. CNL appears to be stating that because it has</p>	<p>AOPFN: We request that CNL engage with AOPFN to identify an agreeable approach to reconsideration of effects on AOPFN culture in the Project Case and report back to the CNSC.</p> <p>We are following up on previous requests that all AOPFN culture and heritage resources be identified at the NPD site and LSA and protected with AOPFN oversight. If there is a high potential for cultural values beyond the site, there is the potential they will remain alienated in an ISD future, due to stigma associated with the permanent hazardous waste disposal facility in proximity.</p> <ul style="list-style-type: none"> AOPFN requests that CNL conduct additional archaeological, cultural heritage and traditional land use site assessments with the

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				<p>rendered the area inaccessible for the past 60 plus years and is planning to build the NPD Closure Project at the site, there can be no cultural sites or cultural values or cultural activities at the location in the future. <u>This is evidence of a Project impact on potential cultural use, not evidence of absence of cultural values in or cultural utility of the area.</u> All areas with forested landscapes, in close proximity to the Kichi-Sibi, should be considered to have high potential for cultural use of the Algonquin people, a consideration not recognized by CNL in the draft EIS.</p> <p>CNL has chosen not to further assess impacts to AOPFN culture and heritage resources beyond providing the current context. It is important to recognize Indigenous culture as a holistic VC on its own, and also as the foundation for Indigenous cultural rights practices, which must be part of the assessment of Project effects on AOPFN cultural rights.</p> <p>A more fulsome cultural impact assessment needs to be conducted that includes an evaluation of whether cultural reconnection to any portion of AOPFN territory is subject to constraint in the Project Case, regardless of whether this is a “known site of significance” or an area where ceremonies are conducted.</p> <p>A deeper examination is also required of the factors impacting on the practicability of conducting cultural ceremonies, including but not limited to, alienation from cultural areas due to changes in the sensory experience and real or perceived contamination. A proper assessment would recognize that lack of access and lack of suitability of the area are impacts to cultural practice in themselves, that have been generated by the siting of this facility by its current owner, without consultation of AOPFN, back in the 1960s.</p> <p>In addition, as communicated to CNL in comments on previous iterations of the EIS, AOPFN disagrees that archaeology work was not required beyond the immediate vicinity of the NPD site. According to the Archaeological TSD, there is potential for pre-contact material, except for in areas of extensive disturbance as a result of construction and operation of the reactor. Consequently, while the presence of physical heritage resources may be low within the small portion of the site that has been industrialized, due to existing disturbance, it is still possible given the high potential reported within the larger NPD site area. AOPFN needs to understand within the larger context of the whole site, whether there are archaeological values. Those values would signify greater reason to push for the full removal of all radiological materials from the site, as without this full removal it may prove difficult to ever reintegrate the site as a functioning part of the AOPFN cultural landscape.</p>	<p>participation of AOPFN Neyagada Wabandagaki Guardian monitors that covers the entirety of the NPD site.</p>
116	CNSC	Section 8.9.3 Cultural Resources and Ceremonies	Accepted		
117	CNSC	Section 8.11.2 Seismicity	Not Accepted	<p>1. A probabilistic seismic hazard assessment (PSHA 2024) has been conducted for the NDP site. CNL’s response and relevant sections in EIS should be updated using information in the PSHA (2024).</p>	<p>1. CNL is expected to update section 8.12.2 and section 9.14.7 with most recent information in the PSHA (2024).</p>

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				<p>2. The PSHA TSD should be shown to support the EIS (as the post SA and geosynthesis documents do).</p> <p>3. CNL stated that it has updated the characterization of the seismicity information in sections 8.12.2 and 9.14.7. However, some of the information in sections 8.12.2 and 9.14.7 are either inaccurate or do not represent a thorough review of the relevant scientific literature. For instance, CNL states in its discussion of seismicity at the local study area that the reactivation of structures at the NPD site is unlikely based on analyses by McCrank (2016b) and Geofirma, 2019), but at the same time states that the proximal Mattawa fault is an active major fault zone comprising the Ottawa Bonnechere Graben. It is not clear how the possibility of reactivation was ruled out for similarly optimally-oriented faults/fractures/ shear zones at the site, given that the orientation of in-situ stress does not deviate significantly from the regional stress field.</p> <p>Also, CNL states that the Mattawa and Petawawa Faults are the sources of 1935 Timiskaming and 2000 Kipawa earthquakes. However, the epicenters of these events are too far from the traces of Mattawa and Petawawa Fault. Besides, analysis by Bent (1996) (https://doi.org/10.1007/BF00876667) and Rimando et al. (2023) (https://doi.org/10.1139/cjes-2023-0025), for instance, suggest that the 1935 Timiskaming earthquake likely occurred along an unnamed fault west of the city of Témiscaming.</p> <p>Lastly, the notion that the location of the NPD site is stable due to its distance from active plate boundaries is not true. GPS observations and geomorphological analysis indicating regional uplift related to tectonic loading and glacial isostatic adjustment (GIA) suggest significant crustal deformation that can be expected to continue for several millennia (e.g., Gusti et al., 2023: https://doi.org/10.1139/cjes-2022-0137); Samadi Alinia, et al, 2017: https://doi.org/10.1007/s00190-016-0987-5).</p>	<p>2. The relationship of the PSHA TSD to the EIS should be depicted.</p> <p>3. CNL is expected to correct the noted scientific inaccuracies/inconsistencies.</p>
118	ECCC	<p>Section 8.11.4 Floods</p> <p>Also applicable to Section 9.13.2 Climate Change and Section 9.13.6 Flood</p> <p>Also applicable to the</p>	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Decommissioning Safety Assessment Technical Supporting Document, Section 4.3 (p.4-9) and Section 9.6.3 (p.9-65 to 9-69)			
9. Assessment and Mitigation of Environmental Effect					
119	Government of Quebec, AOPFN	Section 9.1 Effects Assessment Approach	Gov of Quebec - Accepted AOPFN – Not Accepted	<p>AOPFN: In its response to Government of Quebec IR #119, CNL states “The removal of radioactive components to reduce short term risk as modelled by Helbrecht is offset by the significantly increased worker doses required to perform the extra work. This is illustrated by comparison of the worker doses estimated in the Detailed Decommissioning Plan (DDP) for NPD (Johnson 2022a) with the dose estimate for complete removal of the facility, (McVeigh 2018c). Johnson 2022a estimates the collective occupational radiation dose for in-situ disposal as 14 person mSv. McVeigh 2018c analysed the collective doses for complete removal of the facility to be 761 person mSv which is approximately 50 times the current DDP dose estimate for in-situ disposal.”</p> <p>The term "significant" has specific connotations in the context of an environmental assessment and should not be used unless the impact on workers in the higher dose scenario would be significantly adverse.</p>	<p>AOPFN: CNL is requested to identify whether the estimated collective doses for complete removal of the facility of 761 person mSvs would be within regulatory limits for the workforce or not.</p>
120	ECCC	Section 9.1 Effects Assessment Approach	Not Accepted	<p>Considering the sensitivity of the project to water infiltration and its proximity to a major river, another scenario that should be evaluated is long term flooding of the monolith by the Ottawa River. Under this scenario which considers the possibility of long-term inundation of the concrete monolith for decades or longer, the proponent should evaluate the impacts from, and on, surface water due to physical, chemical, biological and other limnological processes that may occur under conditions of long-term inundation/saturation of the concrete monolith.</p> <p>Under this scenario, the extreme flooding event evaluated as one of the disruptive scenarios resulting from the cascading failure of all the upstream dams may lead to extreme base erosion or mudslide erosion of the river facing embankment. Considering that the normal elevation of the Ottawa River adjacent to the NPD site is 4 metres above the bottom of the NPD subsurface structure (figure 3-5, Decommissioning Safety Assessment Technical Supporting</p>	<p>ECCC recommends that the Proponent:</p> <ul style="list-style-type: none"> • Provide an analysis of the potential for long-term inundation of the monolith post institutional control phase. • Alternately, provide additional justification that supports the prediction that the embedded radioactivity in the iron-based matrices would continue to provide long-term containment

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				Document, 2017), the potential for long term inundation and saturation of the lower portion of the concrete monolith by the Ottawa River may be plausible. Furthermore, given enough time, Ottawa river valley will likely be substantially different than today due to flow erosion and meandering. There is great uncertainty regarding the 1000y the monolith decay. Dam rupture may be caused by many factors one of them being the lack of maintenance beyond some institutional continuity limitations.	
121	CNSC	Section 9.1 Effects Assessment Approach, Figure 9.1-2	Not Accepted	The information provided in the CNL's response is not reflected in the EIS section 9.1.1.1, <i>Normal Evolution Scenario</i> , on P. 9-6. As stated, the assessment time frame is 10000 years, so a 1 in 10000 year seismic event should be considered as a normal evolution scenario. A link between the Normal Evolution Scenario and Effects of the Environment to the Project in Figure 9.1-2 is necessary. In addition, CNL has stated in the response that, Change to EIS, " <i>Table 9.14-2 has been updated to identify the 1/10,000 year event as the DBE, and the 1/50,000 year event as the BDBE.</i> " However, in the EIS, Table 9.14-2 does not contain the stated information.	CNL is expected to: <ul style="list-style-type: none"> • add seismic event to normal evolution scenario • add a link between Normal Evolution Scenario and Effects of the Environment to the Project in Figure 9.1-2. • Clarify which table identifies the 1/10,000 year event as the DBE, and the 1/50,000 year event as the BDBE.
122	CNSC	Section 9.1 Effects Assessment Approach, p.9-4	Accepted		
123	ECCC	Section 9.2.3 Identification of Residual Effects (Atmospheric Environment), Table 9.2-3	Not Accepted	In Table 9.2-5 and Table 12.3-2 of the EIS it indicates monitoring for dust and diesel emissions will be conducted however information of what parameters will be monitored was not provided. Key pollutants such as PM10, PM2.5, metals (asbestos, Lead, Mercury) and other key parameters associated with diesel emissions such as NO2, SO2, VOCs, PAHS, CO should be included in followup monitoring. This information will allow for a better understanding of how the projects predicted air quality predictions impact the receptors in the local study area and can be used to verify the accuracy of predictions from dispersion modeling including the efficiency of mitigation measures	ECCC recommends that the Proponent: <ul style="list-style-type: none"> • Identify the substances that are to be monitored as dust (including metals) and diesel emissions (list each substance). The parameters should be the same parameter used for dispersion modelling as indicated in Appendix F of Decommissioning study. • Provide and incorporate the following information as part of the air quality follow-up program: sampling duration, sampling methodology (continuous/noncontinuous), list of equipment to be used, triggers and thresholds for action, adaptive measures being considered and reporting (and exceedance reporting).
124	Health Canada	Section 9.2.3 Identification of Residual Effects (Atmospheric Environment)	Not Accepted	Develop and implement additional methods to communicate Project noise impacts with potentially impacted people. A quantitative noise assessment was deemed unwarranted due to the characteristics of the Project (i.e., short duration of noise-emitting activities, rural location of the Project, forest buffer around the Project areas, and low population density in the region; CNL's Response	Health Canada recommends the following comments be addressed in future Project documents: <ul style="list-style-type: none"> a) Establish notification and consultation platforms to proactively inform the community members (both Indigenous and non-

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		Also applicable to Section 8.2.5 Ambient Noise		to IR-124). The EIS concluded that, “ <i>due to the nature of the work, quantity and nature of equipment on site, and proximity to Highway 17, no noise effects are expected</i> ” (Section 9.2.3.3). However, given the elevated baseline noise levels along the Highway 17 (Table 8.2-16, EIS) and absence of detailed assessment and monitoring plans for noise (Table 12.3-4, EIS), there are substantial uncertainties about the conclusions on noise impacts. Implementation of a comprehensive communication plan could help to address deviations from the predicted noise impacts.	Indigenous) about the period of high-level noise activities, including potential night-time activities (7pm to 7am), that may be conducted in exceptional circumstances. b) Establish complaint resolution mechanisms that record information on the date and time of the complaint, the approximate location of the complainant (if possible), any specific noise(s) that may have resulted in the complaint, climatic information at the time of the complaint (wind speed, wind direction, humidity, etc.), the date of the response, and the overall outcome/resolution.
125	Health Canada	Section 9.2.3 Identification of Residual Effects (Atmospheric Environment)	Accepted		
126	Health Canada, AOPFN	Section 9.2.5 Monitoring and Follow-up (Atmospheric Environment), Table 9.2-4 Also applicable to Section 12 Follow-up Program	Not Accepted	<p>For the record, AOPFN notes that the draft CNL NPD Follow-up Monitoring Plan was developed in 2018, prior to any engagement of AOPFN in relation to the NPD Project. As a result, its current iteration represents no input from AOPFN, no reflection of Algonquin Knowledge, and is substantially outdated. AOPFN will provide additional comments on this topic elsewhere in this table.</p> <p>Health Canada: Provide further details about the proposed follow-up environmental monitoring programs.</p> <p>The proposed follow-up environmental monitoring plans during the Decommissioning and Post-Closure Phases do not provide essential details on monitoring, such as locations, duration, contaminants and country food species to be monitored and action levels that would trigger additional mitigation or adaptive management measures for each valued component (Section 9.1.2.3, and Tables 12.3-4 and 12-3-5, EIS).</p> <p>For example, the EIS states that follow-up atmospheric environmental monitoring during the Decommissioning Phase would be conditionally implemented depending on whether the atmospheric effluent monitoring results meet the pre-determined evaluation criteria (i.e., “<i>tier 2 exceedances</i>”; Table 12.3-4, EIS). Similarly, follow-up environmental monitoring for various environmental media (e.g., soil, sediment, fish, vegetation) during the Post-Closure Phase would also be conducted if triggered by “<i>tier 2 exceedances</i>” of the surface water/groundwater monitoring results (Table 12.3-5, EIS). The conditions of “<i>tier 2 exceedances</i>” have not been clearly stated for each of the relevant environmental media or follow-up environmental monitoring programs.</p>	<p>AOPFN requests that CNL engage AOPFN in reviewing the Follow-up Monitoring Plan and provide an updated version of the Follow-up Monitoring Plan that represents the expectations of Indigenous peoples prior to the filing of a Final EIS.</p> <p>Health Canada recommends the following comments be addressed in future Project documents.</p> <p>a) See new IRs #350 and 351 b) Describe the decision criteria and threshold values that were used to determine the “<i>tier 2 exceedances</i>” evaluation criteria for individual air quality parameters and environmental media (i.e., soil, sediment, vegetation, fish).</p>

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
127	CNSC	Section 9.2.5 Monitoring and Follow-up (Atmospheric Environment)	Accepted	Note: CNL has now included the draft effluent and environmental follow-up monitoring in its EIS. When finalized these programs will need to be reviewed and accepted.	
128	ECCC	9.3.3 Identification of Residual Effects (Surface Water Environment) Also applicable to Sections 9.3.5 and 9.3.6 and Tables 9.3-2 and 9.3-4	Not Accepted	The Project primarily relies on grouting the NPD building as the method of mitigation to prevent the release of contaminants and radionuclides to the environment. Additionally, CNL has indicated monitoring activities to verify its predictions, as stated in the EIS section 9.3.5: <i>“Monitoring activities, such as inspection of site drainage properties and analyzing discharges for parameters of concern, will verify the accuracy of the EA predictions and effectiveness of measures implemented to mitigate potential adverse environmental effects.”</i> Grouting will eventually degrade and considering that this will occur in the Post Closure Phase when there will be no institutional oversight or control, that no additional mitigation measures could be applied at that point. There is a high degree of uncertainty regarding the environmental effects as the grout degrades over time - whether in a normal scenario or one where radionuclides release occurs earlier, faster or larger amounts. Additional mitigation measures should be incorporated into the Project design to provide a greater margin of safety. The concept of “defense in depth”, which requires multiple layers of defense to prevent harmful environmental outcomes, should be a fundamental principle incorporated into the design of the Project, particularly since there will be no opportunities for human intervention after the Institutional Control period.	ECCC recommends that the Proponent: <ul style="list-style-type: none"> • Provide additional justification that supports the prediction that the embedded radioactivity in the iron-based matrices would continue to provide long-term containment. • Alternately, provide additional mitigation measures to address the risk posed by eventual degradation of the grout post-institutional control and leaching of radionuclides and other contaminants like lead into the Ottawa River. Propose action levels that will trigger additional mitigations during the Institutional Controlphase.
129	Government of Quebec	Section 9.3.3 Identification of Residual Effects (Surface Water Environment), Table 9.3-2	Accepted		
130	ECCC, MOECC	Section 9.3.3 Identification of Residual Effects (Surface Water Environment)	Not Accepted (ECCC), Accepted (MOECC)	The Proponent has included mitigation measures for decommissioning materials that may reduce the risks of a spill; however, a key element of preparedness is the development of a spill management plan that outlines the procedures and practices that will be followed to clean up a spill and reduce its environmental and safety consequences. There is currently no mention of a spill management plan that pertains to decommissioning materials within the EIS or Decommissioning Safety Assessment. At present, the Decommissioning Safety Assessment (section 7.4 Existing and Planned Safeguards) states that: <i>“Response will be provided through contractors regarding accidental spills of decommissioning material (e.g. aggregates).”</i>	ECCC recommends that the Proponent: <ul style="list-style-type: none"> • Include a list of mitigation measures. • Commit to develop a spill management plan for spills of decommissioning materials (or include them within larger spill management plan document). • Update Morin (2018) references to the more current Hawkins (2024).

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				<p>Although response to a spill of decommissioning materials may be carried out by contractors, it is recommended that the Proponent commit within the EIS and/or the Decommissioning Safety Assessment to develop a spill management plan for decommissioning materials, or to include spills of these materials within an overall site spill management plan.</p> <p>Mitigation measures for prevention of release of decommissioning materials are included in this section, as well as within the Decommissioning Safety Assessment (section 7.4 Existing and Planned Safeguards). However, these sections lack the commitment to develop a spill response / management plan for decommissioning materials, in the event that they are able to breach the silt fence containment.</p> <p>The Proponent references Morin (2018) in the EIS and ECCC notes Hawkins (2024) is a more current reference to be using.</p>	
131	MOECC	Section 9.3.3 Identification of Residual Effects (Surface Water Environment)	Accepted		
132	ECCC	<p>Section 9.3.3 Identification of Residual Effects (Surface Water Environment)</p> <p>Also applicable to Section 9.6.3 (Table 9.6-2)</p> <p>Also applicable to the Decommissioning Safety Assessment, Technical Supporting Document (Table 7-3) and Section 8.4.1 (p.8-12)</p>	Not Accepted	<p>The location of the grout batch mixing plant is important due to the potential for impacts on Chimney Swifts. The proximity to the Chimney Swifts roost creates the potential for dust, noise or disturbance to impact birds. The Proponent's response indicates that the ventilation stack is situated farthest away from the preferred location for the batch mixing plant, however the distance was not included in the draft EIS.</p> <p>In addition, the Proponent's response provides information on the extent of milkweed clearance within the Site Study Area; however, it is unclear how many individuals (Monarch and Monarch caterpillars) may be present on the site and may be displaced by some of the proposed project activities. This information is important in order to verify the significance of direct effects to individual Monarch and Monarch caterpillars at the site.</p>	<p>ECCC recommends that the Proponent:</p> <ul style="list-style-type: none"> • Provide the distance between the grout batch mixing plant and the ventilation stack and evaluate potential impacts associated with dust, noise, or other disturbances to the Chimney Swift roost. • Describe alternatives for the location of the grout batch mixing plant considered and provide additional rationale for the preferred site chosen. • Confirm the number of years that the 1.2-hectare area of milkweed will be unavailable to Monarch and the estimated number of Monarch and Monarch caterpillars that may be directly affected or displaced as a result of the Project

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
133	MOECC	Section 9.3.3 Identification of Residual Effects (Surface Water Environment), Table 9.3-3	Accepted		
134	Government of Quebec	Section 9.3.3 Identification of Residual Effects (Surface Water Environment), Table 9.3-3	Accepted		
135	CNSC, MOECC, AOPFN	Section 9.3.5 Monitoring and Follow-up (Surface Water Environment)	MOECC – Accepted, CNSC - Not Accepted, AOPFN – Not Accepted	<p>CNSC - Table 12.3-4 indicates only radionuclides will be monitored as part of on-site surface water quality. Given the nature of the NPD project as primarily a construction project, it is unclear why no non-radiological parameters been selected for on-site water quality monitoring.</p> <p>AOPFN - CNSC and MOECC’s IR #135 stated (in part): “please clarify whether or not routine sampling analysis of water quality in the Ottawa River will be conducted throughout the lifecycle of the project, and not only during the Institutional Controls phase. If not, please justify why no monitoring and follow-up activity for water quality in the Ottawa River is necessary.”</p> <p>In response, CNL states “Specifically, the draft environmental monitoring program identifies quarterly sampling and analysis of Ottawa River water quality during the Decommissioning Execution and Institutional Controls phases.”</p> <p>From an AOPFN perspective, there are three phases of the “project lifecycle” – Decommissioning Execution, Institutional Controls, and Post-Institutional Controls.</p>	<p>CNSC staff expect CNL to provide justification for only monitoring radionuclides as part of the on-site surface water quality monitoring program.</p> <p>AOPFN - CNL to please clarify what routine sampling analysis of water quality will occur, if any, during the Post-Institutional Control phase of the Project and if not, provide a justification as well as discuss whether there are any potential risks to the receiving environment during this time period that may not be tracked in the absence of monitoring.</p>
136	Government of Quebec	Section 9.3.5 Monitoring and Follow-up (Surface Water Environment), Table 9.3-4	Not Accepted	<p>Un suivi plus exhaustif des contaminants radiologiques et non radiologiques potentiellement rejetés dans la rivière des Outaouais est nécessaire pour assurer la protection des usages de l’eau. Ce suivi doit être réalisé en complément au programme de suivi détaillé dans le document « Draft Effluent Follow-Up Monitoring Plan ».</p>	<p>Un suivi doit être réalisé du côté québécois de la rivière des Outaouais en aval du point de rejet dans un site représentatif après le mélange de l’effluent dans la rivière, pour s’assurer qu’aucun critère de qualité de l’eau de surface n’est dépassé pour les paramètres suivants :</p> <p>Métaux :</p> <ul style="list-style-type: none"> - Aluminium : 0,76 mg/L - Argent : 0,0001 mg/L - Baryum : 0,1 mg/L - Cadmium : 0,0001 mg/L - Cobalt : 0,1 mg/L - Cuivre : 0,0029 mg/L - Fer : 1,3 mg/L - Manganèse : 0,57 mg/L

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					<p>- Mercure : 1,3 X 10⁻⁶ mg/L - Plomb : 0,00054 mg/L - Radium 226 : 0,6 Bq/L - Radium 228 : 0,5 Bq/L - Sélénium : 0,005 mg/L - Uranium : 0,014 mg/L - Zinc : 0,037 mg/L</p> <p>Autres : - Alcalinité : suivi - Azote ammoniacal : suivi - Amiante : suivi - Biphényles polychlorés (BPC) : 6,4 X 10⁻⁸ mg/L - Chlorures : 120 mg/L- Dioxines et furanes chlorés : 3,1 X 10⁻¹² mg/L - Hydrocarbures pétroliers C₁₀-C₅₀ : 0,2 mg/L - Matières en suspensions (MES) : suivi - Nitrates : 3 mg/L - Nitrites : 0,02 mg/L- pH : 6,5 à 9,0 - Phosphore : 0,03 mg/L - Sulfates : 500 mg/L - Sulfure d'hydrogène : 3,6 X 10⁻⁴ mg/L</p> <p>Les critères ont été calculés en fonction de la dureté (25 mg/l), du carbone organique dissous (7,0 mg/l) et du pH (7,4) à la station BQMA 04310008 située dans la rivière des Outaouais, près de la municipalité de Portage-du-Fort.</p> <p>Le critère pour les dioxines et furanes chlorés s'applique à la sommation de chacun des congénères, pondéré avec les facteurs d'équivalence de la toxicité pour les humains et les mammifères. La valeur à comparer au critère est la concentration totale en équivalent toxique (TEQ), qui peut être nommée de diverses façons dans les certificats d'analyse (par exemple Équivalence toxique totale ou Lower Bound PCDD/F TEQ)0.</p> <p>Plus d'informations sur les CQES sont disponibles sur notre site internet : Critères de qualité de l'eau de surface.</p> <p>Le suivi qui sera réalisé doit être trimestriel pendant la période de démantèlement et biennuel pour le période post fermeture. Les limites de détection doivent permettre de rencontrer les CQES et les métaux doivent être mesurés sous la forme dissoute et doivent répondre aux exigences du Protocole d'échantillonnage de l'eau de surface pour l'analyse des métaux traces. Les méthodes d'analyse doivent être conformes aux indications des chapitres 3 et 4 des guides Suivi de la qualité des rivières et des petits</p>

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					cours d'eaux de surface et Modes de conservation pour l'échantillonnage des eaux de surface.
137	CNSC	Section 9.4 Aquatic Environment, Table 9.4-1	Accepted		
138	MOECC	Section 9.4.3 Identification of Residual Effects (Aquatic Environment), Table 9.4-2	Accepted		
139	ECCC	Section 9.4.3 Identification of Residual Effects (Aquatic Environment) Also applicable to the Postclosure Safety Assessment Technical Supporting Document, Figures 5.7 and 5.8	Accepted		
140	Government of Quebec	Section 9.5.3 Identification of Residual Effects (Geological and Hydrogeological Environment)	Accepted		
141	CNSC, MOECC	Section 9.5.5 Monitoring and Follow-up (Geological and Hydrogeological Environment)	Accepted		

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142	Government of Quebec	Section 9.6.3 Identification of Residual Effects (Terrestrial Environment), Table 9.6-2 Also applicable to Section 3.3.2 NPDWF Description, Figures 3.3-1 and 3.3-2, p.3-11 to 3-12	Accepted		
143	ECCC	Section 9.6.3 Identification of Residual Effects (Terrestrial Environment), Table 9.6-2	Accepted		
144	ECCC	Section 9.6.3 Identification of Residual Effects (Terrestrial Environment), Table 9.6-3	Accepted		
145	CNSC	9.7.3 Identification of Residual Effects (Ambient Radioactivity)	Accepted		
146	CNSC	Section 9.8.1 Selection of Valued Components (Human Health)	Accepted		
147	Government of Quebec	Section 9.8.3 Identification of Residual Effects (Human Health)	Not Accepted	Bien que qu'aucun risque ne menace actuellement la population du Québec, il est requis que la population en soit informée.	Les LNC doivent élaborer et mettre en oeuvre une stratégie de communication officielle réitérant clairement cette absence de risque, dans le but de rassurer la population.

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148	CNSC	Section 9.8.3 Identification of Residual Effects Also applicable to the Decommissioning Safety Assessment Technical Supporting Document	Accepted		
149	CNSC	Section 9.8.3 Identification of Residual Effects Also applicable to the Decommissioning Safety Assessment Technical Supporting Document	Accepted		
150	Government of Quebec	Section 9.8.3 Identification of Residual Effects (Human Health)	Accepted		
151	CNSC	EIS, Section 9.8.3 Identification of Residual Effects Also applicable to the Postclosure Safety Assessment Technical	Accepted		

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		Supporting Document			
152	Government of Quebec, AOPFN	Section 9.8.3 Identification of Residual Effects (Human Health)	Gov of Quebec – Accepted AOPFN – Not Accepted	<p>AOPFN: The Government of Quebec’s IR #152 includes a request for CNL to “Please explain the lack of assessment of potential social and psychological impacts of the proposed project in the draft EIS.”CNL’s response suggests only that it did not consider social and psychological impacts of the proposed project because a CNSC REGDOC and the Generic Guidelines did not explicitly require it.</p> <p>However, both the Government of Quebec (by implication by raising the question) and the Algonquins of Pikwakanagan (explicitly in prior comments) have called for CNL to consider social and psychological impacts of the Project, especially as it relates to Indigenous determinants of health. In addition, CNL is in possession of evidence, from the AOPFN studies, comments and issues and concerns raised by AOPFN, and from an explicit psychosocial impact assessment of a similar project in Manitoba, that shows the Project Case with ISD would likely have differential (worse) adverse psychological impacts on Indigenous peoples than other technically and economically feasible alternatives. AOPFN does not understand why, in the face of these calls and this evidence, CNL has chosen to continue to effectively ignore these impact pathways in the revised EIS.</p>	<p>AOPFN: AOPFN requests that a full and proper assessment of potential social and psychological impacts of the proposed project be integrated into the final EIS.</p>
153	CNSC, AOPFN	Section 9.9 Aboriginal Land and Resource Use, Table 9.9-1	CNSC - Accepted AOPFN – Not Accepted	<p>AOPFN: AOPFN has in comments on previous iterations of the EIS communicated our rejection of CNL’s flawed approach using “representative” proxy species for certain VCs. We are following up, as CNL has not provided an adequate response to our concern or CNSC’s IR #153. We would like to reiterate that using biophysical proxies is not a defensible approach to traditional land use impact assessment. The approach insisted on by CNL diminishes the quality of the assessment and renders the results unjustifiable from an Algonquin Knowledge perspective.</p> <p>Additionally, certain VCs identified through Algonquin Knowledge by land users themselves, who are in this case the experts, are still not incorporated into the EIS. They include:</p> <ul style="list-style-type: none"> • Kichi-Sibì as a cultural landscape • AOPFN members’ cultural continuity and way of life. <p>Other values identified from our review of the latest EIS iteration that have potential to be significantly impacted include Indigenous health, Indigenous governance and stewardship, Indigenous TLRU, Indigenous culture, and food security. Effects pathways on these VCs have not been adequately explored in the EIS. CNL needs to revisit the selection of VCs for the EA, and to re-assess Project effects using appropriate spatial and temporal boundaries.</p>	<p>AOPFN: AOPFN calls for CNL to reassess impacts of the Project on traditional land and resource use, this time demonstrably integrating inputs and perspectives of affected Indigenous groups into the effects characterization and significance estimation. This also needs to be done on a “per Indigenous Nation” basis, not in a blanket “all Indigenous Nations” fashion.</p>

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				<p>In general, we find that AOPFN input and feedback on TLRU may have been used to inform baseline descriptions but were summarily ignored in relation to impact pathway identification, impact characterization or significance estimation. We note that CNL’s characterization of effects on traditional land and resource use is directly contrary to the findings of AOPFN, the people who will actually experience the effects. This treatment of impact assessment inputs from Indigenous peoples as ‘refusable advice’ needs to change going forward.</p>	
154	CNSC, AOPFN	Section 9.9.2 Assessment Boundaries (Aboriginal Land and Resource Use)	<p>CNSC – Not Accepted AOPFN – Not Accepted</p>	<p>CNSC: CNL indicates that they have collected information on traditional use of lands and resources. It remains unclear how CNL considered the information collected from Indigenous Nations and communities to inform the development of or evaluation of the assessment boundaries. It is not sufficient to simply state that the information was considered, some description of the process used to consider the information should be provided.</p> <p>While CNL does indicate that Indigenous and Traditional Knowledge was considered in the establishment of assessment boundaries, it does not describe soliciting input directly on the assessment boundaries from Indigenous Nations and communities, nor whether the boundaries were validated by Indigenous Nations and communities.</p> <p>AOPFN: AOPFN strongly disputes the accuracy of CNL’s response to CNSC’s IR #154, a topic on which we have repeatedly raised concerns (including in comments submitted to CNL on previous draft iterations to the EIS) and on which CNL is yet to provide an adequate response. We find to be inaccurate, the proponent’s assertion that Traditional Knowledge was considered in the delineation of spatial boundaries for the assessment traditional land and resource use effects. There is no evidence Traditional Knowledge was considered, and in any case, no one but the rights holders themselves are qualified to determine appropriate boundaries based on traditional use and Traditional Knowledge. We reiterate that CNL’s LSA and the RSA are inadequate to meet standard practice for assessing traditional land and resource use effects. If Traditional Knowledge was considered in the delineation of boundaries, CNL would have chosen a more appropriately sized LSA (5km radius) and RSA (25km radius) that matched that chosen by the Traditional Knowledge holders themselves for consideration of effects on traditional land and resource use. AOPFN also notes that there is evidence from AOPFN’s three studies shared with CNL, including survey results from over 200 AOPFN families, that the impact zone around the NPD site identified by AOPFN members is larger than the RSA arbitrarily chosen by CNL. As well, AOPFN study findings showed that direct alienation effects are likely beyond a 1km radius around the project SSA, an indication that the proponent’s geographic scope of assessment is inadequate.</p>	<p>CNSC: Please indicate how the collected Indigenous and Traditional Knowledge was considered when CNL verified the established assessment boundaries. In addition, CNL should clearly show how this work was validated with Indigenous Nations and communities, if further feedback was sought or received, and how this information was considered or influenced the assessment of the boundaries. If needed, CNL should provide a rationale where information was not obtained for some of the identified Indigenous Nations and communities.</p> <p>AOPFN: As a follow up to IR #154, AOPFN requests:</p> <ol style="list-style-type: none"> CNL to revise its LSA and RSA for traditional land and resource use to 5km and 25km respectively and reassess effects on TLRU in collaboration with Indigenous groups CNL to establish a defensible geographic zone of influence – the area of lost and constrained use - for current use of lands and resources by Indigenous peoples (aka traditional land and resource use) around the NPD project in the Project Case. CNL to identify the factors influencing this loss of use and alienation (such as but not limited to psychosocial impacts caused by the fear and stigma associated with the NPD site). <p>All of the above must be done prior to the completion of the EA, in order to properly assess Project Case effects on traditional land and resource use by Indigenous peoples.</p> <p>In addition, in response to CNSC IR #154, CNL states that it and AOPFN have agreed to a series of collaborative and focused next steps, including:</p> <ul style="list-style-type: none"> Collaborative development of risk-informed communication materials for the NPD Closure Project for AOPFN community members and application of the AOPFN Algonquin Risk Communication Program at the NPD Site.

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					<ul style="list-style-type: none"> NPD site-specific Guardian monitoring activities, incorporating traditional knowledge and AOPFN valued components. AOPFN-led site inventory work to develop an Algonquin Knowledge baseline for the entire NPD site. <p>CNL is requested to identify when was the last time any substantive work occurred in relation to each of the three noted “next steps” in relation to the NPD Project and its proposed timeline for full activation of each.</p>
155	CNSC, AOPFN	Section 9.9.3 Identification of Residual Effects (Aboriginal Land and Resource Use)	CNSC – Not Accepted AOPFN – Not Accepted	<p>CNSC: In the response to the IR, CNL has provided information on how they have engaged with Indigenous Nations and Communities on mitigation measures for potential impacts on Aboriginal and Resource Use VCs. However, CNSC notes that certain aspects of CNL’s engagement on mitigation measures are still preliminary, or have not concluded, results of which should be captured in the EIS. For example, CNL notes that AOO has requested a socio-economic study, the results of which will be covered in the IER and will help to develop monitoring and mitigation measures. CNL also notes that engagement with other Indigenous Nations, communities and organizations is only preliminary. In addition, CNL demonstrates that they have solicited IK with regards to the project location, but does not demonstrate sharing information about the effects of the project to Aboriginal land and resource use as CNL understands them with all Nations. It is not clear whether CNL presented information related to effects to Aboriginal land and resource use to all identified Indigenous Nations and communities. Simply asserting that Indigenous Nations and communities have received the EIS is insufficient – CNL must demonstrate that they have shared and highlighted s. 9.9 of the EIS and s. 7.1 of the IER for input on effects to Aboriginal land and resource use.</p> <p>AOPFN: CNL indicates in its response to CNSC IR#155 that “CNL and AOPFN have agreed to the following commitments” and then lists a series of commitments. A correction is required. As has been expressed by AOPFN to CNL on a variety of occasions verbally and in writing, AOPFN remains opposed to the ISD decommissioning plan put forward by CNL. As a result (also expressed verbally and in writing from AOPFN to CNL), AOPFN is not in a position to “agree to” any commitments associated with the ISD proposal at this time. Commitments that are made by CNL in the updated EIS (and by extension IR responses) should not be framed as “agreed upon” by CNL and AOPFN.</p>	<p>CNSC: Please demonstrate how CNL has shared information about the effects of the project to Aboriginal land and resource use as CNL understands them with all interested Indigenous Nations and communities. CNL should further demonstrate how they made efforts to facilitate discussions, received and implemented feedback, and responded to and validated the concerns of all the identified Indigenous Nations and communities. In addition, please confirm that all interested Indigenous Nations and communities have been given adequate opportunities to provide feedback on mitigation measures for potential impacts on Aboriginal Land and Resource Use VCs</p> <p>AOPFN:</p> <ul style="list-style-type: none"> CNL is requested to confirm that AOPFN has expressed this concern to CNL clearly in written comments in the past. CNL is requested to clarify its response to CNSC IR #155 based on this AOPFN concern.
156	CNSC, AOPFN	Section 9.9.3 Identification of Residual Effects	CNSC – Not Accepted AOPFN – Not Accepted	CNSC: CNSC notes that several Nations have continued to express concerns with CNL’s planned end state and the site restoration activities for the NPD Closure Project, and CNL has indicated that they will “incorporate Indigenous Knowledge systems and undertake engagement on site restoration activities.”	CNSC: CNL should continue to engage with Indigenous Nations and communities as described in the response to IRs submitted on October 10, 2024:

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		(Aboriginal Land and Resource Use), Table 9.9-2		<p>The <i>Generic EIS Guidelines</i> indicate that the EIS must include “measures identified to mitigate or accommodate potential adverse impacts of the project on the potential or established Indigenous or treaty rights and effects of changes to the environment for Indigenous peoples, including suggestions made by Indigenous groups”</p> <p>CNSC requests that ongoing discussions with Nations on the site restoration activities, including any new mitigations and accommodations that CNL may develop, should be described in the EIS.</p> <p>AOPFN: AOPFN has outstanding concerns on the topic of re-naturalization and would like to follow up on CNSC’s IR #156, as we find CNL’s response to be inadequate. As noted in our comments on the original version of the EIS, it is either disingenuous or plainly incorrect of CNL to suggest that the NPD SSA will be “re-naturalized.” AOPFN finds the reference to “re-naturalization” to be misplaced in relation to the NPD facility in the Project Case. CNL has indicated that under ISD, the area around the reactor building footprint will remain fenced in long term, and an “engineered” concrete and earth cover will be permanently placed over the grouted radioactive waste disposal facility. Trees will not be allowed to grow, thus meaning that natural forest regeneration will not occur over this portion of the site. This inability for a portion of the site to actually be “re-naturalized” means that an area will remain physically distinctive and physically and psychologically off limits for AOPFN members. This also means it is highly likely that fear and stigma associated with the “unnatural” area will mean that a much larger area is subject to alienation for AOPFN members, who are extremely risk averse to contamination – real and perceived – due to the weight of colonial and industrial history on Indigenous health and well-being.</p> <p>Within the EIS it should also be captured in Table 9.9-3, as a potential interaction, that the maintenance of a fenced-off area is a physical feature of Institutional Control under ISD that will lead to longer-term continuation of alienation from traditional land use, due to lack of access and unwillingness to come near an industrialized, visibly unnatural, unwelcoming, and thus, unsuitable location. The EIS should clearly state the reality, that in the ISD scenario, the whole site cannot be subject to re-naturalization, which differs from a full removal scenario.</p> <p>Regarding the EIS statement (table 9.9-2) that “<i>Land Use may change during and/or after the Institutional Controls phase</i>”, AOPFN’s position is that the future of the NPD site cannot be decided upon until end state and future use of the land have been subject to a planning process. We disagree that future land use, end state, and land transfer are beyond the scope of the EA or that they can be determined after the EA is complete. AOPFN’s position is that future land use is, in fact, central to the EA, as the impacts from the project will influence the ability to use lands into the future, depending on which decommissioning approach is ultimately adopted. CNL must engage with AOPFN on Closure and End State principles, criteria and objectives, prior to the completion of the Project EA; anything else is putting the cart before the horse. For example, the significance of impacts to AOPFN</p>	<p>“CNL will incorporate Indigenous Knowledge systems and undertake engagement on site restoration activities.”</p> <p>As per the requirements of the <i>Generic EIS Guidelines</i>, the results of these discussions should be captured in a revised EIS, and also in the IER. CNL should provide an update on the discussions with Indigenous Nations and communities regarding restoration activities and any new proposed mitigation and accommodations measures that have been discussed and agreed upon with potentially impacted Indigenous Nations and communities.</p> <p>AOPFN: To this end AOPFN requests:</p> <ul style="list-style-type: none"> The EIS should clearly state and explore the reality in the effects assessment, that in the ISD scenario, the whole site cannot be subject to re-naturalization, which differs from a full removal scenario. Table 9.9-3 should include, as a potential interaction, that the maintenance of a fenced-off area is a physical feature of Institutional Control under ISD that has a high likelihood to lead to longer-term continuation of Indigenous alienation from traditional land use, due to lack of access and unwillingness to come near an industrialized, visibly unnatural, unwelcoming location. <p>AOPFN requests the following additional information:</p> <ul style="list-style-type: none"> Please provide information on whether a planning process has taken place for the end state and future use of the land on which the NPD facility is located, as well as whether and how Indigenous peoples have been engaged in the process. If this has not occurred, AOPFN requests that this exercise be completed prior to the completion of this EA process. Please provide CNL’s identified land use and end state options for the various portions of the NPD site (prior to requested engagement with AOPFN on the topic), under all four decommissioning approaches. CNL states that the next step is to engage with AOPFN through targeted discussion to seek input as part of restoration plan development. The last noted discussion of any sort recorded by CNL was in 2020. Have any meetings occurred in the interim if not, why not, and is CNL committed to providing the CNSC with an Indigenous-vetted restoration plan in the final EIS?

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				<p>traditional land use cannot be determined in the absence of a future desired end land use to compare the Project Case against.</p> <p>With regard to CNL’s commitment - AOPFN-13 - to work with AOPFN on end land use goals, AOPFN expects that the discussions cover objectives and standards (i.e., industrial vs. recreational). As well, the commitment should also extend to developing a decisionmaking role for AOPFN, as part of discussions on the topic. AOPFN also requires CNL commitment to working with AOPFN to co-develop and include restoration plans in the revised EIS. But ultimately, it remains critical to complete this land use and end state planning exercise BEFORE, rather than AFTER, the Crown makes a decision on the one currently proposed decommissioning approach.</p>	<ul style="list-style-type: none"> If the NPD facility was subject to full decommissioning, would there be remaining radiological material on site that would constrain future land use options for the site (for example but not limited to, a case where the site would be considered a permanent radiological waste disposal facility, and be treated as such by regulators, restricting zoning possibilities)? Please clarify language re: “agreed to commitment” as per AOPFN’s concern raised on this topic of “agreement” in IR #155 above
157	CNSC, AOPFN	Section 9.9.3 Identification of Residual Effects (Aboriginal Land and Resource Use)	<p>CNSC – Not Accepted AOPFN – Not Accepted</p>	<p>CNSC: In the response to the Information Request, CNL notes that : “CNL’s Environmental Impact Statement (EIS) concludes that although there may be short-term effects on non-human biota through contaminant release from the grouted structure, there are no significant long-term effects. CNL acknowledges that the findings of the on-going rights impact assessment may require additional engagement and a mutually agreed upon resolution of any found impacts on rights.”</p> <p>It was not clear to reviewers what short-term effects there may be on non-human biota through contaminant release from the grouted structure during the institutional control and post-institutional control phases, and what engagement had been conducted with Indigenous Nations and communities on said short-term effects.</p> <p>AOPFN: On the topic of rights impacts related to traditional land and resource use, AOPFN has outstanding concerns and would like to follow up on CNSC’s IR #157. In the Culture and Rights Study for the NPD project, AOPFN identified 17 distinct “sufficiency resources” considered by AOPFN members when deciding whether, when and where to harvest. The purpose of this delineation was to enable impact assessors have a fulsome view of enabling / constraining factors when evaluating impacts on traditional land and resource use. While many of these sufficiency resources extend beyond the biophysical realm, to AOPFN’s disappointment, CNL’s assessment approach still does not factor these in. In its unwillingness to go “beyond the biophysical”, CNL is conflating environmental effects with effects on rights; they are not one and the same. Rights are practiced by people and therefore human parameters must be included including trust, knowledge levels, risk perception, fear and stigma, sense of belonging and its converse, alienation</p>	<p>CNSC: Please include a discussion on what the potential impacts to Aboriginal and/or treaty rights may be during the Institutional Controls and Post-Institutional Controls phases through short-term effects of contaminant release on non-human biota from the grouted structure. Also, please explain how CNL has engaged with Indigenous Nations and communities with regards to addressing / mitigating these impacts, as per CNSC’s Generic EIS Guidelines</p> <p>AOPFN: As a follow up on CNSC’s IR #157, AOPFN requests:</p> <p>A. In 2021 AOPFN posed the following questions bilaterally to CNL which have not yet been addressed in the revised draft EIS, so we are reposing them here:</p> <ul style="list-style-type: none"> Does CNL recognize that other factors than access and absolute biophysical harm impact on Indigenous ability and willingness to use areas for traditional purposes and rights practice? If so, why was this not integrated into the assessment? Does CNL understand how perceived risk can lead to land alienation, concerns about quality of country foods, and thereby reduced traditional use activities around the NPD facility? Is this considered an impact pathway by CNL in its EIS? Why or why not? <p>B. CNL to reassess effects on traditional land and resource use:</p> <ul style="list-style-type: none"> On a per-Indigenous group basis and in the case of AOPFN in direct collaboration with AOPFN (other Indigenous groups can identify their own preferences); and

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					<ul style="list-style-type: none"> In the case of AOPFN, incorporating the 17 “sufficiency resources” in thereassessment of effects on AOPFN’s traditional land and resource use.
158	Health Canada	Section 9.9.3 Identification of Residual Effects (Aboriginal Land and Resource Use)	Accepted		
159	CNSC, AOPFN	Section 9.9.3 Identification of Residual Effects (Aboriginal Land and Resource Use), Table 9.9-3	CNSC – Not Accepted AOPFN – Not Accepted	<p>CNSC: In the response to the IR, CNL notes that Indigenous Nations and communities have concerns with CNL’s assessment approach for effects of the project on traditional land and resource use and many disagree with the results of the effects assessment. CNL also notes that the concern remains outstanding between CNL and several Nations, and that CNL will continue to engage identified Indigenous Nations, communities and organizations.</p> <p>CNL is expected to describe engagement with Nations about the content and conclusions of their Ecological Risk Assessment and Post Closure Safety Assessment, and describe how outstanding concerns about potential contamination were assessed and addressed.</p> <p>AOPFN: CNSC’s IR #159 is an important one. It asks CNL to “Please demonstrate how engagement activities with First Nation and Métis groups have informed CNL’s conclusion that there will be not residual effects on Aboriginal Land and Resource Use VCs during all phases of the project.” It is a hard question to answer for CNL because, in the case of AOPFN, CNL has had to directly contradict AOPFN’s finding that in the Project Case there will be residual effects on Aboriginal Land and Resource Use VCs. CNL does note in its response that it has added a section drafted by AOPFN into its EIS with AOPFN’s assessment findings that differ from CNL’s. CNL does not, however, change anything from its original estimation of no residual effects as a result. It is hard, therefore, for CNL to suggest that AOPFN’s inputs have “informed” CNL’s conclusion whatsoever. CNL has continued onwards as if the AOPFN inputs do not exist. Clearly the issue is still outstanding.</p> <p>AOPFN’s review of CNL’s response to CNSC’s IR #159 and section 9.9 of the EIS, reveal remaining gaps in the proponent’s approach to the assessment of impacts on traditional land and resource use, which AOPFN has continuously brought to the CNL’s and CNSC’s attention during engagement for the EA. AOPFN has significant concerns with the assessment approach used by CNL, which we non-exclusively summarize below:</p> <ul style="list-style-type: none"> The insistence on abiding by legislation that the federal government rightly concluded was flawed, particularly in how it managed its obligations to Indigenous 	<p>CNSC: CNL is expected to describe engagement with Indigenous Nations and communities about the content and conclusions of their Ecological Risk Assessment and Post Closure Safety Assessment, and clearly describe how outstanding concerns about potential contamination were assessed and addressed.</p> <p>As per the requirements of the Generic EIS <u>Guidelines</u>, the updates of these discussions should be captured in a revised EIS, and also in the IER.</p> <p>AOPFN:</p> <ul style="list-style-type: none"> AOPFN continues to request that CNL reconsider its characterization of effects on Indigenous traditional land and resource use in the final EIS, to reflect expected practice of such an assessment in 2025. To support in this, we encourage CNL to review its assessment against recognized principles of good practice of assessment of effects on traditional land and resource use, for examples the First Nations Major Projects Coalition’s Guiding Appendices for its Major Projects Assessment Standard (https://fnmpc.ca/wpcontent/uploads/FNMPCMPASGuidanceappendices-FINALJanuary2020.pdf - Appendix 5). Any guidance used should be referred to in updates to the EIS in Section 9 (as noted in Section 3.5.3.7).

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				<p>peoples. We note that referring to this critical concern as a "preference" for one legislation over the other (as seen in section 6.2.4.3.2) deliberately minimizes its significance. AOPFN again states for the record, that CEAA, 2012 is outdated and the increased diligence and wider jurisdiction of IAA 2019 should be used for this assessment occurring in 2025. The fact that a project proposed by Canada (CNL is an effective Agent of the Crown) refuses to meet its own federal IA requirements is beneath the honour of the Crown. We urge CNL and AECL to remedy this failing, by adhering to the requirements of IAA 2019, which is the up-to-date legislation that supports best practice decision making through a collaborative process, especially considering that the proposed project is of high concern to Indigenous groups including AOPFN.</p> <ul style="list-style-type: none"> • AOPFN finds fault with the attitude expressed by CNL in the EIS to the effect that "every Indigenous group has an opinion," which seeks to dismiss Aboriginal rights, values and interests potentially impacted by the Project. Relying on this excuse, CNL's approach to the EA has continued to be a process that is confined to CNL, AECL and their consultants, such that input from Indigenous peoples that is contradictory to the internal position is dismissed. The EA does not incorporate into its VC selection or effects characterization, any of the impact pathways identified by AOPFN that result in both direct and indirect effects on traditional land and resource use, culture, governance and stewardship rights, or health and wellbeing. • In determining effects to TLRU, we find illogical the faulty premise of considering the current lack of access to the NPD site to mean the absence of effects related to use of the area. The current lack of access and suitability of the area are existing impacts on TLRU in themselves, created by the facility being located there in the 1960s by its present owner, and without consultation with Algonquin peoples. Yet this past harm is held up as a sort of 'pseudo-mitigation' measure; akin to "we have already impacted on TLRU here, so it can't get worse in the Project Case", except without either recognition of responsibility for or provision of accommodation for the past harm caused. Fundamentally, it is a faulty premise to assume that the lack of access prevents impacts on use, when it is itself an impact. • AOPFN disagrees with the narrow conceptualization of Project-environment interactions provided and requires a comparison of effects on TLRU between ISD and full removal. Further, in assessing impacts to traditional harvesting, CNL fails to establish a zone of alienation in the Project Case versus a future with full removal. Additional work is required to determine the TLRU impact radius from the existing facility and what this will look like in the Project Case (see AOPFN Follow-up IR #154(b) above). • AOPFN finds problematic the outlined methodology for significance determination (s. 9.1.2.2) where it states that "<i>criteria ratings were established such that any</i> 	

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				<p><i>residual adverse effect rated as “low” in any of the criteria would necessarily be a residual adverse effect that was so minimal that it could not be significant, regardless of the ratings of the other criteria used.”</i> AOPFN finds this approach to be illogical and poor practice, given the roles of both frequency and reversibility in determining the significance of an effect.</p> <p>AOPFN’s own assessment has found substantial impacts on traditional land and resource use in the Project Case, to which CNL has not provided an adequate response. The proponent’s contrary finding of “no adverse effects” on traditional land and resource use cannot and should not be credited, as it is based on faulty assumptions, does not properly consider the evidence provided (on multiple occasions and in multiple study reports) by AOPFN Traditional Knowledge Holders, and rests on a faulty assessment premise of disregarding – or worse, treating as some form of pseudo-mitigation - historic and ongoing impacts occurring as a direct result of the siting of the NPD facility.</p>	
160	Government of Quebec	Section 9.11 Accidents and Malfunctions	Accepted		
161	Government of Quebec	Section 9.11 Accidents and Malfunctions	Accepted		
162	CNSC	Section 9.11.4 Radiological Accidents and Malfunctions Effects Also applicable to the Decommissioning Safety Assessment Technical Supporting Document	Accepted		
163	CNSC	Section 9.11.4 Radiological Accidents and	Not Accepted	CNL response is overall acceptable. However, some aspects of it deserve to be investigated further. In particular, while it is understood that the “ventilation stack is not structurally linked to the Main Building”, it is still a possibility that the vibrations due to	CNL is requested to assess the elements referred to in the “Justification/Rationale” section, or to provide evidence that such assessments are not required.

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		Malfunctions Effects		<p>the decommissioning activities may generate some damage to the ventilation stack and may potentially lead to its collapse.</p> <p>Similarly, the level of seismic solicitation at which the stack would collapse is unclear. The DecomSA TSD mentions that the stack was not designed to withstand earthquake, and that it has been assumed that the stack meets the requirement of the Canadian building code with respect to seismic forces. This is an assumption that has yet to be demonstrated.</p>	
164	CNSC	Section 9.11.4 Radiological Accidents and Malfunctions Effects	Not Accepted	<p>CNL response mentions that, should the follow-up monitoring program indicate higher rates of relate following a potential collapse of the stack, this could indicate some effect on the disposed waste, and CNL would take action at that time to assess what corrective actions may be required if the performance of the facility is trending towards the bounds of the assessment basis. However, it is unclear what types of corrective actions could be implemented by CNL in these instances. It is crucial to have such scenarios evaluated ahead of times to ensure that adequate measures could be implemented, should there be a need for it.</p> <p>Also, similarly to comment #163, the current Safety Assessment Report does not consider the stack collapse as a credible event, mainly because it considers that the stack was designed, built and maintained to meet the required design basis. However:</p> <ul style="list-style-type: none"> - it is still a possibility that the vibrations due to the decommissioning activities may generate some damage to the ventilation stack and may potentially lead to its collapse, thus potentially impacting certain parts of the site (e.g. entombed waste, security fence, monitoring wells, etc.). CNL mentions that, should the stack collapse, accessible parts of the facility would be inspected to identify potential damage and determine corrective actions. However, most parts of the facility would be inaccessible, and it is unclear how CNL would identify potential damage and implement corrective actions for the inaccessible areas of the facility. - the DecomSA TSD also mentions that the stack was not designed to withstand earthquake, and that it has been assumed that the stack meets the requirement of the Canadian building code with respect to seismic forces. This is an assumption that has yet to be demonstrated. This could also impact certain parts of the site (e.g. entombed waste, security fence, monitoring wells, etc.). 	CNL is requested to assess the elements referred to in the “Justification/Rationale” section, or to provide evidence that such assessments are not required.
165	Government of Quebec, AOPFN	Section 9.12.2 Assessment of Cumulative Effects	Gov of Quebec – Accepted AOPFN – Not Accepted	<p>AOPFN: As communicated in our comments on previous iterations of the NPD EIS, AOPFN totally disagrees with CNL’s conclusion that a cumulative effects assessment is not required, and we request that cumulative effects be assessed on TLRU, Indigenous culture and Indigenous health and well-being. We note that even the deficient CEAA, 2012 guidelines clearly state that a cumulative effect on a VC can be important even if the assessment of the project’s effects finds the effects of the project to be minor (CEAA 2012 Practitioner</p>	<p>AOPFN: AOPFN calls for the re-assessment of effects (including cumulative effects) on traditional land and resource use, Indigenous culture, and Indigenous health and well-being, in a process that respects, is informed by Indigenous Knowledge, and where upon request (and with appropriate capacity supports) is led by the subject matter experts - i.e., the affected Indigenous groups themselves.</p>

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				Guidance). This is especially critical in the case of the NPD decommissioning in the Project Case, being in a location where ongoing effects from multiple past and current sources already have a likelihood of significant effects on multiple values of critical importance to AOPFN. We find the idea that the Project as a whole "has no measurable residual effects" to be an affront to Indigenous peoples who have the right to reject the radioactive legacy of a facility they never consented to and would have opposed, had they been asked.	
166	Government of Quebec	Section 9.13.6 Flood and Section 9.13.7 Earthquake	Accepted		
167	CNSC	Section 9.13.7 Earthquake	Accepted		
10. Mitigation Measures					
168	Government of Quebec	General	Accepted		
169	CNSC, AOPFN	Section 10.1 Regulatory Requirements	CNSC - Accepted AOPFN – Not Accepted	AOPFN simply states here that anywhere that is in the direct groundwater gradient feeding the Kichi-Sibi must be considered “near surface”, and based on our understanding, the entire NPD reactor facility meets this definition. As a result, disposing of ILW using ISD is contrary to acceptable practice as defined by the IAEA, and what is considered acceptable to AOPFN. “Jerrymandering” of definitions and selective guidance picking by CNL does not change this reality	
170	Health Canada	Section 10.3 Scope, Table 10.3-1	Accepted		
11. Conclusion on Significance					
171	CNSC, AOPFN	Section 11.2 Confidence in Assessment Findings	CNSC - Accepted AOPFN – Not Accepted	In its IR #171, CNSC quotes from IAEA materials Section 1.10 of the IAEA General Safety Requirements (GSR) Part 6, <i>Decommissioning of facilities</i> , which states that “[e]ntombment, in which all or part of the facility is encased in a structurally long-lived material, is not considered a decommissioning strategy and is not an option in the case of planned permanent shutdown. It may be considered a solution only under exceptional circumstances (e.g. following a severe accident).” AOPFN notes that CNL attempts to justify its choice for why ISD fits as an “exceptional circumstance” for NPD in its response. AOPFN also notes that the choice to promote ISD as CNL’s preferred alternative appears to have been made by CNL prior to the conduct of	Can CNL provide any evidence that it engaged with AOPFN on the topic of consideration of alternative decommissioning means prior to choosing ISD as its preferred alternative to bring forward to the regulator? If such engagement did occur, can you provide the details of that engagement? Did, for example, CNL describe for AOPFN existing IAEA guidance on decommissioning (i.e., flag that ISD was not the norm but only to be pursued in “exceptional circumstances”)?

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				any meaningful engagement with AOPFN. This is highly disconcerting to AOPFN, given that in any instance where “exceptional circumstances” is being argued by the proponent, we would expect an even higher requirement for preliminary engagement/consultation of affected First Nations than the norm, before a proponent makes a decision on its preferred option.	
12. Follow-Up Program					
172	CNSC, ECCC, AOPFN	Section 12.5 Preliminary EA Follow-up Monitoring Program, Table 12-5.1	CNSC-Not Accepted, ECCC - Not Accepted, AOPFN – Not Accepted	<p>CNSC & ECCC:</p> <p>The IR recommended, in part, that the Proponent provide potential adaptive management actions for each follow-up monitoring element.</p> <p>The Proponent indicated in their response: <i>“If the follow-up monitoring program identifies that adverse environmental effects are greater than predicted, then CNL will evaluate whether they result in changes to the conclusions in this EIS. If changes are confirmed, then CNL will evaluate the need for revised mitigation actions and management practices to manage effects. Where the need for revised mitigations is identified, they will be developed and implemented. Specific mitigation measures would depend on the nature of the exceedance and would be defined after the exceedance is characterized. Response to Tier 2 exceedances defined in Section 12 of the EIS define the contingency plan actions. First, investigate the source of the exceedance and then apply additional mitigation measure or consider remediation. Again, the specific mitigation measures implemented will depend on the nature of the exceedance.”</i></p> <p>The EIS and Follow-Up Monitoring Plans currently provide no information regarding the potential suite of mitigation measures or remediation actions that could be taken in the event of an exceedance (as part of adaptive management actions). As such, the nature of the actions that could be considered in the event of an exceedance cannot be evaluated.</p> <p>Although the specific nature of an exceedance cannot be known in advance, a section with the EIS or associated Follow-Up Monitoring Plans describing the potential remediation strategies and mitigation measures that could be implemented, and how decisions would be made about their implementation, would address the uncertainty as to how these measures will be used to protect the environment and maintain safety.</p> <p>The Proponent has committed to implementing additional mitigation measures or remediation actions in the event of a tier-two exceedance of a follow-up monitoring parameter. Current text in the EIS and Follow-Up Monitoring Plans states: “Apply additional mitigation measures, consider remediation (if applicable)”. At present, there are no further details provided in these documents regarding the suite of remediation actions or mitigation measures available, or the decision-making process that would be used when</p>	<p>ECCC recommends that the Proponent include within the EIS and/or within the associated Follow-Up Monitoring Plans:</p> <ul style="list-style-type: none"> • Potential additional mitigation measures or remediation actions that could be implemented in the event of a tier two exceedance of a monitored parameter. • The decision-making process that would be used to determine what measures are needed and when they should be implemented. <p>AOPFN: As a follow-up to CNSC and ECCC IR #172:</p> <ul style="list-style-type: none"> • CNL to clarify whether the draft follow up monitoring plans in the revised EIS are based on data only current to 2018. • CNL to re-engage affected Indigenous groups in relation to the follow up monitoring plans that includes co-developing objectives, indicators, thresholds, and responses, in addition to adaptive management, and provide an updated draft follow up monitoring plan to the CNSC. <p>Please note that any comments and requests from AOPFN re: follow-up monitoring plans are not to be read as evidence of support for the ISD proposal.</p>

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				<p>considering what measures to implement or when to implement them. It is recognized that specific details and scenarios of a tier-two exceedance cannot be known in advance; however, generic information regarding the available mitigation and remediation options, as well as the decision-making process that would be followed when considering their implementation, would enable a more thorough assessment of long-term environmental protection and facility safety.</p> <p>AOPFN:</p> <p>AOPFN shares CNSC and ECCC concerns regarding the adequacy of the proponent’s framework for the Project follow up monitoring program. AOPFN agrees that the current framework fails to meet regulatory guidelines (i.e., CNSC’s <i>Generic EIS Guidelines</i>). The most important gap is that the draft follow-up monitoring plans are dated to 2018, which predates any concerted effort by CNL on Indigenous engagement and calls into question the level of input by Indigenous peoples into the monitoring plans. For example, AOPFN was not engaged by that date in relation to the Project on any issue and can confirm it was not engaged by CNL on the draft FUP provided in the revised draft EIS, dated 2018.</p> <p>Given that AOPFN has identified extensive concerns about impacts on traditional land and resource use, culture, and Indigenous health that are not reflected in CNL’s findings, these topics (for which at minimum there must be high uncertainty in the accuracy of the Proponent’s conditions given the actual experts – the Indigenous peoples themselves - have contrary findings, and for which it is more likely that the Proponent’s estimations are inaccurate and underestimate effects loads on these VCs), must be integrated into the Project follow-up monitoring plan. It is crucial to build Indigenous objectives, indicators, thresholds and responses into follow-up monitoring planning and implementation regardless of what decommissioning strategy is adopted.</p> <p>Further, it is critical to provide an updated version of the follow up monitoring plan, given the seven-year gap, and for the proponent to show that the revised draft follow-up monitoring plan properly integrates inputs from affected Indigenous groups.</p>	
173	Government of Quebec	Section 12.5 Preliminary EA Follow-up Monitoring Program, Table 12.5-1	Accepted		
174	Government of Quebec	Section 12.6 Conclusions	Accepted		
175	CNSC, AOPFN	General	CNSC-Accepted	EDAD: CNL has provided information on their plans to monitor the effectiveness of the existing and new barriers through monitoring plans. CNL has also explained that they would perform routine surveillance activities which findings would potentially trigger	EDAD: CNL is requested to clarify if remote sensing technology is to be used to monitor the structural health of the barriers, in particular for barriers that would be inaccessible (e.g. grout, existing concrete

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			AOPFN – Not Accepted	<p>maintenance and repair activities. However, CNL has not addressed the question related to the use of remote sensing technology to monitor the structural health of the barriers. This is particular relevant for barriers that would be inaccessible (e.g. grout, existing concrete structures, etc.).</p> <p>AOPFN:</p> <p>AOPFN shares CNSC’s concern over the barrier performance and following a review of CNL’s response still have outstanding concerns. Considering the timeframes involved and inherent uncertainty as well as inadequate AOPFN involvement in follow up monitoring planning, AOPFN is dissatisfied with the proponent’s response to CNSC IR #175 stating the intention to limit the monitoring of barrier performance to groundwater monitoring. Additionally in thinking Seven Generations ahead, AOPFN needs assurances of physical safety during and past the 100 years of Institutional Control being considered.</p> <p>Section 4.1.2 of the EIS suggests that based on the performance of some natural cements, the grouting proposed to be used for the NPD site would remain effective for up to a thousand years. AOPFN is however concerned about risks of radiation exposure following this timeframe, and the direct and indirect impacts on future generations of its members.</p> <p>As part of the response to CNSC’s IR, CNL states that “<i>All the follow up monitoring plans incorporate a tiered system of evaluating monitoring results with response actions outlined to address exceedances, if they should occur.</i>” AOPFN has concerns with this approach to monitoring, for instance with regard to aquatic biota, whereby monitoring of related parameters (e.g., fish tissue sampling) are only triggered in the event of exceedances in surface water parameters (or “tier 2 evaluation criteria”). Similarly, we have concerns with the proposed frequencies of groundwater quality monitoring, which in some cases is semi-annually and can result in delays in the identification of exceedances and application of remedial action.</p>	<p>structures, etc.). If not, CNL is requested to explain how they will monitor the condition of these barriers other than through the monitoring plans.</p> <p>AOPFN:</p> <ul style="list-style-type: none"> • CNL to explain if/how Indigenous peoples were engaged in the development of and verification of the adequacy of the draft follow up monitoring plans. • CNL to verify that it will not release its final draft EIS until an updated follow-up monitoring plan that has been subject to extensive Indigenous engagement is developed and is appended to the final draft EIS.
Technical Supporting Documents					
Indigenous Engagement Technical Supporting Document (previously titled Aboriginal Engagement Technical Supporting Document)					
176	CNSC, AOPFN	General	CNSC -Not Accepted AOPFN – Not Accepted	<p>CNSC: CNSC notes that CNL seems to have engaged with in all indicated Nations and communities to some extent. For certain Nations (ex: Timiskaming First Nation, Algonquins of Barriere Lake, and Wolf Lake First Nation), it is not clear if the engagement went beyond a high-level update about the project, or if specific request was made to seek Indigenous Knowledge or Valued Components. CNSC also notes that the conversations with KFN have not been completed, as KFN began engaging on the NPD project at a later phase.</p> <p>AOPFN: AOPFN finds that the topic of the IR has not been addressed adequately by CNL, evidenced by the nature of its engagement with AOPFN and treatment of input provided over the years during engagement for the Project. AOPFN is disappointed with the posture</p>	<p>CNSC: As per the NPD project’s <u>Generic EIS guidelines</u>, “The proponent will make reasonable efforts to consider traditional Indigenous Knowledge in the assessment of environmental impacts”.</p> <p>CNL is expected to identify and demonstrate whether project updates and potential effects of the project were shared with all identified Nations, including Timiskaming First Nation, Algonquins of Barriere Lake, and Wolf Lake First Nation, and also sought to obtain their input and any traditional knowledge they are willing to share to inform the EIS, including the identification of VCs.</p>

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				<p>CNL has taken in the EIS, where its response to AOPFN’s input (and other Indigenous groups) is limited to recording within the document rather than substantially incorporating AOPFN perspectives and findings from studies into the EIS. AOPFN would argue that the nature of CNL’s treatment of AOPFN input (including AOPFN’s AMA, Diet and Harvest Study and Culture and Rights Study) is tantamount to a “catch and release” exercise, where the proponent is not meaningfully considering AOPFN input and Algonquin Knowledge, and that inputs are being treated in a trivial manner. AOPFN notes for the record that including AOPFN inputs in the EIS does not mean that AOPFN’s inputs have been integrated into the actual effects characterization and significance determination process; indeed, they demonstrably have not been.</p> <p>Further, CNL suggests in the EIS (section 8.9.2) that is engaging in discussions with AOPFN on the effects, issues and recommendations resulting from the AOPFN Diet and Harvest Study and Culture and Rights Study. However, substantive discussions have not been held with AOPFN in the past couple of year and CNL has not presented AOPFN with a plan for resuming engagement on the NPD file.</p> <p>AOPFN further notes that in its CNSC IR #176 response, CNL states “CNL commits to support and fund further AOPFN-led site inventory work covering the whole NPD site in 2024 and 2025 to develop an Algonquin Knowledge baseline for the site.” AOPFN notes that no work occurred in 2024, and none has yet been scheduled for 2025.</p>	<p>AOPFN:</p> <ul style="list-style-type: none"> • CNL to outline proposed next steps and timelines for specific discussions on addressing effects, issues and recommendations resulting from the two studies, and what meaningful incorporation into the NPD EIS will entail. • CNL to engage AOPFN to identify a schedule for the required “whole of site” Algonquin Knowledge inventory, and confirm the results will inform the finaldraft EIS
177	CNSC	General	Accepted		
178	CNSC	<p>Section 3.0 Description of Aboriginal Communities, Table 3-1</p> <p>Also applicable to the main EIS, Section 7.3 Identified First Nation and Métis Communities, Table 7.3-1, p.7-3</p>	Accepted		
179	CNSC	Section 4.5 Engagement Activities Completed, Table 4-1	Accepted		

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		Also applicable to the main EIS, Section 7.5 Engagement Activities Completed, Table 7.5-1			
180	CNSC	Section 4.5 Feedback Received to Date Also applicable to the main EIS, Section 7.6 Feedback Received to Date	Accepted		
181	CNSC, AOPFN	Section 4.5 Feedback Received to Date Also applicable the main EIS, Section 7.6 Feedback Received to Date	CNSC - Accepted AOPFN – Not Accepted	AOPFN: As a follow up to CNSC IR #181, AOPFN notes that it has outstanding issues on the topic of biodiversity and cultural heritage studies, yet to be addressed by the proponent. AOPFN has previously communicated to CNL (including in comments submitted on the initial draft EIS) that we believe it to be critical to fully understand, from an Algonquin Knowledge and a western scientific perspective, the socio-cultural, physical and biophysical characteristics of the entire ~400 ha NPD property. This is essential to understanding what may be lost on an ongoing basis should the Project cause continued alienation and loss of use for Indigenous peoples. For example, if the area has strong ecological and socio-cultural characteristics, the magnitude of impact on TLRU would be of a higher magnitude in the Project Case. AOPFN has previously requested that CNL support Algonquin Knowledge on-territory data collection for the entire NPD property, but this has not occurred yet.	AOPFN: <ul style="list-style-type: none"> • CNL to correct its statement in its response to CNSC IR #181, that “AOPFN and CNL have worked together to conduct site-wide Algonquin Knowledge inventories at the NPD site in 2022 and 2023”, given that those inventories were short in duration and covered only a small portion of the overall NPD property. • CNL to clarify whether it is committed to and if so, its proposed timeline for, the collection of AOPFN Algonquin Knowledge on-territory data for the broader NPD property. AOPFN notes that our expectation is that this work will be completed prior to the filing of the final EIS.
182	CNSC	Section 4.6 Planned Engagement Activities	Accepted		
183	CNSC, AOPFN	Section 4.6 Planned Engagement Activities	CNSC - Accepted AOPFN – Not Accepted	AOPFN: Regarding CNSC’s IR #183, AOPFN notes that CNL’s response has not provided accurate information on the status of its engagement with AOPFN. AOPFN appreciates the funding made available by CNL to collect Algonquin and community-based knowledge as well as the inclusion of AOPFN study findings and perspectives into the EIS document. In contrast, AOPFN is disappointed with CNL’s largely perfunctory manner in engaging with	AOPFN: As a follow up to IR #183, AOPFN expects responses from CNL and CNSC as to how the engagement gaps outlined here in will be remedied. The response should include any commitments CNL has to: <ul style="list-style-type: none"> • Completion of site-level Algonquin Knowledge inventory, and further engagement on the cultural, traditional use, and ecological

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		Also applicable to the main EIS, Section 7.7 Planned Engagement Activities		<p>AOPFN whereby our input and feedback are collected, but then, response is limited to recording these as external inputs to the EIS. As previously noted, findings from AOPFN assessments have had minimal influence on the EIS' assessment of alternative means and characterization of effects in the Project Case.</p> <p>Further, CNL suggests in the EIS (sections 4.2.4.8; 8.9.2) that it is engaging in discussions with AOPFN on the issues and recommendations resulting from three of AOPFN's study reports (AMA, Diet and Harvest Study, and Culture and Rights Study). We, however, find this to be misleading as no substantive discussions have been held with AOPFN since 2022. Reasonable efforts are not being made by CNL to engage with AOPFN, beyond the documentation of outstanding issues in the EIS summary of Interests and Concerns. We note that this does not constitute meaningful engagement and expect a response from CNL as to how it will remedy this gap.</p>	<p>values of the site as a whole and how they may be impacted in the Project Case</p> <ul style="list-style-type: none"> Establishment of a defensible zone of influence around the NPD site, on AOPFN traditional land and resource use Consideration of psychosocial impacts and other impact pathways from the Project on Indigenous determinants of health Updating baseline surface water quality data in the Kichi-Sìbì in the vicinity of the Project, including engagement of the Neyagada Wabandangaki Guardian Program Completion of a Land use and End State planning exercise with AOPFN Further engagement in the development of a follow-up monitoring plan that integrates Algonquin Knowledge and Algonquin monitoring requirements.
Alternative Means Assessment Technical Supporting Documents					
184	CNSC	Section 2.2 Definition of Alternative Means Also applicable to Section 4.2 Alternative Means of Carrying out the Project of the main EIS, p.4-5 to 4-6	Not Accepted	The general quote from IAEA GSR 1 does not support the selection of ISD as a decommissioning strategy. The selection of ISD diverges from <i>IAEA GSG part 6 Decommissioning of Facilities</i> . The disposal options mentioned based on waste inventory are also further illustrated in IAEA tecdoc NW-T-1.27 <i>Design principles for Radioactive Waste Repositories</i> – for example, the designs depicted in Fig. 2 of that document would depict the NPD ISD project as a near surface disposal facility suitable for LLW.	The inference that this disposal option (of ISD) is supported by IAEA should be removed.
185	CNSC, AOPFN	Section 4.3 Environmental Effects of Alternative Means	CNSC – Accepted, AOPFN – Not Accepted	As a follow up on CNSC's query on systematic biases present in CNL's evaluation of alternative decommissioning options, AOPFN has outstanding concerns on the topic (previously communicated to CNL in comments submitted on the original draft EIS), to which CNL is yet to provide a satisfactory response. AOPFN agrees with the systematic bias identified by CNSC re: assumption of long-term storage at CRL of reactor waste in the full removal option, given the likely development of one or more DGRs. AOPFN appreciates the update to the alternative means assessment noted by CNL, but also notes that the adjustment appears not to have reduced CNL's preference for ISD.	<p>Following up on IR #185, AOPFN requests further information:</p> <ul style="list-style-type: none"> CNL to clarify whether radiation exposure levels to workers in the full removal case are within regulated safety limits, and by what percentage or order of magnitude. CNL to clarify whether estimated likely injuries to workers in the full removal case exceed or are below historic and current averages for major construction projects in Ontario. Regarding the collective dose estimate for full dismantling provided by CNL in its AMA, AOPFN requests the clarification of the

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				<p>Another systematic bias is overweighting of worker risks. AOPFN disagrees with CNL’s approach to highly weighting the risks of exposure to workers (who are trained professionals with state of the art protective equipment, procedures, monitoring and safety measures) over the risk to traditional land users (who in the future may have no idea about the risks they could be exposed to).</p> <p>We note that while for workers and in the short term, ISD is preferable, for traditional land users and in the medium to long term, full removal to a deep geological, purpose-built facility is the safer option, and this needs to be acknowledged by the proponent.</p>	<p>estimated dose amount per person and whether it would breach any regulatory standards. As fifty times almost nothing may still be safe, AOPFN needs more detail on the absolute degree of risk of full dismantling, not just the relative risk vs. ISD.</p> <p>See also AOPFN follow-up IRs in relation to Government of Quebec IRs #39 and #119.</p>
186	CNSC	Section 4.3 Environmental Effects of Alternative Means	Accepted		
Decommissioning Safety Assessment Technical Supporting Document					
187	Health Canada	<p>Section 4.1.6 Non-Radiological Benchmarks</p> <p>Also applicable to Section 8.5.2.5 Effects on Public Health and Table 8-17</p>	Not Accepted	<p>Use the Air Quality Management System (AQMS) levels as the targets for air quality management to reduce incremental population health risk from exposure to NO₂ and fine particulate matter (PM_{2.5}).</p> <p>For non-threshold air contaminants, such as PM_{2.5} and NO₂, there is no population-level threshold for human health effects and any increase in exposure will result in an incremental population health risk. Therefore, the CAAQS should not be considered as “pollute-up-to” levels and proposed mitigation measures should not be limited to meeting the CAAQS values. To minimize population exposure to non-threshold contaminants associated with a Project, Health Canada recommends the use of the AQMS levels² as the air quality management targets for the Project. The four colour-coded AQMS levels provide guidance on a suite of monitoring, reporting and management actions that become progressively more rigorous as air pollutant concentrations approach or exceed the CAAQS.</p> <p>Although the EIS compared the baseline and predicted PM_{2.5} and NO₂ levels to the AQMS levels (Table F-12, DecomSA) pursuant to Health Canada’s recommendation, the AQMS levels were not used as the targets for air quality management during the Decommissioning Phase.</p>	See new IR 350
188	Health Canada	Section 5.2 Non-Radiological Compounds	Not Accepted	<p>Monitor non-radiological contaminants in relevant environmental media as part of the follow-up programs to address the gaps and uncertainties associated with the predicted effects.</p>	See new IRs 350 and 351

² CCME. 2019. Guidance Document on Air Zone Management. Available at: https://ccme.ca/en/res/guidancedocumentonairzonemanagement_secured.pdf

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		Also applicable to Section 10.2 Malfunctions & Accidents Assessment, Figure 10-7		<p>Due to the gaps and uncertainties identified below, Health Canada recommends that asbestos, lead, mercury and polychlorinated biphenyls be closely monitored in relevant environmental media as part of the follow-up programs.</p> <p>Asbestos: During the Decommissioning Phase, a large quantity of asbestos waste (i.e., an approximate volume of 192 m³, or mass of 465 metric tonnes) will be displaced from various locations of the Project site, including the temporary storage in shipping containers (i.e., an estimated volume of 165 m³, or mass of 396 metric tonnes) (Table 5-19, DecomSA). Considering the large scale of the asbestos displacement/emplacement activities on site and known health effects³, verification of the predicted asbestos air emissions is recommended through the follow-up effluent and environmental monitoring during the Decommissioning Phase.</p> <p>Lead (Pb): Based on the estimated inventory of Pb on site (Table 5-18, DecomSA), a total of more than 200 metric tonnes of Pb will be permanently encapsulated within the Nuclear Power Demonstration Disposal Facility (NPDDF). Given the large quantity of Pb in the NPDDF and uncertainties about both the NPDDF's structural integrity (Section 5.2.4, Post-Closure Phase Safety Assessment [PostSA]) and the groundwater hydraulic conductivity during the Post-Closure Phase (Section 5.2.5., PostSA), close monitoring of potential releases of Pb to the environment is recommended through the follow-up effluent and environmental monitoring activities during the Post-Closure Phase.</p> <p>Mercury (Hg): While the amount of Hg remaining in the NPDDF may be small (< 0.01 kg), multiple fish consumption advisories are currently in effect a few kilometers downstream of the NPD site along the Ottawa River (i.e., at "<i>Holden Dam to Morrison Island</i>" location) due to elevated tissue levels of Hg⁴. At this location, a complete consumption restriction is in effect for Lake Sturgeon, while a consumption reduction is recommended for Lake Herring, Lake Whitefish, Northern Pike, Sauger, Smallmouth Bass, Walleye, White Sucker, Yellow Perch. To prevent the Project emissions from exacerbating the existing Hg contamination and related fish consumption advisories, it is recommended to verify the predicted Hg release through the follow-up environmental monitoring during the Post-Closure Phase.</p> <p>Polychlorinated Biphenyls (PCBs): The PCBs present in paint and caulking were excluded from environmental modelling as the measured concentrations were below the regulatory limit of 50 mg/kg (CNL Responses to IR-189 and 199). While the PCB regulations are important for sorting PCB-containing materials for disposal, meeting these regulations is insufficient rationale for not evaluating potential release to and accumulation in the environment (i.e., groundwater,</p>	

³ Health Canada. 2023. Asbestos and Your Health. Available at: <https://www.canada.ca/en/health-canada/services/air-quality/indoor-air-contaminants/health-risks-asbestos.html>

⁴ Ministry of the Environment, Conservation and Parks. 2024. Guide to Eating Ontario Fish. Available at: <https://www.ontario.ca/page/fish-consumption-report?id=46077729>

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
				surface water, sediment and fish during the Post-Closure Phase) and associated health effects. Additionally, the EIS did not provide information on the quantity of PCBs in paint and caulking. To adequately characterize the overall PCB impacts on the environment and human health, the amount of PCBs in paint and caulking should be estimated and evaluated as part of the environmental modelling for air, groundwater, surface water, and sediment. Given that a fish consumption advisory for Lake Sturgeon is in effect due to elevated tissue concentrations of PCBs at a few kilometres downstream of the NPD site along the Ottawa River ⁴ , verification of the predicted PCB emissions is recommended through the follow-up environmental monitoring during the Post-Closure Phase.	
189	Health Canada	Section 5.2.4 PCBs	Not Accepted	See Health Canada's comments on PCBs in CNL Response to IR-188.	See new IR 351
190	CNSC	Section 6.2.2 Atmospheric Dispersion Factor	Accepted	The explanation covers the fact that CALPUFF has the more conservative results, but it needs to be noted that CALPUFF is not the model for dispersion to be used in Ontario (Air Dispersion Modelling Guideline for Ontario).	
191	CNSC	Section 6.2.2 Atmospheric Dispersion Factor	Accepted		
192	CNSC	Section 7.4 Existing Measures/Safeguards	Accepted		
193	CNSC	Section 7.9.2 Severity Screening	Accepted		
194	Health Canada	Section 8.3.2 Assumptions on Operational Practices	Accepted		
195	CNSC	Section 8.4.2 Stockpile Grout Ingredients	Accepted		
196	CNSC	Section 8.5.2 Grout Fill Nuclear Area Also applicable to Section 9.8.3	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Identification of Residual Effects			
197	CNSC	Section 8.6.1 (Demolition of Above Grade Structures) Also applicable to the main EIS, Section 9.9 (Aboriginal Land and Resource Use), p.9-119	Accepted		
198	Health Canada	Section 8.6.1 Demolition of Above Grade Structures	Not Accepted	<p>Ensure the correct usages of “dose” and “dose rate”</p> <p>While the EIS and supporting documents were revised to support the correct usages of “dose” and “dose rate”, the two terms were still used interchangeably in certain places. Incorrect uses of the terms can lead to confusion when comparing predicted dose to a dose rate criterion. For instance, the two terms were used interchangeably on the same page (Page 9-230, Section 9.14.7, EIS):</p> <ul style="list-style-type: none"> In 1st paragraph: “<i>The peak dose from this scenario results from exposure and use of sediments contaminated with groundwater leaking from the NPD Disposal Facility, and was assessed at 0.004 mSv/y, well below the threshold dose for a Disruptive Event Scenario</i>”; and In 2nd paragraph: “<i>The maximum resulting dose rate received by humans is 0.0003 mSv/y, and is well below the dose rate criterion for disruptive events (1 mSv/y)</i>”. 	Health Canada recommends the following comments be addressed in future Project documents: Ensure that “dose” and “dose rate” are used correctly throughout the EIS and supporting documents.
199	Health Canada	Section 8.6.2 Sizing Material	Not Accepted	See Health Canada’s comments on PCBs in CNL Response to IR-188	See new IR 351
200	Health Canada	Section 9.4.2 Public Receptors	Accepted		
201	Health Canada	9.4.2 Public Receptors, Table 9-36	Accepted		
202	CNSC	Appendix F Air Quality Assessment for the NPD Project,	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Section F.2 Air Quality Regulations, Table F-1			
203	Health Canada	Appendix F Air Quality Assessment for the NPD Project, Section F.3 Air Dispersion Model Configuration	Accepted		
204	CNSC	Appendix F Air Quality Assessment for the NPD Project, Section F.3.5 Source Characterization	Not Accepted	The proposed approach “maximum scenario” appears to be bounding based on CNL’s explanation. However, CNL is indicating that they still have a lot of unknowns (p. 9-16 of the EIS). Therefore, it is expected that CNL will revise its modelling as necessary when more information become available.	
205	Health Canada	Appendix F Air Quality Assessment for the NPD Project, Section, Section F.4 Air Modelling Results, Table F-7	Not Accepted	See Health Canada’s comments on CNL Response to IR-187	See new IR 350
206	Health Canada	Appendix F Air Quality Assessment for the NPD Project, Section, Section F.4 Air Modelling Results, Table F-7	Accepted		
207	ECCC	Appendix F Air Quality Assessment for the NPD Project,	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Tables F-7, F-8 and F-9			
208	Health Canada	Appendix F Air Quality Assessment for the NPD Project, Section, Section F.4 Air Modelling Results, Table F-9	Accepted		
Ecological Risk Assessment Technical Supporting Document					
209	CNSC	Section 2.1 Site Characterization Also applicable to Section 8.5.3 Soil Quality of the main EIS	Accepted		
210	CNSC	Section 2.2 Receptor Selection Also applicable to Section 4.2 Toxicological Benchmarks, Table 4.6, p.4-9	Accepted		
211	CNSC	Section 2.2 Receptor Selection, Tables 2.2 and 2.4 Also applicable to Section 5.3 Species at Risk, p.5-11	Accepted		

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212	ECCC, AOPFN	Section 2.4.2 EcoRA Screening Also applicable to the main EIS, Section 8.7 Ambient Radioactivity, Table 8.7-2	ECCC – Accepted AOPFN – Not Accepted	<p>AOPFN shares in ECCC’s caution of the necessity of understanding existing conditions and corresponding existing impacts on the environmental components and VCs prior to evaluating effects of the Project. Reviews of CNL’s response as well as the EIS show that gaps remain in CNL’s characterization of baseline conditions.</p> <p>The most significant gap which AOPFN has raised consistent concerns about is the temporal comparison chosen by CNL for the NPD decommissioning assessment, which is to compare the future against today, rather than against a pre-industrial NPD site condition. AOPFN is again stating for the record its rejection of the use of a “damaged” current baseline for the assessment of effects, rather than focusing on the rightful ability of AOPFN members to use and occupy the area for cultural and traditional use purposes as they did prior to it being industrialized by parties and decisions outside of AOPFN’s control. We find that this approach is fundamentally punitive to AOPFN members, as Canada has imposed alienation and loss of use of the area on our members since the 1960s, against our will and without consultation. The Project Case should not be assessed against a current, damaged baseline, but against the condition of the site prior to the facility being built, and the degree to which it will differ in the Project Case from this prior, relatively pristine baseline case.</p> <p>CNL does realize in section 8.9.3 (pg. 8-232) that:</p> <p><i>“... the current baseline environment of the NPD site is one where these activities [Indigenous traditional land and resource use] can’t be currently practiced. Therefore, CNL recognizes that the baseline environment is not one desirable to Indigenous peoples and the desire is to return the lands back to pre-development condition.”</i></p> <p>As such, it is baffling why the actual assessment of traditional land use effects and culture continues to rely on this already impacted current baseline. AOPFN finds this to be unacceptable and we consider this position to be beneath the honour of the Crown (AECL) and Agents of the Crown (CNL).</p>	<p>CNL should reassess the Project Case against either or both of the following:</p> <ol style="list-style-type: none"> 1. Pre-industrial conditions at the NPD site; and/or 2. An alternative technically and economically feasible decommissioning scenarios which would leave conditions at the NPD site as close as possible to historic/natural conditions.
213	CNSC	Section 2.4.2 EcoRA Screening	Accepted		
214	ECCC	Section 2.4.2 EcoRA Screening Also Applicable to Section 3.4 Exposure Point Concentrations (p.3-4 to 3-18)	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
215	CNSC	Section 2.4.2 EcoRA Screening	Accepted		
216	CNSC	Section 2.4.2 EcoRA Screening	Accepted		
217	CNSC	Section 2.4.2 EcoRA Screening	Accepted		
218	ECCC	Section 2.4.2 EcoRA Screening Also applicable to Section 2.6 Conceptual Site Models (p.2-47 to 2-51)	Accepted		
219	ECCC	Section 2.4.2 EcoRA Screening	Not Accepted	The resolution provided by the Proponent is generally acceptable. However, the specific “key times during grouting operations” when the HEPA filtered ventilation would be deployed remain unclear. Additionally, the statement “releases are not captured by the HEPA filtration system” induces confusion. Understanding when the HEPA filter filtration system will be deployed is an important part of the air quality assessment.	ECCC requests that the Proponent: <ul style="list-style-type: none"> • Provide additional details on how and when HEPA filters will be deployed during the grozuting operations. • Incorporate updated details regarding active ventilation that will be used during grouting operations as outlined in the Proponent’s response, into the revised EIS.
220	ECCC	Section 2.4.2 EcoRA Screening, Table 2.14 Tritium Levels near Guardhouse	Accepted		
221	ECCC	Section 2.4.2 EcoRA Screening	Accepted		
222	ECCC	Section 2.4.2 EcoRA Screening	Not Accepted	The Proponent has provided the requested additional clarification on the postclosure phase scenarios and additional clarification for the “Discharge to Shore” scenario which was renamed as “River Level Fall”. In the Post Closure Safety Assessment TSD, due to institutional control of the site some of the scenarios, that require access to the NPD site, exclude institutional period in the assessment of potential effects. However, the post closure scenarios including “what if” scenarios considered the scenarios only after the 100-year institutional control period is over. Extreme conditions associated with some of the scenarios might occur before the institutional control period ceases. Although the revised	ECCC requests that the Proponent: <ul style="list-style-type: none"> • Provide additional information on how specific disruptive events and what-if scenarios such as extreme degradation and river level fall might be detected during the institutional control period

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				EIS describes monitoring programs during the institutional control period, there is no specific information on how the what-if scenarios would be detected and responded to.	<ul style="list-style-type: none"> Identify mitigation measures being considered in the event these scenarios occur.
223	ECCC	Section 2.4.2 EcoRA Screening, Table 2.19	Accepted		
224	CNSC	Section 3.5.1 Radiological COPCs Also applicable to Appendix C	Accepted		
225	CNSC	Section 5 Risk Characterization, Tables 5.1 and 5.2	Accepted		
226	ECCC	Appendix A, Ecological Profiles	Accepted		
227	ECCC	Appendix B, Dose Coefficients	Accepted		
Greenhouse Gas Emissions Technical Supporting Document					
228	CNSC ECCC	Section 2.1 Scope of Activities Considered in the Analysis, Table 2.1	Accepted		
229	CNSC ECCC	Section 2.2 Indirect GHG Emissions	Accepted		
230	CNSC ECCC	Section 2.3 Direct GHG Emissions	Accepted		

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231	CNSC ECCC	Section 2.3 Direct GHG Emissions	Accepted		
232	CNSC ECCC	Appendix A, A.1 – Output and Input of Indirect GHG Emission Calculation Model	Accepted		
233	ECCC	Appendix A-A.2 – Summary of Direct GHG Emission Calculations Also applicable to the Decommissioning Safety Assessment Technical Supporting Document, Appendix F Air Quality Assessment for the NPD Project, Tables F-4, F-5 and F-6	Accepted		
Postclosure Safety Assessment Technical Supporting Document					
234	CNSC, AOPFN	General	CNSC – Accepted AOPFN – Not Accepted	CNSC staff will review the safety case for the NPD project through licensing. AOPFN is highly concerned to hear from CNSC staff that “CNL has not demonstrated that the proposed safety case is robust, nor has it been well supported by scientific evidence. CNSC staff do not consider the proposed safety case to meet CNSC’s expectations”. AOPFN does not agree with CNL’s seemingly dismissive suggestion that this issue is a post-EA issue.	AOPFN requests that CNL and CNSC both engage with AOPFN on this topic moving forward, and that CNL be required to submit its safety case during this EA, not after it

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235	ECCC	General	Accepted		
236	ECCC	General	Accepted		
237	CNSC	Section 2.0 Assessment Context	Accepted		
238	CNSC	Section 4.0 Scenarios, Calculation Cases, Models and Data Also applicable to Appendix E Conceptual Models and Data	Accepted	Note - To be reviewed under licensing, once CNL dispositions CNSC's outstanding comments on version 3 of the post closure safety assessment.	
239	CNSC	Section 4.1.7 Sensitivity Calculations	Accepted		
240	CNSC	Section 4.2.2 Waste and Facility Model	Accepted		
241	CNSC	Section 5.1 Normal Evolution Scenario, Table 5-2	Accepted		
242	Health Canada	Section 5.1.3 Doses to Humans	Accepted		
243	ECCC	Section 5.3 Defence-in-Depth Calculation Cases	Accepted		
244	CNSC	Section 5.5.3 Well in Contaminated Plume	Accepted		

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		Also applicable to the main EIS, Section 9.8.3 Identification of Residual Effects, p.9-110			
245	Health Canada	Appendix A 5.4 Criteria for Non-Radioactive Contaminants Also applicable to the main EIS, Section 8.3.5 Sediment Quality	Not Accepted	Evaluate the country food consumption pathway for non-radiological contaminants in the health risk assessment for the Post-Closure Phase. Potential human exposure to Pb (see Health Canada’s comments on CNL’s Response to IR-188) from country food consumption was not evaluated in the health risk assessment for the Post-Closure Phase. This potential pathway was excluded as the predicted Pb levels in other environmental media (i.e., soil, sediment, groundwater and surface water) were below the screening criteria for individual media (Table G-14 and Section G 2.2.2, PostSA). However, as acknowledged in CNL Response to IR-245, these screening criteria are not necessarily protective of human health from exposure to contaminants via food consumption. In cases where there are no screening criteria available for an environmental medium (e.g., country foods), the contaminants can be carried forward into a quantitative risk assessment to determine whether there may be health risks associated with the predicted concentrations ⁵ .	See new IR 251
246	ECCC	Appendix B System Description, B 3.4 Uncertainties	Not Accepted	ECCC accepts the explanation of conservatism for tritium and C-14. However, the Proponent has not addressed the concerns regarding Ag-108m and the risk associated	ECCC recommends that the Proponent: <ul style="list-style-type: none"> Assess the risks associated with not having measurement data for Ag-108m.
247	CNSC	Appendix C Features, Events and Processes	Not Accepted	CNSC request for a quantitative assessment to support decision to screen out gas-mediated release, including calculation of expected rate of gas generation and its dissolution in groundwater, has not been satisfied. Continuing research into this area suggests that gas generation and migration from different waste forms remains an important phenomenon to assess.	CNL is requested to provide more information to support their response.
248	CNSC	Appendix C Features, Events and Processes Also applicable to Appendix D Scenarios and	Not Accepted	<u>Note also that CNSC staff will review the post-closure safety analysis when CNL has dispositioned staff comments made on the previous version of this document, under licensing.</u> Uncertainty remains with regards to the presence of a shear zone (e.g., E-W and NW-SE-striking) or undetected geological structure at the NPD site.	CNSC staff requests that CNL acknowledge the uncertainty regarding the presence of an undetected structure water-conducting feature at the site and synthesize clearly the strategy undertaken by CNL to manage this uncertainty.

⁵ Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Human Health Risk Assessment. Available at: https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-6-2023-eng.pdf

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		Calculation Cases, p.D-6		<p>CNL has removed reference to the existence of a potential shear zone at the NPD site, but haven't presented any alternative explanation for the "high core losses, highly fractured core and drill water losses in drillholes S-3 and S-11."</p> <p>CNL focussed their characterization work, and the outcome, around gathering evidence for a historically described 90 m-wide, east-west striking, moderate south-dipping shear zone. CNL though acknowledges the presence of minor shear zones, though with no criteria for classifying a shear zone as either minor or major. CNL does not describe the exact thickness of these minor shear zones and does not rule out the possibility that these could be limited exposures of a potentially more extensive shear zone.</p> <p>Moreover, the Geosynthesis refers to a NW-striking fracture zone exhibiting a decrease in rock quality and fracture spacing closer to the Ottawa river, as well as sparsely to highly fractured bedrock (with northeast-dipping fractures), without elaborating on the nature of these features and their rationale for ruling out the possibility that these are shear zones.</p> <p>Lastly, CNL has neither laid out its criteria for distinguishing shear zones, for instance, from fracture zones or zones of dense jointing, nor has it discussed the significance of distinguishing these for the geological characterization as well as any analyses/modelling that are biased on these.</p> <p>CNSC staff also note that the absence of a shear zone has not been adequately substantiated by the methods employed. For instance, drilling has its limitations due to issues with recovery of core and due to the limited spatial coverage it provides (the drill holes are few and far between). While excavation has been carried out, CNL has not presented any systematic description and classification of structures associated with the photos presented in the Geosynthesis.</p>	
249	CNSC	Appendix E Conceptual Models and Data, Section E 2.2.4 Biosphere, Figure E-9	Accepted		
250	CNSC	Appendix E Conceptual Models and Data, Section E 3.1 Contaminants of Interest, Table E-5	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
251	CNSC	Appendix E Conceptual Models and Data	Not Accepted	The acceptability of this response is dependent on the review of the 2021 'Waste Form Synthesis Report' cited by CNL. This report was not provided in support of the EIS.	CNL should clarify the role of and importance of the 'Waste Form Synthesis Report' for the EIS.
252	CNSC, AOPFN	Appendix E Conceptual Models and Data	CNSC - Not Accepted AOPFN – Not Accepted	CNSC: The acceptability of this response is dependent on the review of the 2021 'Waste Form Synthesis Report' cited by CNL. This report was not provided in support of the EIS.	CNSC: CNL should clarify the role of and importance of the 'Waste Form Synthesis Report' for the EIS. AOPFN: CNSC's IR #252 asks about current corrosion rates at the facility, including concrete structures. <ul style="list-style-type: none"> As a follow-on IR, can CNL provide, based on the results of recent and occasional structural integrity assessments of the facility, an estimate of how long the facility could stay in its current Storage with Surveillance mode with minimal risk of substantial loss of radionuclide to surrounding groundwater, or other fundamental failure mode of the facility?
253	CNSC	Appendix G Detailed Results, Section G 2.3 Doses to Human Receptors	Accepted		
Stakeholder Engagement Technical Supporting Document					
254	CNSC	General	Accepted		
255	CNSC	General	Accepted		
Supplementary Documentation					
Alkaline Plume Modeling Report					
256	ECCC	Alkaline Plume Modeling Report Also applicable to the Lead Solubility Limits	Partially Accepted	The majority of the requested information has been provided by the proponent regarding the grout behaviour and lead solubility as well as the potential for lead being leached to Ottawa River in the future post institutional period. However, the assumptions behind grout behaviour including the simulations of flow are based exclusively on Darcy flow and the assumption of isotropy in the cementitious monolith. Given adequate time, grout degradation will transition from a diffuse type of flow to an inertial type of flow (due to cracking) with potential increase of chemical/particulate transport by many orders of magnitude.	ECCC recommends that the Proponent: <ul style="list-style-type: none"> Provide additional justification that supports the prediction that the embedded radioactivity in the iron based matrices would continue to provide long-term containment.

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Report, p. 3-2 and 3-6 Also applicable to the Postclosure Safety Assessment Technical Supporting Document, p. 5-2, 5-5, 5-7, 5-38			Alternately, provide additional analysis of grout behaviour and hydraulic conductivity based on non-Darcy flow and lead/radionuclide transport to Ottawa River.
Calculated Radioactive Inventory of NPD					
257	CNSC	General	Accepted		
Characterization Report for the NPD Reactor					
258	CNSC	General	Accepted		
259	CNSC	General	Accepted		
260	CNSC	General	Accepted		
261	CNSC	Section 7.0 Analytical Instruments – Off-site Analysis	Accepted		
262	CNSC	Section 8.2 NPD Reactor Radionuclides Analysed, Table 37	Accepted		
263	CNSC	Section 10.4 Verification of the Calandria Tube Inventory	Accepted		
Updated Groundwater Modeling Report					
264	MOECC	General	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
265	MOECC	General	Accepted		
266	MOECC	General	Accepted		
267	CNSC	General Also applicable to the Resaturation Modeling Report and the Postclosure Safety Assessment Technical Supporting Document	Not Accepted	<p>Figure 4.2 shows that overburden is represented by 7 model layers. Section 3.1.5 indicates that “The northern boundary of the model is also no flow, except the top layer defined at a specified head of 111.5 m, the elevation of the Ottawa River at this location”. This would mean that groundwater discharge to Ottawa Rive only through the top layer. Does that mean that deeper groundwater has to flow upward first before they can discharge to the river? What is the implication of this?</p> <p>Table 4-1 Scenario Cases include a case for “Extreme Grout Degradation – Degraded” (K value for severely degraded grout is assumed to be 10^{-6} m/s) and a case for “Extreme Concrete Degradation – Degraded” (K value for severely degraded concrete is assumed to be 10^{-6} m/s). but there is not a case assuming both concrete and grout severely degraded. Considering the configuration of concrete and grout (i.e., grout is contained in concrete walls), if only one of the two components is assumed severely degraded, the other component would become the “constraining” condition for solute transport. In the scenario “Fault Zone Activation”, it is stated that “The facility is also assumed to be extremely degraded: grout and concrete is extremely degraded (10^{-6} m/s). GCL in cover is also extremely degraded (10^{-6} m/s)”. Is it correct to say that the “Fault Zone Activation” is a combination of “Extreme Concrete Degradation – Degraded” and “Extreme Grout Degradation – Degraded” plus increased K values in bedrock?</p> <p>It is indicated (Table 4-1) for the “NES – Degraded” case that “Same as NES Degraded Cap case, but with a degraded structure”. What does “structure” here refer to, concrete wall?</p> <p>With regard to #6 – Shear Zone, please see disposition related to IR# 269.</p>	<p>Justify why only the top layer is assigned a specified head while all other model layers that represent the overburden and bedrock are no-flow boundary conditions in the northern boundary of the model. What is the implication of this assignment of boundary conditions?</p> <p>Clarify if a scenario case assuming both concrete and grout severely degraded is considered in the Scenario Cases in Table 4-1.</p> <p>Clarify what “structure” refers to in Table 4-1, and if “degraded structure” in Table 4-1 means “Extreme Concrete Degradation”.</p>
268	ECCC	General Also applicable to the Postclosure Safety Assessment Technical Supporting Document, p. 4-15	Not Accepted	<p>There are issues with the baseline hydrogeological information that subsequently decrease the validity of the hydrogeological model that is based on them. Specifically, in the updated Groundwater TSD:</p> <ul style="list-style-type: none"> • For pages 2-7 and Table 2-1: The calibration methodology, statistics, and final calibrated values are not fully provided or sufficiently explained. Also, it is not clear how Fig 3-4 “Cumulative Distribution of Measured Sand Hydraulic Conductivity”, was used to develop a hydraulic conductivity estimate for the on-site sand layer • For page 5-1, Figure 5.1: There are no details provided regarding thecalibrated groundwater used to model the eastern boundary. 	<p>ECCC recommends that the Proponent:</p> <ul style="list-style-type: none"> • Provide a detailed explanation for the calibration that was applied for hydraulic conductivity for both the analysis shown in table 2.1 and figure 5.1. • Describe how the “cumulative distribution of measured sand hydraulic conductivity was used to develop the estimates for hydraulic conductivity. • Provide justification for using only three K-values for conductivity, alternatively provide a more robust characterization for conductivity

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Also applicable to the Resaturation Technical Supporting Document, p. 6		<ul style="list-style-type: none"> ○ The 1988 values of hydraulic conductivity (K) look uncharacteristically low for those overburden types. The 1988 values appear questionable when compared to the values for the wells sampled in 2017. ○ Table 2-1 shows that the wells that are screened across both till and shallow bedrock are assumed to represent the hydraulic conductivity of the sand. This is an invalid assumption that biases the measured K-values to appear less conductive for the sand units. This is evident by the reported K-values which appear to be uncharacteristically low and also lower than the 2017 measurements made in sand only (i.e. no bedrock component). <p>The model appears to be based on only three K-values for bedrock which does not make for a robust dataset, especially considering the importance of this model. Furthermore, there is no information as to what depth these K-values were measured at. A more detailed campaign of drilling and testing the bedrock should be undertaken.</p>	
269	CNSC	Section 2.0 Background Also applicable to the Postclosure Safety Assessment Technical Supporting Document, Appendix C, p. C-104	Not Accepted (linked to comment 19 disposition)	<p>Clarification requested. CNL ruled out the presence of a major shear zone on the site and described the fracture intensities and more in the geosynthesis and supporting submissions. Suggestions to further evaluate/confirm the bedrock topography at the site have not been done – for reasons that include that the presence of the boulder till, which would make indirect imaging (such as, for example, GPR) unlikely to be successful.</p> <p>Remaining uncertainty around the possibility of a bedrock-hosted water conducting feature – including a shear zone – and how this is addressed by the CNLs models (hydrogeological and post SA) should be clarified by CNL.</p>	CNL is requested to synthesize how uncertainty around an undetected water conducting bedrock feature has been addressed in their submissions.
270	MOECC	Section 2.0 Background	Accepted		
271	ECCC	Section 3.2 Model Domain and Discretization Also applicable to the Resaturation	Accepted		

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Modeling Report, p.4			
272	CNSC	Section 3.3. Material Properties, Table 3-1 Also applicable to the Postclosure Safety Analysis Technical Supporting Document	Not Accepted	The initial estimate for hydraulic conductivities (K) for concrete and grout are changed from previous values (2017) without justification. For example, the initial estimate for grout K value was 1×10^{-9} m/s in the 2017 groundwater modeling report, while it was 6×10^{-11} m/s in the 2024 groundwater modeling report. It is noted that the K values for concrete and grout are not adjusted in the groundwater model calibration process.	Justify the change in the hydraulic conductivity estimate for concrete and grout.
273	ECCC	Section 3.4 Boundary and Initial Conditions	Accepted		
274	ECCC	Section 3.4 Boundary and Initial Conditions	Accepted		
Resaturation Modeling Report					
275	ECCC	Section 3.3 Material Properties (of the 2017 Resaturation Report)	Accepted		
276	ECCC	General Also applicable to the Postclosure Safety Assessment Technical Supporting Document, p. 4-15	Not Accepted	The revised analysis on the shear zone under the NPD site provided by CNL with the conclusion that the shear zone does not exist has not been corroborated by other experts at the CNSC/NRCan. A shear zone under the NPD site would indicate additional risk for the long-term integrity of the concrete monolith which would affect the containment of contaminants within the concrete monolith. Accordingly, the predictions of long-term predictions on the Ottawa River based on containment of radionuclides and lead within the concrete monolith would need to be re-evaluated with revised to include the shear zone.	ECCC recommends that the Proponent: <ul style="list-style-type: none"> Provide additional justification that supports its conclusion that there is no shear zone or else provide additional information and analysis of long-term integrity of containment of radionuclides and other contaminants that account for a shear zone under the NPD and its potential risk to the Ottawa River.

Reference Number	Federal / Provincial Department/Indigenous Nation	Section, Table or Figure	Result of PFIRT Review of CNL October 11, 2024 submission	Justification/Rationale	Follow up Information Request
		Also applicable to the Resaturation Technical Supporting Document, p. 6			
277	CNSC	Section 3.4 Boundary and Initial Conditions	Accepted		
Lead Solubility – Limits Report					
278	ECCC	Lead Solubility Limits Report Section 2 Modelling of Lead Mineral Solubility Also applicable to Section 3.3 Solubility Limit Calculations, p.3-20 and to the Alkaline Plume Modeling Report (p.14)	Accepted		
279	ECCC	Section 3.1 Model Water Compositions	Accepted		
280	ECCC	Section 3.2 Thermodynamic Stability of Lead Minerals	Accepted		

Federal Provincial Indigenous Review Team Technical Review of CNL's October 11, 2024 Revised Draft EIS submission for the proposed Nuclear Power Demonstration Closure Project

FPIRT New Information Requests

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
281	CNSC		Environmental Impact Statement – NPD Closure Project, 64-509200-ENA-004, rev. 4 Section 8.2.5	<p>Context: Ambient noise level surveys were conducted at various locations in and around the NPD project site, local and regional study areas. These surveys, while anthropocentric and appropriate to assess human health impacts, do not consider impacts to terrestrial biota, specifically SARA species. Noise (and vibration) thresholds for biota should be considered in this assessment.</p> <p>Rationale: Noise and vibration thresholds for biota should be considered given that anthropocentric noise surveys may not be appropriate to assess impacts on terrestrial biota. Monitoring the impacts of noise and vibration on sensitive biota (SAR), such as, but not limited to behavior should be conducted, and appropriate adaptive management including noise attenuation to minimize these effects considered.</p>	Please provide an assessment or discussion of how the results of noise surveys would be applicable to terrestrial biota, including SARA species. Provide, where possible, a quantitative assessment of effects of noise (and vibrations) on these species.
281	CNSC		Environmental Impact Statement – NPD Closure Project, 64-509200-ENA-004, rev. 4 Section 8.2.5	<p>Context: Ambient noise level surveys were conducted at various locations in and around the NPD project site, local and regional study areas. These surveys, while anthropocentric and appropriate to assess human health impacts, do not consider impacts to terrestrial biota, specifically SARA species. Noise (and vibration) thresholds for biota should be considered in this assessment.</p> <p>Rationale: Noise and vibration thresholds for biota should be considered given that anthropocentric noise surveys may not be appropriate to assess impacts on terrestrial biota. Monitoring the impacts of noise and vibration on sensitive biota (SAR), such as, but not limited to behavior should be conducted, and appropriate adaptive management including noise attenuation to minimize these effects considered.</p>	Please provide an assessment or discussion of how the results of noise surveys would be applicable to terrestrial biota, including SARA species. Provide, where possible, a quantitative assessment of effects of noise (and vibrations) on these species.
282	CNSC		Ecological Risk Assessment TSD, 64-509200-ASD-004, rev. 2 Section 2.7	<p>Context: In Table 2.39 (Problem Formulation Checklist), it is stated that reptiles were assessed only for radiological effects but not non-radiological effects as there is lack of available information on the toxicity effects of the latter on reptiles. It is unclear why efforts were not made to search this information in the open literature.</p> <p>Rationale: A quick Google Scholar search, for example, indicated that there are scores of studies on toxicity of non-radiological contaminants on turtle species, including but not limited to seminal papers on turtles as monitors of chemical contaminants in the environment. Turtle</p>	CNL should be asked to conduct a literature search on the effects of non-radiological COPCs on reptile species and assess effects on non-radiological COPCs on turtle species in the site/local study areas.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				species which utilize a habitat similar to the Blanding's turtle can be used as surrogate species to assess non-radiological effects.	
283	CNSC		Ecological Risk Assessment TSD, 64-509200-ASD-004, rev. 2 Section 4.1	In Table 4.1 (Radiological Dose Benchmarks), a safety factor of 10 was applied to the UNSCEAR radiological dose rate benchmarks (mGy/d) for terrestrial and aquatic SAR species. While the UNSCEAR benchmarks are applicable for protection of the species at the population level, SARA species need individual protection due to their conservation status, and a safety factor is warranted. However, it is unclear how or on what scientific basis the safety factor of 10 was chosen. Rationale: Species listed under the federal SARA need to be protected at an individual level and a safety factor applied to the UNSCEAR dose rate benchmark is warranted. However, the safety factor should provide a reasonable assurance, based on scientific argument, that the species to be protected at an individual level will in fact be protected using the chosen safety factor.	CNL should provide a scientific justification for the use of a safety factor of 10 applied to the UNSCEAR dose rate benchmark used in the assessment of terrestrial and aquatic SAR species.
284	CNSC		Ecological Risk Assessment TSD, 64-509200-ASD-004, rev. 2 Section 4.2.3	In Table 4.5 (Lead TRVs for Mammals and Birds), the TRVs for non-SAR and SAR species are identical. Therefore, it is unclear if the SAR species would be protected at the individual level. Rationale: Species listed under the federal SARA need to be protected at an individual level and a scientifically valid safety factor should be applied to the toxicological benchmark used in this assessment.	
285	CNSC		Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1	Paragraph 19(1)(f) of CEAA 2012 states that the EIS shall identify and describe alternative means to carry out the project that are, from the perspective of the applicant, technically and economically feasible. As identified by the proponent, the alternative means include options for locations, development, and implementation methods, routes, designs, technologies, mitigation measures, and so on. REGDOC 2.9.1 section A.3.2 include the following aspect to be addressed in the alternative means: <ul style="list-style-type: none"> • the characteristics of the project • the environmental effects associated with the potential alternative means • the health or status of valued components (VCs) that may be impacted by the alternative means • the potential for mitigation and the extent to which mitigation measures may address potential environmental effects • the level of concern expressed by the public and Indigenous groups 	CNL needs to ensure they address the information expected in CEAA 2012 and REGDOC 2.9.1 for the Alternative means.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				<p>In Section 4.3.1.1 for atmospheric does not include the level of concern of the public and indigenous groups.</p> <p>Rationale: CEAA 2012 and REGDOC 2.9.1 provide the level information expected for the alternative assessment.</p>	
286	CNSC		<p>Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1</p> <p>Section 4.2.1</p>	<p><i>The criteria used to identify alternative means as unacceptable, and how these criteria were applied, should be described, as should the criteria used to examine the environmental effects of each remaining alternative means to identify the preferred alternative.</i></p> <p>CNL indicated that in section 4.2.1: <i>The assignment of relative risk arrows was based on the experience and professional judgement of technical specialists. Although subjective in scale, the arrows consider aspects such as magnitude, spatial extent, impact to human and non-human biota health.</i></p> <p>Therefore the methodology relies on technical opinion and not on predefined criteria.</p> <p>Rationale: REGDOC 2.9.2 recommends using criteria to determine the alternative means.</p>	CNL should consider using criteria as defined in REGDOC 2.9.1 section A.3.2.
287	CNSC		<p>Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1</p> <p>Section 4.3.1.6: Radiation and Radioactivity Environmental</p>	<p>Context: Under each timeframe (e.g. decommissioning execution, institutional controls and post-institutional controls), results of relative risk are qualitatively described and compared for the four decommissioning alternatives (e.g., SwS, Partial decommissioning and removal, Full decommissioning and removal and in-situ disposal). However, there is no discussion of how this relative risk was evaluated/assessed.</p> <p>Rationale: Section 4.2.1 states that “the assignment of relative risk arrows is based on the experience and professional judgement of technical specialists and the this assignment of arrows considers aspects such magnitude, spatial extent, impact to human and non-human biota.”</p> <p>An explanation related to the qualifications of the technical specialists should be added and a clarification how these aspects were considered in the assignment of arrows to support this statement.</p>	<p>A- Provide a comprehensive discussion or an assessment that would show how the provided results of the relative risk have been obtained.</p> <p>B-Explain if the assignment of the relative risk is performed by the qualified personnel (in this case: technical specialists) in accordance with industrial criteria/requirements (e.g., CSA N286, Clause 4.5.2- Human resources: Workers shall be competent to do the work assigned to them) or a similar.</p> <p>C- Clarify how the mentioned aspects have been considered in the assignment of arrows</p> <p>Reference: CSA N286:12 (reaffirmed 2022) Management system requirements for nuclear facilities</p>
288	CNSC		<p>Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1</p>	<p>Context: In this section, external Gamma fields is considered for the four options (e.g., baseline, partial dismantling and removal, full dismantling and removal and in-situ disposal). The information provided does not include any characteristics, such as potential Gamma</p>	<p>Specific Question/ Request for Information: Please include missing information (e.g., potential gamma emitters and associated dose rates) or provide a rational for non-inclusion?</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			Section 4.3.1.6: Radiation and Radioactivity Environmental	emitters and associated dose rates. This information seems to be missing or not of importance. Rationale: Providing this information would assist in better understanding of the external Gamma fields magnitude and its comparison between the options.	
289	CNSC		Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1	Context: Section 4.3.1.3 Includes "aquatic biota" but excludes "non-human biota" and refers to Section 4.3.5.3 (which includes aquatic biota).	Specific Question/ Request for Information: Provide clarification in the table and/or footnote about where and how aquatic biota are considered.
290	CNSC		Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1 Section 4.3.1.3.	Context: For the partial and full dismantling and removal alternatives, there should be reference to any cumulative risks expected from storage, disposal activities and final disposal at CRL (i.e., where other wastes are stored).	Specific Question/ Request for Information: CNL should include discussions of any project cumulative risks expected from storage, disposal activities and final disposal.
291	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Section 2.5 Page 2-67: Table 2.37 Summary of Exposure Pathways for Radiological Contaminants	Context: There is no rationale provided as to why sediment was not included as a pathway to aquatic vegetation, or clarity on what type(s) of aquatic plant (i.e., rooted vs floating, exposed to air vs completely sub-merged) is being considered in assessment. Text on page 2-65 paragraph 3 states that aquatic vegetation (amongst other aquatic biota) are "assessed against contaminant concentrations in surface water and sediment".	Specific Question/ Request for Information: Provide clarification on type(s) of aquatic plant(s) assessed and rationale for exclusion of the sediment pathway for aquatic vegetation.
292	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Section 2.6 Page 103/104 Figure 2.4/2.5 Conceptual Site Models	Context: No mention could be found in Section 2.6 or elsewhere for the rationale used to support the selection of different receptors and pathways in decommissioning phase versus post-closure phase (e.g., Great Blue Heron only in post-closure CSM, but no reason identified for not including it in the decommissioning CSM). It is noted that all contaminants were screened out of assessment for the decommissioning phase, so no impact on conclusions.	Specific Question/ Request for Information: Provide rationale (or reference where in the report it is discussed) for the selection of receptors and pathways used in the decommissioning and post-closure phases.
293	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Table 2.38 Summary of Exposure Pathways for Non-Radiological Contaminants (Page 2-69)	Context: Some assumptions in the ERA are unclear: -why was aquatic vegetation (e.g., cranberries) only considered to have uptake from surface water and not from sediment/soil? Cranberries can uptake nutrients through their roots in soil/sediments. -why were benthic invertebrates only considered to have uptake from surface water and was not also compared to sediment quality guidelines?	Specific Question/ Request for Information: Provide clarification on the exposure pathway assumptions (i.e., not including sediment pathway) for non-radiological contaminants for aquatic vegetation and benthic invertebrates.
294	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2	Context: CNSC staff made the following observations:	Specific Question/ Request for Information: Provide clarification on the selection of occupancy factors for aquatic vegetation and benthic invertebrates.

New IRs					
Reference Number	Federal / Provincial / Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			Table 3.9 Mapping of EcoRA Receptors to ERICA and ICRP Representative Organisms and Assumed Occupancy Factors (Page 3-22)	<ul style="list-style-type: none"> - Aquatic vegetation (e.g. cranberries) has an occupancy factor of 1 in water. Typically, aquatic plants have a 0.5 occupancy factor in water and 0.5 on sediment to account for the sediment uptake pathway. Benthic invertebrates have an occupancy factor of 0.5 in sediment and 0.5 in water. Typically, benthic invertebrates have a 1 occupancy factor in sediment as they spend all their time in the sediment.	
295	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Table 2.4 Summary of Ecological Receptors Selected for Inclusion in the EcoRA (Page 2-19)	Context: Blanding Turtle is stated to be on site but was only assessed qualitatively for chemical exposure. On Page 2-17 it states "Blanding's Turtle is assessed quantitatively in the EcoRA for radiological dose but there is not enough information for a quantitative assessment of exposure to lead or mercury, although some inferences of the exposure are made in Section 5.3.3. " However, other CNL ERAs have used the painted turtle as a surrogate for the Blanding turtle and have calculated chemical exposure risks.	Specific Question/ Request for Information: Provide an explanation as to why a surrogate (such as the painted turtle) was not used in the ERA to assess chemical exposure risks to the Blanding turtle.
296	CNSC		Alternative Means Assessment TSD_ 64-509200-ASD-002_REV 1	Context: Although the Alternative Means Assessment TSD has been revised to include the assumption that waste disposal will become available during the Institutional Control period for both low-level and intermediate level waste (as per IR 185), it remains unclear how this change has impacted the decision to prioritize in-situ disposal as the best option. For instance, statements are made such as " <i>it is assumed that the releases to surface water during the post institutional controls phase would be very low for an ILW facility (e.g., for a deep geological disposal facility). Therefore, the overall risk for this alternative is the same as for "4. in Situ Disposal"</i> ". However, evidence that this would be the case is not provided. Would the long-term risks from in-situ disposal and a deep geological disposal facility (DGDF) actually be the same? Would the DGDF provide better barriers to groundwater leaching and better assurance that the waste won't be disturbed into the future? In addition, would the future disposal options provide a reduced risk to pathways to aquatic environment compared to in-situ (i.e., more distance from surface water pathways)? Its not clear how these factors were considered when ranking the risks from each of the options.	Specific Question/ Request for Information: Please provide additional information on how it was determined that the risks to the aquatic environment would be the same for in Situ Disposal and a deep geological disposal facility. Update the risk rankings as necessary.
297	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Section 8.4.2.1	Context: Section 8.4.2.1 present the following information: <i>"This activity includes trucking on unpaved roads to the storage location for the concrete batch plant (i.e. to bring raw materials to the stockpiles, from offsite), which results in emissions of NOx, SO2, TSP, PM10, and PM2.5. The atmospheric effects from these trucking activities are also bounded by the emission estimate in Appendix F. Appendix F shows that the effect of these trucking emissions on the atmospheric environment is considered not to be measurable and therefore does not require further consideration."</i> CNL has not included Benzo(a)pyrene in their assessment when this is a subproduct of diesel combustion. It is not clear why it was not considered.	Specific Question/ Request for Information: CNL should clarify why Benzo(a)pyrene has not been included in the assessment.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
298	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Table 3.16 Stable Carbon Concentration by Food Types (pg. 3-52)	Context: A stable carbon concentration of 111 g C/kg ww was used for benthic invertebrates based on marine crustacea from CSA N229.1 Table 23. However CSA N288.1-20 Clause 7.7.5.4 states that for freshwater invertebrates a value of 120 g C/kg ww should be used.	Specific Question/ Request for Information: Update selection of stable carbon concentration for benthic invertebrates.
299	CNSC		Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2 Table 2.1 Valued Components and Pathways for the NPD Closure Project, Listed by Environmental Component (c) Aquatic Environment pg. 2-4 Table 2.2 Ecological Receptors Identified for the Aquatic Environment pg. 2-12	Context: Lake Sturgeon Great Lakes - Upper St. Lawrence populations are a provincially listed Endangered species under the Ontario Endangered Species Act (November 2017). Additionally, the same Lake Sturgeon population is currently under consideration for uplisting to Schedule 1 of the federal Species at Risk Act and has a COSEWIC status of Threatened (2017). It is recommended that CNL consider assessing this species as a species at risk in the ecological risk assessment.	Specific Question/ Request for Information: Recommend for conservativeness that Lake Sturgeon be assessed as an aquatic species at risk and that the ecological risk assessment is updated to reflect that. If this cannot be done justification should be provided.
300	CNSC		Environmental Impact Statement - NPD Closure Project (V.4) Section 8.12.4. Floods, Flooding from Heavy Precipitation	Context: In Section 8.12.4 (p.8-274) CNL states “ <i>In the facility Safety Analysis Report (Athauda-Arachchige 2015), localized flooding due to surface run-off of meteorological extremes and or spring thaw conditions was identified as extremely unlikely because of the good drainage provided by the site topography [...] Several engineered drainage features, such as ditches, drainage slopes and berms, are present around the facility to increase drainage. [...]</i> ” CNSC staff disagrees with this statement. Although good drainage can be provided through the existing site topography, stormwater management system that is designed for collection, conveyance and discharge of extreme storm event should be adequately sized to convey onsite runoff during intense local precipitation such as probable maximum precipitation event given the project lifetime is more than 100 years and beyond. Whether the design capacity of existing engineered drainage features and potential modifications will be sufficient to mitigate potential flooding of the NPD site due to extreme onsite runoff is unclear. CNSC staff notes information on the design of stormwater management system should be provided to allow fulsome review of how localized flooding effects due to local intense precipitation are mitigated.	Specific Question/ Request for Information: CNL is requested to provide information that demonstrates CNL’s stormwater management system (and its design criteria) is adequate to safely manage extreme storm events without potential localized flooding impacts at the NPD site over its lifetime
301	CNSC		Environmental Impact Statement - NPD Closure Project (V.4) Section 8.12.4. Floods, Flooding from dam failure	Context: In Section 8.12.4 (p.8-275) CNL states “[...] <i>In the event of the failure of these main three dams, the river basin has to drain the flows from its tributaries as well as additional large and abrupt flows due to failure of dams. If sufficient time elapses between the dam failure event and the time when outflows from the basin begins to exceed the inflows, the water in the basin may back up all the way to the NPD site causing severe flooding at the facility [...]</i> .” As per OPG’s Ottawa River Dam Break and Inundation Mapping Study [R-1] and	Specific Question/ Request for Information: CNL is requested to clarify whether there will be flood protection measures, in the form of mitigation strategy or contingency plan, in place should such event occur during the period of institutional control (100 years) and beyond.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				<p>[R-3], the flood level for the NPDWF is 132.2m which is about a flood depth of 3.2m at the current NPDWF building and considered to have a probability of occurrence of 10⁻⁷ and as such is considered to be a beyond design basis event for the Ottawa River dams.</p> <p>Despite the low probability of occurrence of such event, it should be considered as a credible event considering the long lifetime of the proposed project (i.e. beyond 100 years of institutional control) and history/frequency of failures of large dams. For example, US Nuclear Regulatory Commission [R-2] reported that dam failure incidents are common and that over 700 have occurred in the United States alone since 1975 of these 148 failures were of large dams. Therefore, the flooding of the site due to potential dam failure should be considered in the design of the project and assessment of radiological impacts.</p> <p>In addition, in Section 5.3.2 (Surface Erosion) (p.5-55) of CNL-Post-closure Safety Assessment, the dose assessment assumes that a flood or erosion event occurs after 100 years but considerations should also be taken where such event occurs during the institutional control period of 100 years due to potential flooding caused by upstream dam failures.</p> <p>References:</p> <ul style="list-style-type: none"> [R-1] Ontario Power Generation, Ottawa River Dam Break and Inundation Mapping Study, Final Report, Volume 1, 64-10150-226-001-0001, R-DSP-08410-1-00-01103-0001, 1999, December. [R-2] Perkins, et al.,2011. Screening Analysis Report for the Proposed Generic Issue on Flooding of Nuclear Power Plant Sites Following Upstream Dam Failures. ML113500495, July 2011. [R-3] Athauda-Arachchige, H. 2015. <i>Safety Analysis Report for the Nuclear Power Demonstration Waste Management Facility</i>. 64-03610-SAR-001. Revision 3. 	
302	CNSC		Environmental Impact Statement - NPD Closure Project (V.4) Section 8.12.4.3.3 Future Climate Conditions	<p>Context: In Section 8.12.4.3.3 (p.8-278) CNL states “[...] Projected changes in climate extremes of temperature and precipitation can result in climate change effects on the NPD Closure Project and are an important consideration in a climate change resilience assessment. [...] Each of the climate extreme indices are described in Table 8.12-5 with projected changes for the Mid Term and Far Term periods relative to the modelled baseline presented in Table 8.12-6.[...]” However, the projected and reference climate indices reported in Table 8.12-6 that are expected to be utilized in climate change resilience assessment do not include extreme precipitation events that include intensity duration frequency (IDF) (e.g. 100-year rainfall) and probable maximum precipitation (PMP) that are expected to be used for design purposes (e.g. stormwater drainage system and erosion protection works). In addition, the reported projected climate extreme indices for the NPD site for mid-term and far-term are based on the periods 2021-2050 and 2051-2080. There is no justification why these periods are selected. For instance, far-term period should consider the end of this century considering</p>	<p>Specific Question/ Request for Information: CNL is requested to:</p> <ul style="list-style-type: none"> Provide IDF and PMP estimates at NPD site for reference and projected periods. Clarify the basis for the selected climate change assessment time frames.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				<p>the design and operational life of NPD project, i.e., 2071-2100 also as per IPCC (2021) [R-1] unless justified.</p> <p>Reference:</p> <ul style="list-style-type: none"> [R-1] IPCC (2021). Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. In Press, www.ipcc.ch. 	
303	CNSC		<p>Environmental Impact Statement - NPD Closure Project (V.4)</p> <p>Section 9.14.2.2.4 Climate Change Resilience Profile</p>	<p>Context:</p> <p>In Section Section 9.14.2.2.4 (p.9-224) CNL states “A qualitative climate risk assessment based on likelihood and consequence rankings has been conducted and summarized in Table 9.14-6”. CNSC staff note that the current mitigation measures that are identified and would be implemented for the NPD Closure Project have been considered in the risk ranking process as such it determines whether potential adaptation measures or risk treatments would be required to ensure climate change resilience of the project over its design life. Unless climate change provisions or allowances based on the worst cases scenarios (RCP 8.5) and a future time horizon that considers at least the end of 2100 (given the design life of the project) are not incorporated in the proposed ‘current mitigation measures’ in Table 9.14-6, the climate risk rankings may not reflect the actual potential risk and the need for risk treatment or adaptation measures. Therefore, it is imperative to clarify whether changes in future climate (climate variable) will be considered as part of the design of the infrastructures or the current mitigation measures including what emission scenarios (RCP 4.5 or/and RCP8.5) and time horizon (e.g. 2071-2100) are or will be considered. For instance, future or projected extreme precipitation should be considered in the design of engineered cover to protect against potential erosion of engineered cover due to increased runoff and in the design of stormwater management system to ensure adequate conveyance and discharge of increased stormwater runoff due to climate change.</p>	<p>Specific Question/ Request for Information:</p> <p>CNL is requested to clarify whether changes in future climate (climate variable) will be considered as part of the design of the infrastructures or the current mitigation measures including what emission scenarios and time horizon are or will be considered.</p>
304	CNSC		<p>Environmental Impact Statement - NPD Closure Project (V.4)</p> <p>Section 9.14.2.1 Climate Change Effects on the Project</p>	<p>Context:</p> <p>In Section 9.14.2.2.4 (p.9-224) CNL states “For background info, NSDF's Climate Change Assessment TSD (232-509220-TD-001) states that current climate parameters are recorded by the most representative climate station as the basis for further analysis to be performed.” The report (NSDF's Climate Change Assessment TSD (232-509220-TD-001)) is not available to facilitate fulsome review of the EIS.</p>	<p>Specific Question/ Request for Information:</p> <p>CNL is requested to submit the report “NSDF's Climate Change Assessment TSD (232-509220-TD-001”.</p>
305	CNSC		<p>Ecological Risk Assessment Report – NPD Closure Project 64-509200-ASD-004 v2</p>	<p>Context:</p> <p>In Table 2.1 e) on page 2-8 the federal SARA status of the Eastern Wolf is stated as “Special Concern”. This should be updated to reflect the current status of this species, which is “Threatened”.</p>	<p>Specific Question/ Request for Information:</p> <p>CNL should ensure that the current status of these two federally listed SARA in the EcoRA are current and accurate. Ensure also to update</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			Section 2.2 Receptor Selection, Table 2.1 Valued Components and Pathways for the NPD Closure Project, Listed by Environmental Component	As well, the federal SARA status for the Blanding's Turtle should be updated to the current "Endangered" status.	other relevant sections of text in the EcoRA report wherein the SARA status of these two species are mentioned.
306	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Section 4.6 Human Receptors, p. 4-19	Context: The list of public receptors does not include receptor groups to represent the local Indigenous communities. Rationale: CNSC staff noted from information provided in Section 9.0 of the EIS report v.4, that AOPFN and MNO have explicitly stated that their citizens have negative perceptions associated with performing traditional activities (such as harvesting) near the NPD site. CNSC staff also noted that the Post Closure Safety Assessment TSD considers an Indigenous receptor characterized using information from a dietary study completed by the AOPFN as well as a self-sufficient Indigenous receptor group using the area around the NPDDF for hunting and gathering, following a traditional lifestyle.	Specific Question/ Request for Information: CNL should include receptor groups representative of the local Indigenous communities in the Decommissioning SA. Ensure, for instance, that these receptor groups are added to the dispersion and transport modelling methods used to estimate contaminant concentrations in air and water; and ensure the conclusions being made regarding effects are inclusive of the Indigenous receptor groups. This also applies to any other subsequent sections of the Decommissioning SA wherein effects to the public from normal activities, accidents, natural events, etc. are assessed.
307	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Section 5.2.5 Petroleum Hydrocarbons (PHCs), p. 5-27	Context: It is stated that PHC contamination exists near the facility due to a leak from an underground diesel fuel storage tank in 1992. It is further stated that contaminated soil was removed from the site and monitoring wells were subsequently installed. It is not clearly stated if the storage tank itself was removed. Also, in what year was the most recent sampling of the monitoring wells conducted? It is also not clear if the groundwater sampling program included other parameters other than PHCs such as benzene, toluene, ethyl benzene, and xylenes, also known as BTEX.	Specific Question/ Request for Information: CNL is expected to mention in this section of the report whether (or not) the diesel fuel storage tank was properly decommissioned and removed from the site. CNL is also expected to provide the most year of sampling conducted at the monitoring wells and the complete suite of parameters tested.
308	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Section 7.6.2 Severity Ratings, p. 7-18	Context: Editorial comment: In Table 7-5, while off-site members of the public are included in the table, the quantitative criteria for the severity ratings to chemical exposures are not provided, as compared to occupational limits presented for the NEWs. CNSC staff noted that earlier in Section 4.1.6, benchmarks for non-radiological contaminants in air and in soil are provided for public exposure are presented.	Specific Question/ Request for Information: For better transparency, include the identified benchmarks for non-radiological contaminants in the severity ratings for exposures by members of the public.
309	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 8.4.3.1 Atmospheric Environment, p. 8-15; 8.4.4.1 Atmospheric Environment,	Context: For many project activities such as the operation of the concrete batch plant, construction of the slip-pipe access, construction and operation of the wash out pit, transporting of grout from the batch plant to the reactor, demolition of above ground structures: the atmospheric effects of associated trucking activities, gas-powered saws and drills, use of excavators and	Specific Question/ Request for Information: CNL should more clearly define what is meant by the concluding statement of non-measurable effects. Were the calculated values compared against the relevant air quality criteria, and no exceedances were noted?

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			p. 8-17; 8.4.5.1 Atmospheric Environment, p. 8-21, 8.5.2.1 Atmospheric Environment, p. 8-24, 8.6.1.1 Atmospheric Environment, p. 8-37, 8.6.2.1 Atmospheric Environment, p. 8-46, 8.6.3.1 Atmospheric Environment, p. 8-48, 8.7.1.1 Atmospheric Environment, p. 8-49	backhoes, and operating heavy equipment were all assessed in the air quality assessment (Appendix F). In all scenarios, it is concluded that the effects of these activities on the atmospheric environment are considered not to be measurable. However, in the worked calculations provided for each of these activities in Appendix F of that air quality assessment report, values are provided for the various COPCs. It is therefore unclear what is meant by “not to be measurable”.	
310	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Appendix F: Air quality Assessment for the NPD project, Table F-1 Applicable Air Criteria, p. F-2	Context: In this table the air quality criteria from three sources are provided: the MOE, the CAAQS, and the MELCC. It is unclear which of these three sources were used in the effects assessment for the COPCs in air emissions (particularly as related to public exposure). Also, ozone (O3) as well as volatile organic compounds (VOCs) and benzo[a]pyrene (a common byproduct of fossil fuel combustion) were not included as parameters. In addition, later on p. F-35 of the Air Quality Assessment in Appendix F, CNSC noted that modelled concentrations of other COPCs in air such as acrolein, carbon monoxide (CO), carbon dioxide (CO2), and methane (CH4) are presented.	Specific Question/ Request for Information: CNL should highlight in Table F-1 which air quality criteria was used in the effects assessment for the inhalation exposure pathway. CNL should also explain why O3, VOCs, B[a]P, CO, CO2, and CH4 were not considered. CNL should also correct the inconsistencies that CNSC staff noted with the COPCs identified in Appendix F such as results for acrolein, CO and CH4, which are not mentioned in the report.
311	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Appendix F: Air quality Assessment for the NPD project, F.3.3 Modelling Grid and Discrete Receptors, Figure F-3, p. F-7	Context: From this figure and later in this air quality assessment, it appears that four receptor locations (R1, R2, R3, R4) were include in the air dispersion modelling. Earlier in the Decommissioning SA report in Table 4-9 (p. 4-20) and Figure 4-4 (p. 4-21), seven additional human receptor locations are listed. An explanation as to why these additional receptor locations were excluded from the air dispersion modelling is not provided.	Specific Question/ Request for Information: CNL should provide an explanation why all of the receptor locations identified in Table 4-9 were not included in the air dispersion modelling. This explanation should be provided here in the air quality assessment report.
312	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Appendix F: Air quality Assessment for the NPD project, Appendix F – Calculation Details, p. F-33	Context: Editorial comment: In the summary of variables used for emission estimates, there is a note indicating the construction days per week were not used in the calculations.	Specific Question/ Request for Information: CNL should clarify why this exposure frequency was excluded in the exposure characterization.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
313	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Section 9.4.2.6 Age Group – Public Receptors, p. 9-45		Please provide the reference source from which the receptor characterizations (e.g., inhalation rates, dose coefficients) of the adult and infant age groups were obtained
314	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Figure 10-5 Normal Operations – Workers – Demolition Non-Radiological Airborne Exposure Comparison (Asbestos, Lead), p. 10-5		The benchmarks for asbestos and lead are missing from this graph. As well, their corresponding values on the y-axis should be correctly positioned.
315	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Figure 10-9 Consequence Assessment Results – Public – Non-Radiological Exposure Comparison, p. 10-9	The incorrect benchmark value for asbestos is presented in this graph. According to Table 4-7, the selected benchmark for asbestos should be 5.0E-05 g/m ³ .	
316	CNSC		Decommissioning Safety Assessment Report TSD, 64-508760-ASD-002, rev. 2 Figure 10-10 Consequence Assessment Results – Workers – Non-Radiological Exposure Comparison a), p. 10-12	The incorrect benchmark value for asbestos is presented in this graph. According to Table 4-6, the selected benchmark for asbestos should be 5.0E-05 g/m ³ .	
317	CNSC		Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0 4.1.2 Normal Evolution Scenario, Transport in Groundwater, p. 4-4	Context: Here, it is stated that contaminants will gradually be released from the Facility into the groundwater; however, the concentrations of contaminants in the groundwater will be very low due to their low rate of release. Is this the rationale as to why potential exposure to contaminants in groundwater by human receptors was not conservatively considered under the normal evolution scenario? CNSC staff noted that later in the Post Close SA, the potential effects associated with use of a contaminated well are assessed as Disruptive Event scenarios. It is also stated that in the vicinity of the NPDDF, some properties use wells to extract water for domestic and agricultural use.	Specific Question/ Request for Information: CNL is to clearly explain in this section of the report why potential exposure to contaminants in groundwater by human receptors was not considered under the normal evolution scenario.

New IRs					
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318	CNSC		<p>Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0</p> <p>4.1.2 Normal Evolution Scenario, Surface Environment, p. 4-4</p>	<p>Context: CNSC staff make a number of observations regarding the exposure assumptions presented in this section: For the site resident, potential exposure pathways mentioned included: drinking water consumption of river water and consumption of food crops irrigated with river water. It is not clear if dermal exposure to river water (either through swimming or bathing) was considered as a potential exposure pathway. CNSC note that later on p. 4-20, there is mention of using the river water for domestic purposes such as bathing and washing.</p> <p>It is stated that people living downstream and using water from the river may be exposed to contaminants released into the river water. As such, down-river public receptors were included among the receptors assessed. It is unclear from reading this section, which exposure pathways were considered for the down-river public receptors.</p> <p>A recreational hunter was also included in the assessment. Potential exposure pathways identified included dermal exposure to bank sediments and river water. It was initially unclear to CNSC staff why incidental ingestion of river water was not also included. However, CNSC staff later noted that in E 3.7.8 (Appendix E, p. E-134), it is mentioned that hunters are assumed to get 10% of their water needs from the river. In addition, was it assumed that the hunter would not do any fishing in the river?</p>	<p>Specific Question/ Request for Information: For completeness, please ensure that all relevant exposure pathways for all receptor groups are provided in this section. In particular, please ensure to be consistent with the information provided in the receptor profile characterizations presented in Appendix E.</p>
319	CNSC		<p>Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0</p> <p>4.3.1. Contaminants of Interest, Non-radioactive Contaminants, p. 4-21</p>	<p>Context: Here it is stated that asbestos will be encapsulated within the grout backfill and therefore will not be released from the Facility. However, in the Decommissioning Safety Assessment TSD (64-508760-ASD-002), worker and public exposure to asbestos in the atmospheric environment were assessed.</p>	<p>Specific Question/ Request for Information: CNL is to explain why exposure to asbestos was considered in the Decommissioning SA for the project, but not here in the Post Closure SA.</p>
320	CNSC		<p>Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0</p> <p>5.1.3 Doses to Humans, p. 5-24</p>	<p>Context: A self-sufficient Indigenous receptor was included to assess potential doses to human receptors. This receptor was to represent a broadly self-sufficient group of people with conservative assumptions that bound the diet as a Sensitivity Case. The assumptions were based on the results of lifestyle surveys for an Indigenous community in the area, as presented in a SENES 2014 report prepared for the Nuclear Waste Management Organization.</p> <p>Rationale: It is CNSC staff's understanding that CNL has undertaken engagement with Indigenous Nations, communities and organizations on the NPD Closure Project since October 2015.</p>	<p>Specific Question/ Request for Information: CNL is to clarify if this SENES 2014 report was recently verified with local Indigenous communities in the area as still being representative of their current lifestyles.</p>
321	CNSC		<p>Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0</p>	<p>Context: Editorial comment: Here, for lead concentrations in bedrock groundwater, the Health Canada drinking water guideline of 0.01 mg/L is presented. Later in Appendix A on p. A-32, this benchmark is presented as 0.005 mg/L and is stated as such in the referenced Health Canada source.</p>	<p>Specific Question/ Request for Information: Please be consistent in the presentation of the significant digits of this value throughout the report.</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			5.1.2.1 Contaminant Concentrations in the Geosphere, p. 5-11		
322	CNSC		Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0 A 3.2 Acceptance Criteria, Non-Radiological Contaminants, A-24	Context: Editorial comment: In Table A-2, only the provincial EQS for lead in groundwater are presented. However, modelled lead concentrations in other media such as surface water, soil, and sediment as well as in drinking water were assessed earlier in the Post Close safety assessment for the surface environment (Section 5.1.2.2). The benchmarks for the respective media are described on p. 5-19.	Specific Question/ Request for Information: CNL is to expected to include the environmental quality guidelines for all media assessed relevant to lead in Table A-2.
323	CNSC		Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0 E 3.3.4 Biosphere, Land Use and Exposed Groups, p. E-25	Context: Editorial comment: The list of human receptor groups does not include the self-sufficient Indigenous receptor whose exposure characteristics bound the dietary and lifestyle of Indigenous community in the area (based on the results of the lifestyle surveys in SENES, 2014), as described earlier throughout the report.	Specific Question/ Request for Information: CNL is expected to clarify why the self-sufficient Indigenous receptor is not included in Section E 3.3.4.
324	CNSC		Post Closure Safety Assessment Report TSD, 64-508760-ASD-003894, rev. 0 E 3.3.4 Biosphere, Biosphere Processes, Figure E-10 Conceptual Model of Contaminant Migration in the Biosphere. Dashed Lines indicate Equilibrium Assumptions, p. E-31	Context: Editorial comment: Displayed in this conceptual model are features which should be explained: <ul style="list-style-type: none"> • What is meant by the dotted vs. solid lines for the exposure pathways arrows? • Why are some compartment boxes outlined in solid lines while other dotted lines? • What is meant by the numbering? 	Specific Question/ Request for Information: CNL is expected to provide a legend or footnotes in the figure explaining the features flagged in the editorial comment to the left.
325	CNSC		Alternative Means Assessment Report TSD, 64-509200-ASD-002, rev. 1 3.2 Potential Effects on VCs, Tables 3.2-1 to 3.2-7, p. 3-10 to 3-16	Context: There are many instances in these tables wherein potential environmental effects in the atmospheric and surface water environments have been marked for a particular project activity. In addition, health effects to the public and/or worker as well as to non-human biota are also marked for those same project activities. However, potential effects to the aquatic nor terrestrial environments are not marked in these instances. It seems odd that effects are assumed to only occur in the surface water environment but not the aquatic environment. Further, if potential effects in the atmospheric environment may occur, it is plausible that there may be effects to the terrestrial environment due to atmospheric deposition of COPCs. Further, potential effects to the health of humans and non-human biota can also be linked to effects in the aquatic and terrestrial environments (i.e., food chain effects).	Specific Question/ Request for Information: CNL is expected to explain why effects to aquatic and terrestrial environments were not considered for those project activities wherein effects to the atmospheric and surface water environments or health of the public and/or worker as well as to non-human biota were identified in the interaction matrices.

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
326	CNSC		Alternative Means Assessment Report TSD, 64-509200-ASD-002, rev. 1 4.3.4 Effects on Indigenous Receptors, starting on p. 4-32	Context: Earlier throughout this alternative means assessment (AMA) report, it stated that identification of VCs relevant to Indigenous Rights and Interests is 'ongoing'. Consequently, here under Section 4.3.4.1, no direct VCs have been identified. CNSC staff noted that the Algonquins of Pikwàkanagàn First Nation (AOPFN) conducted an independent AMA for the CNL NPD Closure Project. This report was included as an appendix to the main EIS report (Appendix D). In that report, the AOPFN assessed the three options: partial dismantling and removal, full dismantling and removal, and in-situ disposal for a number of VCs that were of significance to the AOPFN. There is no mention of the AOPFN's conclusion or recommendations here in CNL's AMA. CNSC staff noted that full dismantling and removal appears to be the strong preference from the AOPFN perspective.	Specific Question/ Request for Information: CNL is expected to explain how the findings and recommendations of the AOPFN's AMA report were considered in this AMA.
327	CNSC		Alternative Means Assessment Report TSD, 64-509200-ASD-002, rev. 1 4.3.5.1 Public Health, starting on p. 4-35	Context: The potential exposures to public health from each of the four options are mentioned at a very high-level. Further details should be provided regarding exposure pathways such as via ingestion of foods, water, and inhalation of emissions.	Specific Question/ Request for Information: For better transparency, CNL is expected to provide further details regarding potential exposures to substantiate the conclusions being made regarding levels of risk.
328	CNSC		Environmental Impact Statement – NPD Closure Project, 64-509200-ENA-004, rev. 4	Context: In the Fall 2023, CNSC staff performed a gap analysis of NPDWF's documentation against the environmental risk assessment (ERA) requirements of CNSC's REGDOC 2.9.1 and CSA N288.6-22. CNSC identified the following three gaps: Gap #1: Human Health Risk Assessment (HHRA) CNSC staff expect CNL to conduct a HHRA for hazardous substances and physical stressors for the current state of the facility (storage with surveillance). Gap #2: Ecological Risk Assessment (EcoRA) CNSC staff expect CNL to conduct an EcoRA for nuclear and hazardous substances and physical stressors for the current state of the facility (storage with surveillance). Gap #3: Environmental Protection Program CNL's Environmental Protection Program (e-Doc # 7032247) does not identify a compliant ERA for NPDWF in Table 32. CNSC staff expect CNL to update Table 32 of the Environmental Protection Program following acceptance of the ERA by CNSC staff. In response, CNL currently has an open action item (REG-23-5561) to review the documentation that comprise the current NPDWF ERA to confirm whether an update to the ERA would be required. CNL stated that the review findings would be provided to the CNSC by June 2025.	Specific Question/ Request for Information: CNL is expected to confirm if the open action item regarding the gap analysis will be incorporated into the EIS submission package. In particular, while an EcoRA has already been included, will a formal HHRA also be provided by CNL?

New IRs					
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				<p>References: Letter, K. Campbell (CNSC) to G. Dolinar (CNL), Subject: CNSC Review of CNL’s Implementation of the Canadian Standards Association N288 Series of Standards - CSA N288.0 (2022), CSA N288.1 (2020), CSA N288.4 (2019), CSA N288.5 (2022), and CSA N288.6 (2022), Nov 15, 2023 (e-Doc 7162821)</p> <p>Letter, K. Ji (CNSC) to K. Shorter (CNL), Subject: CNL-NPD Closure Project – CNSC Staff’s Gap Analysis of CNL NPDWF against REGDOC 2.9.1 and CSA Standard N288.6, Jun 21, 2024 (e-Doc 7303523)</p> <p>Letter, B. Phillips (CNL) to R. Paterson (CNSC), CNL Response to CNSC Staff’s Gap Analysis of CNL Nuclear Power Demonstration Waste Facility (NPDWF) Against REGDOC 2.9.1 and CSA Standard N288.6, Sep 24, 2024 (e-Doc 7370721)</p> <p>Rationale: From a licensing basis, the NPDWF Licence Conditions Handbook (LCH) (e-Doc # 5734996) includes REGDOC 2.9.1, version 1.1 (2017) and CSA N288.6-12 as Compliance Verification Criteria.</p>	
329	CNSC		Throughout	<p>The rationale used by CNL to justify for the very long-term durability and longevity of the cementitious-based materials is not acceptable. CNL has discussed at a very high level how they expect that the performance of the NPDDF grout and concrete structures, existing and new (i.e. concrete cap), could potentially perform their barrier functions for thousands of years. The discussion is based on a high-level theoretical comparison between the alteration products at the Maqarin site in northwest Jordan and the expected hydration products of the CNL grouts and, more generally, the hydration products obtained after reaction of Portland cement with water. The discussion is based solely on assumptions and expectations, and does not contain any detailed quantitative analyses demonstrating that the materials expected to be used for the NPDDF project are actually sufficiently similar to those from the analogues project, which is key to using these analogies as an argument to justify for the long-term performance of the barriers. Of particular note is that the high-level discussion does not take into account any of the many significant differences in the properties and characteristics of the modern hydrates when compared to the alteration products at the Maqarin site, nor does it consider the degradation mechanisms to which the cementitious-based materials would be exposed to at the NPDDF site. In addition, the analogies made are discussed at the hydrates level from a chemical microstructure perspective, but the discussion is silent about the nano, meso and macro scales as well as physical degradation.</p> <p>Demonstration of the long-term durability should actually involve a combination of extensive, exhaustive and detailed laboratory testing and modeling effort, accounting for the latest knowledge on degradation of cementitious-based material, which has not been provided as part of the EIS submission. This effort shall take into consideration the ageing</p>	<p>While the use of analogues might somehow be beneficial from a long-term modelling perspective, the modelling inputs, assumptions and limitations need to be well understood, documented and controlled to ensure an adequate representativity of the overall model and good confidence in the modelling results. Because of the high uncertainty in several of the parameters to consider, analogues alone may not be considered as a valid argument to demonstrate the long-term durability of cementitious-based materials. Demonstration of the long-term durability should actually involve a combination of extensive, exhaustive and detailed laboratory testing and modeling effort, accounting for the latest knowledge on degradation of cementitious-based material, which has not been provided as part of the EIS submission. This effort shall take into consideration the ageing effects and degradation mechanisms to which the cementitious-based materials will be subjected in a holistic and exhaustive fashion, with due consideration given to uncertainties. At best, natural analogues as described by CNL may be seen as an incentive to perform the detailed analyses and studies required, but can’t be used for blanket demonstration of the long-term durability of cementitious-based materials, whatsoever.</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				effects and degradation mechanisms to which the cementitious-based materials will be subjected in a holistic and exhaustive fashion	
330	CNSC		Throughout	<p>Context and Rationale: CNL overarching conclusion that the “NPD Closure Project will not result in any adverse residual environmental effects, including effects from accidents and malfunctions, cumulative effects, and effects of the environment on the project” is based on a significant number of assumptions which are neither conservative nor even representative of the current and expected condition of the facility (existing and planned structures). Such assumptions include those made around the degradation of cementitious materials, which result in changes of the pH as well as dependent properties such as sorption coefficients and porosity, as well as the values used in CNL analyses for the hydraulic conductivity and the diffusivity of the cementitious-based materials (grout and existing concrete structures). Because cracks and cold joints are a preferential pathway for groundwater movement, hydraulic conductivity and diffusivity are highly dependent on the cracking patterns, including the crack openings, of the elements, and of the logistics of the pours (i.e. cold joints developed). In a literature review performed recently [1], it was shown that a crack opening of only 0.4 mm would typically lead to an increase of the Hydraulic Conductivity of up to 7 orders of magnitude when compared to sound conditions. The same literature review highlighted that, beyond a crack opening threshold varying between 0.08 mm and 0.2 mm, diffusivity becomes similar to that in water [1]. Because of the cracking patterns (including crack openings) of the existing concrete structures, and of the cracking patterns (including crack openings) and cold joints expected for the grout, the values of the hydraulic conductivity and the diffusivity of the cementitious-based materials (grout and existing concrete structures) are not satisfactory. The assumptions have significant impacts on several analyses and ensuing conclusions.</p>	<p>Specific Question/ Request for Information: CNL is requested to perform their analyses by considering adequate assumptions for the degradation of cementitious materials and dependent properties. The analyses shall also be performed using values satisfactory to CNSC staff for the Hydraulic Conductivity and Diffusivity of the grout and existing concrete structures. CNL shall ensure that all analyses for which these values may have an impact (direct or indirect, i.e. including those analyses where the results and conclusions of other analyses—for which these values have an impact—are relied upon) are performed with such adequate values in a comprehensive and systematic manner, both for the normal evolution scenario and the sensitivity analyses. A non-exhaustive list of such analyses are the decommissioning safety assessment, the groundwater modelling, the post closure safety assessment, the ecological risk assessment, the assessment of the release dilution in the Ottawa river, the resaturation modelling, the alkaline plume modelling, the grout leaching modelling, etc.. CNL shall also ensure that potential cumulative effects as well as direct and indirect impacts are duly taken into account while performing these analyses. CNL shall also ensure that due consideration be given to events and scenarios occurring in combination.</p>
331	CNSC		Throughout	<p>Context and Rationale: The proposed degradation timescales have not been justified by supporting technical and scientific background and documentation, and it is likely that the proposed degradation timescales are not representative of the expected condition of the concrete and grout structures. The uncertainty in the long-term behavior of modern cementitious materials is very high and therefore, the most conservative approach shall prevail. Typical concrete structures are designed for a lifetime of 50 to 75 years. For specific structures designed for a lifetime of 100 to 120 years, more severe requirements in terms of performance are prescribed [2]. A lifetime of the durability of the grout (and remaining lifetime of the building foundation) of more than 100 years has yet to be demonstrated and no technical justification has been provided regarding the proposed first increase in hydraulic conductivity to occur after 100 years, followed by another increase at 1000 years, and so on.</p>	<p>CNL shall provide science-based evidence demonstrating the conservativeness, or at least the realisticness, of the proposed degradation timescales. Such evidence should involve a combination of extensive, exhaustive and detailed laboratory testing and modeling effort, taking into consideration the ageing effects and degradation mechanisms to which the cementitious-based materials will be subjected in a holistic and exhaustive fashion, with due consideration given to uncertainties.</p>
332	CNSC		Sections 2.2.1, 4.3.1.2, 4.3.1.6	<p>Context: In Section 2.2.1 of the EIS, it is mentioned that the grout “will be placed by pumping to fill gaps and crevices in the NPDWF to as reasonable an extent as possible”. In Section 4.3.1.2 of the EIS, it is mentioned that “the grout is intended to prevent future</p>	<p>Specific Question/ Request for Information: CNL is requested to ensure that operational and logistics considerations, including those that could lead to not filling completely the below grade</p>

New IRs					
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				<p><i>subsidence and fill voids in the facility to as reasonable extent as possible</i>". In Section 4.3.1.6 of the EIS, it is mentioned that the grout "<i>is placed by pumping to fill gaps and crevices to as reasonable extent as possible</i>".</p> <p>Rationale: CNSC staff disagree that the grout would need fill the voids <i>to the extent practicable</i>. The grouting process and grout placement should actually be planned to <i>completely fill the below-grade areas</i> to ensure the adequacy of the assumptions made in the analyses. Should the voids in the facility not be satisfactorily filled by the grout, the assumptions made in the analyses would become unconservative and therefore, the results and conclusions of the various analyses would become invalid.</p> <p>Suggestions for mitigation and follow-up measures</p> <p>The grouting process and grout placement should actually be planned to <i>completely fill the below-grade areas</i> to ensure the adequacy of the assumptions made in the analyses.</p>	<p>areas with grout, are duly taken into account in all of their analyses. Of particular importance are the impact of such voids not being filled out completely on the hydraulic conductivity and diffusivity of the grout. CNL is referred to the IR # 330</p>
333	CNSC		Section 2.7.4	<p>Context and Rationale: In section 2.7.4 of the EIS, it is mentioned that "<i>Any washout water that is produced will be re-used in the grout batch mixing plant, as much as possible</i>". In section 9.3.3.3 of the EIS, it is mentioned that "<i>Washout water (once settled) will be reused for grout mixing, to the extent practicable</i>".</p> <p>Suggestions for mitigation and follow-up measures CNL is hereby reminded / made aware that water used in the production of the mixes shall meet the requirements of CSA A23.1:24 Clause 4.2.2. CNL is recommended to ensure that the optional requirements from CSA A23.1:24 Table 9 are also met.</p>	<p>Specific Question/ Request for Information: CNL is requested to clarify if the intent is to use this water as batching water (i.e. used as part of the mixing water in the grout mixes), or water used for other purposes (e.g. cleaning) in the grout batch plant.</p>
334	CNSC		Section 4.3.1.3	<p>Context: In section 4.3.1.3 of the EIS, it is mentioned that "<i>Settled material from the washout pit may be placed and grouted into the facility</i>".</p> <p>Rationale: The characteristics and properties of such settled materials are in no way comparable to those of the grout expected to be placed into the facility.</p>	<p>Specific Question/ Request for Information: CNL is requested to ensure that the assumptions made throughout the EIS and supporting documents translate into science and evidence-based values for the parameters and characteristics of all materials and structures used within the overall project. CNL is further requested to revise their conclusions accordingly and as required.</p>
335	CNSC		Section 4.3.3	<p>Context and Rationale: In section 4.3.3 of the EIS, the scope change related to water highlights that, for operational flexibility, the existing hydrant on the NPD site is expected to be used for the operation of the grout batch mixing plant.</p> <p>Suggestions for mitigation and follow-up measures CNL is recommended to ensure that the optional requirements from CSA A23.1:24 Table 9 are also met.</p>	<p>Specific Question/ Request for Information: CNL is requested to confirm that, should this water be used for the preparation of the grout mixes, it shall meet the requirements of CSA A23.1:24 Clause 4.2.2.</p>

New IRs					
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336	CNSC		Throughout	<p>Context: CNL has presented throughout the EIS and its supporting documentation a series of monitoring plans (e.g. groundwater monitoring, environmental monitoring, etc.). Similarly, in section 7.9.4.2 of the DecomSA, it is mentioned that “were an external event such as forest fire, tornado, or earthquake to occur during the institutional control phase, follow-up actions would be performed to inspect the site and determine if the closed facility remains intact”.</p> <p>Rationale: However, information is missing with regards to the anticipated potential corrective actions that could be expected to be implemented should the monitoring results exceed the acceptance criteria, or should an external event such as those mentioned above would occur.</p>	<p>Specific Question/ Request for Information: CNL is requested to update the EIS and its supporting documentation to include detailed information with regards to the anticipated potential corrective actions that could be expected to be implemented should the monitoring results exceed the acceptance criteria, or should an external event such as those mentioned above would occur. CNL is requested to perform this exercise for all their monitoring plans for which an exceedance in acceptance criteria may have an impact on the releases into the environment, and the health of people in Canada.</p>
337	CNSC		Sections 9.1.1.1 and 9.14.2.2.3	<p>Context and Rationale: In section 9.1.1.1, it is mentioned that “close to the surface, freeze-thaw effects will degrade the cap and concrete cover”. In section 9.14.2.2.3, it is mentioned that “the concrete cap would be protected from freeze-thaw cycles during the Institutional Controls phase”. These two sections are contradictory.</p>	<p>Specific Question/ Request for Information: CNL is requested to explain their strategy to ensure that degradation due to freeze-thaw cycles would be avoided or mitigated. CNL is also requested to provide evidence demonstrating a high level of confidence in the expected efficiency of the strategy to avoid/mitigate freeze-thaw degradation.</p>
338	CNSC		Sections 8.12.2, 9.14.7	<p>Context and Rationale: The sections on seismicity (8.12.2) and earthquake (9.14.7) do not account for the Probabilistic Seismic Hazard Assessment (PSHA) that has been prepared by CNL.</p>	<p>Specific Question/ Request for Information: CNL is requested to revise the sections on seismicity and earthquake, and the ensuing analyses and conclusions, based on the results of the PSHA and the ongoing FPIRT review of it.</p>
339	CNSC		Sections 8.12.2.1	<p>Context and Rationale The EIS mentions that “Earthquake-induced liquefaction potential at the NPD site is considered to be low given the reported soil compaction (i.e. compact to very dense), well-drained granular material, and the heterogeneous non-uniform grain size of the saturated soils which include silt, sand, gravel and boulders in glacial till and fluvial sand and gravel units”. It seems that this claim is only an assumption at this stage as it is unclear how and in which documentation this has been demonstrated. In addition, the seasonal variations in groundwater levels may have a significant impact on the liquefaction potential at site.</p>	<p>Specific Question/ Request for Information: CNL is requested to provide the documentation in which the evaluation of the liquefaction potential has been demonstrated/documented. In addition, CNL is requested to explain how the seasonal variations in groundwater levels have been considered in the evaluation of the liquefaction potential at NPD.</p>
340	CNSC		Section 9.1.1.1 (and DecomSA)	<p>Context: A series of bounding scenarios, established in the DecomSA TSD, is presented Section 9.1.1.1 of the EIS.</p> <p>Rationale: One scenario that has not been evaluated is about the potential for flooding of the facility while decommissioning activities are underway. Should the facility be flooded while grouts are being poured, or shortly after a/several layer(s) of the grout have been poured, the impact on the properties of the grout would be very significant.</p>	<p>Specific Question/ Request for Information: CNL is requested to include the bounding scenario related to the flooding of the facility while decommissioning activities are underway, and to evaluate its impacts holistically, similarly to what was performed for the other scenarios.</p>

New IRs					
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341	CNSC		Section 12.3.3.2	<p>Context: Section 12.3.3.2 explains that “after resaturation has occurred, the number of sampling locations may be reduced” and that “the frequency of monitoring is subject to change”, should a number of conditions be met.</p> <p>Rationale: CNSC staff disagree with the potential to reduce the frequency of monitoring or the number of sampling locations (which would potentially occur as soon as 5 years after resaturation). After resaturation, the groundwater flow would reach a steady state condition and it is likely that it may increase the degradation of the barriers and increase the release of contaminants into the environment.</p>	<p>Specific Question/ Request for Information: CNL is requested to modify this section of the EIS to remove this option for reduction in frequency and number of samples or to establish, through a science and evidence based approach, a timeframe after which such potential for reduction could be considered.</p>
342	CNSC		Section 3.3 of the DecomSA and section E.2.2.3 of the postSA	<p>Context: It is mentioned in the DecomSA that “a trench was excavated through the overburden, down to rockhead, for cooling water pipes that drew water from the river”. It is further mentioned in the Post SA that “the cooling pipes will be sealed and will not provide a direct pathway, but the trench they travel through will continue to act as a preferential below-grade pathway for facility releases to flow”.</p> <p>Rationale: It is unclear from CNL documentation what their plans are with regards to sealing the cooling water pipes drawing water from the river. Further, it is unclear how the trench which will act as a preferential pathway for facility releases is accounted for in the analyses quantifying the release of contaminants.</p>	<p>Specific Question/ Request for Information: CNL is requested to explain are with regards to sealing the cooling water pipes drawing water from the river. CNL is further requested to explain how the trench which will act as a preferential pathway for facility releases is accounted for in the analyses quantifying the release of contaminants. Finally, CNL is requested to update their analyses and conclusions accordingly and as required.</p>
343	CNSC		Section 9.6.6 of the DecomSA	<p>Context: It is mentioned in the DecomSA that it is assumed that the stack meets the requirements of the Canada building code with respect to seismic forces.</p> <p>Rationale: CNL has not provided any evidence to demonstrate such assumption</p>	<p>Specific Question/ Request for Information: CNL is requested to perform detailed seismic analyses to demonstrate that the stack meets the requirements of the Canada building code with respect to seismic forces, and to revise their conclusions accordingly and as required.</p>
344	CNSC		Section 4.2.2 of the PostSA	<p>Context: It is mentioned in the PostSA that the infill surrounding the NPDDF is assumed to be concrete.</p> <p>Rationale: It is unclear what concrete is expected to be poured at this specific location, and what will be its properties.</p>	<p>Specific Question/ Request for Information: CNL is requested to explain quantitatively what properties have been assumed for the concrete surrounding the NPDDF. Such properties may need be updated based on IR # 329 and 330.</p>
345	CNSC		Section 5.1.1.3 of the PostSA	<p>Context: It is mentioned that the conceptual model assumes that only diffusive releases can occur until the facility is fully resaturated.</p> <p>Rationale: While it is true that diffusive releases would occur during the resaturation period, release of contaminants by advection may also occur for the sections of the facility where groundwater would have made its way before the whole facility is resaturated (in particular considering that the PostSA mentions that the groundwater predominantly flows at the base of the overburden). Therefore, this assumption that only diffusive releases can occur until the facility is fully resaturated does not appear to be conservative.</p>	<p>Specific Question/ Request for Information: CNL is requested to update their analyses to account for partial release of contaminants by advection during the resaturation period (in addition to diffusive releases), or to provide strong evidence that this assumption is conservative.</p>

New IRs					
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346	CNSC		Section 5.3.4 of the PostSA	<p>Context: A seismic event occurring after 1,000 years is presented as a disruptive event and is represented through an increase of the Hydraulic Conductivity in the bedrock.</p> <p>Rationale: Such a seismic event occurring after 1,000 years should not be considered to be a disruptive event, but is rather a likely expected event and should be accounted for in the Normal Evolution Scenario. Also, the selection of a 1,000-year timeframe for the seismic event to occur has not been supported by any technical or scientific documentation. Further, the Hydraulic Conductivity of the bedrock is not the sole hydraulic conductivity to be affected by such an event, as those from the concrete structure and grout would also need to be significantly increased (refer to IR # 330).</p>	<p>Specific Question/ Request for Information: CNL is requested to update their assumptions, analyses and conclusions accordingly.</p>
347	CNSC		Section A.3.4.2 of the PostSA	<p>Context: It is mentioned that “the cap is assumed to function as-designed during this 100-year period and to limit water infiltration”.</p> <p>Rationale: To allow for this assumption to be realistic/valid, period inspection, maintenance and repairs should be required.</p>	<p>Specific Question/ Request for Information: CNL is requested to explain in detail what their plans are for inspection, maintenance and repairs of the cap, to ensure that it would meet its function as designed during the institutional control period.</p>
348	CNSC		Throughout	<p>Context and Rationale: The potential increase in groundwater flow through the ISD facility due to extreme rainfall events, snowmelts and flooding, and to climate change, and how this may increase the degradation of the concrete and grout as well as the potential consequential increase on the release of contaminants, does not seem to have been addressed.</p>	<p>Specific Question/ Request for Information: CNL shall assess how the potential increase in groundwater flow through the ISD facility due to extreme rainfall events, snowmelts and flooding, and to climate change, may increase the degradation of the concrete and grout as well as potentially increase the release of contaminants.</p>
349	CNSC		Throughout	<p>Context and Rationale: CNL indicates that the majority of the radionuclides are embedded within iron-based matrices (carbon steel, stainless steel) and zirconium alloy, and will be gradually released into the surrounding cement pore water as the iron corrodes. CNL states that iron-based matrices and zirconium alloy will corrode very slowly in the chemical environment of the NPDDF, and justifies this statement with 1) the low corrosion rate of iron-based archeological artifacts, native metals and meteorites found on earth, and 2) the mild corrosion environment that might exist for the iron-based matrices. Staff have the following comments:</p> <p>1) On earth, there were/are many iron-based archeological artifacts, native metals and meteorites. Some of these still exist, but many others have been corroded away (disappeared). The assessment only based on the currently existing ones may be misleading.</p> <p>In addition, the chemical composition of the materials and the corrosion environments of found archeological artifacts, native metals and meteorites might be different from these of the carbon steel used in NPD, which could result in significant difference in</p>	<p>Specific Question/ Request for Information: CNL should provide justification, clarification, or explanation as requested in Items 1-4 in the column of “Contact and Rationale”.</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				<p>corrosion rates. Therefore, CNL is required to further justify the applicability of these examples from the ancient time.</p> <p>2) The CNL assessment states that “The carbon steel and stainless-steel waste forms at the NPDDF contain impurities such as nickel and chromium”, which offers resistance to corrosion. Staff agree that stainless steels containing nickel and chromium as alloying elements have good corrosion resistance. But the nickel and chromium contents in plain carbon steels (not including low alloy steels) are negligible, and the benefit of these elements on the corrosion resistance needs to be justified or proved. The contact of carbon steels with external nickel- and chromium- containing particles would not mitigate carbon steel corrosion. Instead, nickel particle can even accelerate the corrosion process of carbon steels through galvanic coupling. CNL is required to explain why nickel and chromium can offer resistance to corrosion for plain carbon steels that do not contain these elements.</p> <p>3) The corrosion assessment is based on the assumption that the corrosion environment is oxygen-free and highly alkaline. However, during decommissioning, a considerable amount of strong oxidizing agents and acid chemicals might have been used. The residual of these oxidizing agents or acid chemicals could significantly increase the corrosion rate of metals if not being properly controlled or disposed. CNL should clarify whether this can contribute to the uncertainty in corrosion rate estimation.</p> <p>4) The CNL indicates that there is a significant quantity of lead associated with shielding at NPDWF. Lead is nobler than iron, which could accelerate carbon steel corrosion if it is galvanically coupled with carbon steels. The CNL should clarify if this is a possible scenario.</p>	
350	Health Canada		Decommissioning Safety Assessment (DecomSA) Section 4.6, Section 8.3.2, Figure F-3, Table F-7, Table F-8, Table F-11, Table F-12, Table 8-13,	<p>Conduct health risk assessments and develop risk management measures for people involved in traditional land and resource use activities near the Project site during the Decommissioning Phase</p> <p>Context: Air quality impacts during the Decommissioning Phase were evaluated primarily at residential locations along the outer boundary of the Local Study Area (LSA) (Section 4.6 and Figure F-3, DecomSA). At the receptor locations, the predicted concentrations of common air contaminants [i.e., nitrogen dioxide (NO₂), fine particulate matter (PM_{2.5})] and asbestos, and predicted radiation doses, were below the Canadian Ambient Air Quality</p>	<p>Specific Question/ Request for Information:</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p> <p>a) Provide the maximum predicted concentrations of NO₂ (1-hr), PM_{2.5} (24-hr), asbestos, and radionuclides, along the Project fenceline where people involved in TLRU activities may receive the highest level of exposure to Project emissions.</p> <p>b) Compare the predicted air contaminant concentrations and calculated radiation doses to health-based air quality criteria and radiation dose limit for the public, respectively. For NO₂ and PM_{2.5}, compare to either World Health Organization’s Global Air</p>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
			<p>Table 8-20</p> <p>Environmental Impact Statement (EIS)</p> <p>Section 6.2.4,</p> <p>Section 12.3.2.1,</p> <p>Figure 2.3-1,</p> <p>Table 12.3-4</p> <p>Indigenous Engagement (IE) Report - Table 7-1</p> <p>Related to IRs:</p> <p>IR-126</p> <p>IR-187</p> <p>IR-188</p> <p>IR-205</p>	<p>Standards (CAAQS)⁶, Ontario’s Ambient Air Quality Criteria (AAQC)⁷, and radiation dose limit for the public⁸, respectively (Tables F-7, F-12, 8-11, 8-20, DecomSA). However, along the Project fenceline, predicted annual NO₂ and PM_{2.5} concentrations were substantially higher than both the baseline levels and the predicted levels at the residential receptor locations. The predicted annual NO₂ and PM_{2.5} levels approached or exceeded the relevant CAAQS values at certain fenceline locations (Tables F-8 and F-13, DecomSA).</p> <p>The above observation indicates that people accessing the LSA near the Project fenceline may be exposed to elevated levels of air contaminants. The Algonquins of Ontario confirmed that they use the lands “<i>outside the restricted/fenced area</i>” for traditional land and resource use (TLRU) activities, such as trapping, hunting, fishing, gathering and conducting cultural ceremonies (Section 6.2.4, EIS; Table 7-1, IE Report). Additionally, a recreational trail route intersects the LSA near the fenceline (Figure 2.3-1, EIS). However, the EIS and supporting documents did not adequately consider a potential exposure scenario where people involved in TLRU activities may be exposed to elevated levels of Project emissions (e.g., NO₂, PM_{2.5}, asbestos and radionuclides) near the fenceline on a short-term basis. For example, short-term NO₂ (1 hr) and PM_{2.5} (24 hr) levels along the fenceline were not modelled, although this information could be crucial in characterizing Project-related health effects during the TLRU activities.</p> <p>Additionally, it remains unclear what site-specific risk management measures will be put in place to reduce short-term exposure to air contaminants in the LSA (including the Ottawa River) during the Decommissioning Phase.</p> <p>Rationale:</p> <p>There are distinct adverse health effects associated with short-term exposure to certain air contaminants, which is why CAAQS have been developed for short-term (1-hr or 24-hr) exposures, as well as for long-term (annual) exposures. The characteristics of exposure and associated health effects for people involved in TLRU activities (i.e., short-term exposure to elevated levels of air contaminants) would be different from those for residential receptors (i.e., long-term exposure to low levels of air contaminants). Short duration of exposure is not a sufficient rationale to exclude a potential exposure scenario from a health risk assessment.</p> <p>Suggestions for mitigation and follow-up measures</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p>	<p>Quality Guidelines⁹ or CAAQS, whichever is more stringent, to evaluate potential adverse health effects of air contaminants.</p>

⁶ Canadian Council of Ministers of the Environment (CCME). 2019. Canadian Ambient Air Quality Standards. Available at: <https://www.ccme.ca/en/air-quality-report#slide-7>

⁷ Ontario Ministry of the Environment, Conservation and Parks (MECP). 2012. Ontario’s Ambient Air Quality Criteria. Available at: <https://www.ontario.ca/page/ontarios-ambient-air-quality-criteria>

⁸ Canadian Nuclear Safety Commission (CNSC). 2015. Radiation Protection Regulations. Available at: <https://laws-lois.justice.gc.ca/eng/Regulations/SOR-2000-203/page-2.html#h-656833>

⁹ World Health Organization (WHO). 2021. WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. <https://apps.who.int/iris/handle/10665/345329>

New IRs					
Reference Number	Federal / Provincial Department/Indigenous Nation	Project Effects Link	Reference to EIS, appendices, or supporting documentation (if applicable)	Context and Rationale	Information Request
				<p>a) Develop and implement risk management measures to reduce short-term human exposure to air contaminants (including radiation) while practicing TLRU activities in the LSA during the Decommissioning Phase.</p> <p>Alternatively,</p> <p>a) Develop a new monitoring program for ambient air concentrations of NO₂, PM_{2.5}, asbestos and radionuclides, <u>targeting TLRU participants</u> during the Decommissioning Phase.</p> <p>b) Define action levels for each valued component (VC) based on applicable criteria for human health protection or changes in contaminant levels (and radiation doses) relative to baseline levels where such criteria do not exist. These levels should guide the implementation of adaptive management or mitigation measures and the duration of monitoring for each VC. For NO₂ and PM_{2.5}, use the Air Quality Management System levels as action levels/air quality management targets (see further rationale in Health Canada's comments on CNL Response to IR-187).</p> <p>c) Re-assess the potential health risks, if monitoring results show increasing trends in contaminant concentrations (and radiation doses), exceed applicable guidelines, or surpass the action levels defined above.</p> <p>d) Develop a communication plan for the Decommissioning Phase detailing how follow-up monitoring results and human health risk assessment will be shared with potentially affected people.</p>	
351	Health Canada		<p>EIS Section 4.3.1.10, Section 5.2.1.2, Section 6.2.4, Section 9.1.2.3, Section 12.3.2.2, Table 12.3-2, Table 12.3-4, Table 12.3-5, Figure 8.3-11</p> <p>IE Report Section 6.1.2.2.9.1, 6.1.2.2.10.1</p> <p>Post-Closure Safety Assessment (PostSA) Section 5.3</p>	<p>Suggestions for mitigation and follow-up measures</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p> <p>a) Include the following contaminants in the proposed follow-up environmental monitoring plans during the Post-Closure Phase (Section 12.3.2.2, EIS):</p> <ul style="list-style-type: none"> Pb, Hg and PCBs in groundwater, surface water, sediment and country foods (e.g., fish, wildlife and plants). <p>b) Provide details of the Post-Closure follow-up environmental monitoring plans, including information on action levels, health risk re-assessment and risk communication as per Health Canada's comments HC-01 b), c) and d), respectively; and</p> <p>c) In addition to the proposed water and fish sampling near the Project site, include sampling at locations further downstream along the Ottawa River where water-based TLRU activities (e.g., fishing, waterfowl hunting, canoeing, swimming, etc.) may occur in the future.</p>	<p>Specific Question/ Request for Information:</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p> <p>Provide the predicted levels of the following non-radiological contaminants and associated health risks during the Post-Closure Phase in both Normal Evolution and Disruptive Event Scenarios:</p> <ul style="list-style-type: none"> Pb, Hg and PCBs in groundwater, surface water, sediment and country foods (e.g., fish, wildlife and plants).

New IRs					
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			Related to IRs: IR-126 IR-188 IR-189 IR-199 IR-205 IR-245	<p>d) Develop and implement long-term control measures for the facility (e.g., land use restrictions) aiming at reducing human exposure to contaminants during the Post-Institutional Control Phase.</p> <p>Suggestions for mitigation and follow-up measures</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p> <p>a) Include the following contaminants in the proposed follow-up environmental monitoring plans during the Post-Closure Phase (Section 12.3.2.2, EIS):</p> <ul style="list-style-type: none"> Pb, Hg and PCBs in groundwater, surface water, sediment and country foods (e.g., fish, wildlife and plants). <p>b) Provide details of the Post-Closure follow-up environmental monitoring plans, including information on action levels, health risk re-assessment and risk communication as per Health Canada’s comments HC-01 b), c) and d), respectively; and</p> <p>c) In addition to the proposed water and fish sampling near the Project site, include sampling at locations further downstream along the Ottawa River where water-based TLRU activities (e.g., fishing, waterfowl hunting, canoeing, swimming, etc.) may occur in the future.</p> <p>d) Develop and implement long-term control measures for the facility (e.g., land use restrictions) aiming at reducing human exposure to contaminants during the Post-Institutional Control Phase.</p>	
352	Health Canada		DecomSA Section 8.0	<p>Provide a total predicted exposure level/radiation dose from all decommissioning activities</p> <p>Context:</p> <p>During the Decommissioning Phase, human exposure to non-radiological contaminants was predicted to occur primarily via inhalation (Section 8.0, DecomSA). The inhalation exposure and related health effects were evaluated for each of the following 5 activity groups of the Decommissioning Phase:</p> <ul style="list-style-type: none"> Batch Mixing Plant; Grouting of Below Grade Structures; Removal of Above Grade Structures; Install Concrete Cap; and, Final Site Restoration. <p>A total, or cumulative, inhalation exposure level from all 5 decommissioning activity groups was not provided for non-radiological contaminants.</p> <p>Similarly, a total radiation dose from all decommissioning activity groups was not calculated.</p> <p>Rationale:</p>	<p>Specific Question/ Request for Information:</p> <p>Health Canada recommends the following comments be addressed in future Project documents:</p> <p>a) For each non-radiological contaminant, provide a total predicted inhalation exposure level from all decommissioning activities.</p> <p>b) Provide a total predicted radiation dose from all Project activities during the Decommissioning Phase.</p>

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				Information on a total exposure level/radiation dose is key to understanding the cumulative health effects caused by all decommissioning activities.	
353	ECCC		9.6.3.2 Proposed Mitigation Measures	<p>Context:</p> <p>Section 9.6.3.2 states that “In order to protect nesting migratory birds, in accordance with the Migratory Birds Convention Act, the site preparation activities will avoid tree clearing during the breeding bird season (April 8 - August 28), wherever possible. If such activities cannot be scheduled outside the prime nesting season, deterrents for nesting will be implemented and a nest survey must be conducted beforehand (i.e., within 2 days) to ensure there are no active nests in the areas of activity.”</p> <p>The EIS does not include further details on the types and locations of deterrents being considered.</p> <p>Rationale:</p> <p>ECCC has concerns with the uncertainty surrounding what deterrents might be used if preparation activities cannot be scheduled outside of prime nesting seasons and how use of deterrents would align with the Migratory Birds Convention Act, 1994 and a potential Species at Risk Act permit for Chimney Swift</p>	<p>Specific Question/ Request for Information:</p> <p>Provide details on deterrents being considered and where deterrents for nesting may be used if tree clearing were to occur during this Project.</p>
354	ECCC		9.6.3.3 Effects After Mitigation	<p>Context:</p> <p>Section 9.6.3.3 states that “The loss of habitat is temporary and minor, displacing wildlife to cultural communities unaffected by project activities, or the surrounding forests. The project is not expected to introduce any physical barriers to wildlife.”</p> <p>Rationale: ECCC is uncertain if there are specific safety/security measures being considered for the site after decommissioning that may prevent/limit the movement of species at risk, and as a result could impact habitat connectivity at the site to SARA listed species (e.g. Eastern milk snake).</p>	<p>Specific Question/ Request for Information:</p> <p>Provide details on any safety/security measures being considered (e.g., fencing) that will be located on site after decommissioning to prevent or limit the movement of species at risk. If specific measures will be in place, what measures will be in place to mitigate for the potential loss of passage by federally-listed species at risk</p>
355	ECCC		9.6.5 Monitoring and Follow-up; Chimney Swift Studies Technical Supporting Document	<p>Context:</p> <p>The Draft EIS and Technical Supporting Document discuss the monitoring and mitigation measures in place for Chimney Swift during decommissioning activities.</p> <p>“During the non-breeding season (May 1 to June 21 and July 31 to September 1):- When >25 swifts are observed leaving the roost in the daytime during the first day of inclement weather (i.e., measurable precipitation lasting longer than 30 minutes, and ambient temperatures below 9oC for more than 120 continuous minutes), and do not return within the observation period, then an examination of the associated decommissioning activities to identify the likely source of disturbance, with mitigation measures, should be taken; or,- if >200 swifts are seen exiting the roost on day 2 or more of inclement weather and do not</p>	<p>Specific Question/ Request for Information:</p> <p>ECCC recommends that the draft EIS monitoring plan for Chimney Swift should align with the proposed Terms and Conditions of the related SARA permit</p>

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				<p>return within the observation period, then an examination of the associated decommissioning activities to identify the likely source of disturbance, with mitigation measures, should be taken.</p> <p>During the breeding period (June 22 to July 30):</p> <ul style="list-style-type: none"> - If a marked decrease is seen, this may indicate that swifts have been disturbed by a contemporaneous activity in the decommissioning process. A marked decrease is a >50% decrease in the average of the counts from the previous 4 nights during which decommissioning activities have taken place during the day. If this marked decrease has been observed, then <i>an examination of the associated decommissioning activities must ensue to identify the likely source of disturbance, with mitigation measures taken.</i> <p>Rationale:</p> <p>ECCC emphasized text above that is not aligned with the proposed Terms and Conditions of the related SARA permit. The proposed Terms and Conditions state that a stop-work order on decommissioning activities would be in place if any of these situations listed above were to occur.</p>	
356	ECCCC		EIS Section 10.2 (CNL Management Programs)	<p>Context:</p> <p>During engagement, Indigenous groups identified the importance of being notified in the event of incidents related to the project. The EIS refers to CNL’s Emergency Preparedness Program (detailed in section 10.2); however, no specific details were included in the EIS regarding notification of Indigenous groups.</p> <p>Rationale:</p> <p>Notification of Indigenous groups is important for their health and safety, as well as to enable their involvement and input in addressing issues that may affect their use of land for traditional purposes, and cultural and physical heritage</p>	<p>Specific Question/ Request for Information:</p> <p>ECCC recommends CNL provide additional information on the procedures and practices that will be implemented to notify Indigenous groups of any incidents, including those caused by accidents and malfunctions, that could have an impact on their health, socio-economic conditions, traditional use of land, or physical or cultural heritage. ECCC recommends ongoing engagement with Indigenous groups to develop and continuously improve procedures and practices that address their needs and concerns.</p>
357	AOPFN		2.7.9 Traditional Land and Resource Use	<p>At pg. 2-26, the proponent states “CNL acknowledges that the AOPFN have identified the key role of the country foods monitoring program in mitigating the concerns of the AOPFN.” This statement is misleading, as AOPFN has identified as an order of priority much higher than any country foods monitoring program, that removal of all the radiological inventory, which is technically and economically feasible, is the BEST way to reduce the concerns of the AOPFN</p>	<p>A. CNL is asked to remove the current statement or augment it by recognizing AOPFN’s position on full removal as a much more effective means of mitigating country foods and other contamination concerns of AOPFN.</p>

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358	AOPFN		2.7.13 Cumulative Effects	At pg. 2-29, CNL estimates that “the NPD Closure Project has no residual adverse effects”.	This statement is considered offensive to AOPFN and should be noted as such. It reflects a blatant ignoring of impacts as understood by Indigenous peoples, and impact assessment that has meaning to Indigenous peoples. It begs the question of whether CNL has heard anything AOPFN has been saying and writing since 2019.
359	AOPFN		3.1 Location of the Project	CNL states at pg. 3-1 that the facility has been renamed the NPD Waste Facility. AOPFN considers NPD’s current status to be a retired research reactor awaiting decommissioning that is currently housing radioactive waste in a temporary, “storage with surveillance” manner. It is not a waste disposal facility or any sort of waste facility. And this status is acknowledged by CNL in section 3.5.2 (pg. 3-17), where it clearly states that: “NPD was a research and a demonstration facility constructed at a time in history when decommissioning was not part of the design.” However, CNL goes on to engage in “linguistic cleansing” by seeking to rename the NPD as “waste facility”. AOPFN notes that artificially renaming it a waste facility does not change the fact that it is a retired reactor containing radioactive waste, awaiting decommissioning. As such, the NPD currently is not (and does not have to become) a permanent radioactive waste disposal facility. Any proposal to convert the facility should be subjected to all requirements applicable to new facilities, including a comprehensive selection process for the most appropriate site from a fulsome technical perspective.	See also AOPFN follow-up IR on Government of Quebec IR #58. AOPFN Comment: AOPFN’s position is that any proposal to convert the NPD storage facility to a disposal facility should be subject to all requirements applicable to new facilities, including a comprehensive selection process. It is AOPFN’s expectation that in keeping with the requirements laid out in Canada’s Integrated Strategy for Radioactive Waste, such a proposal must undergo a willing host engagement process and garner Indigenous free, prior, and informed consent. We strongly note that the NPD decommissioning is a proposed development requiring AOPFN free, prior, and informed consent, and there must be demonstrable and defensible efforts on CNL and CNSC’s part to garner AOPFN consent for the project.
360	AOPFN		3.6 Report Organization 3.5.3.7 Guidelines and Standards for Effects Assessment	The proponent provides in the EIS a list of physical and biophysical impact assessment guidelines/guidance it relied upon. No similar guidance documents for consideration of effects on Indigenous peoples are cited, although there are many available. The parties need to know what standards of practice were used by the proponent for all types of assessment.	A. As was done for environmental effects, CNL to identify and provide access to any guidelines used with respect to the assessment of effects on Indigenous peoples. See also AOPFN follow-up IR on CNSC IR #159.
361	AOPFN		4.1 Purpose of the Project	CNL talks about its Integrated Waste Strategy. It is not clear that CNL has consulted with affected Indigenous groups in the development of the Integrated Waste Strategy and AOPFN also notes that the ISD proposal appears to have been developed prior to the 2023 Integrated Waste Strategy.	CNL to describe whether and if so, how Indigenous groups were involved in the development of the Integrated Waste Strategy.
362	AOPFN		4.1.1 Robustness of the System	The section includes CNL’s suggestion that following institutional control, signage and permanent markers would not be used to identify the NPD site. AOPFN needs more information on how this determination was reached, given that the site in the Project Case would be a permanent radioactive waste disposal facility and that parties who come in proximity to it should be made aware of that from a public health perspective. For the record, AOPFN does not agree with the suggestion at pg. 4-3 that signage would encourage interest more than it would keep people away from the facility.	CNL to provide a justification based on evidence (e.g., are there studies indicating that the “attractant” effect of signage is greater than the “protective” effect of signage?) for the determination not to utilize signage to identify the NPD site following institutional control, as well as state whether Indigenous groups were engaged in the process of making this determination and if so, how Indigenous input was incorporated. The other option is for CNL to recognize that signage and permanent markers may be necessary on a permanent basis in the Project Case, and show how this can be confidently enforced into the far future.
363	AOPFN		4.1.2.3 Concrete / Grout / Cement (also Section 3.2 Project Overview)	The section suggests that based on the performance of some natural cements, the grouting proposed to be used for the NPD site would remain effective for up to a thousand years. AOPFN is however concerned about risks of radiation exposure following this timeframe, and the direct and indirect impacts on future generations of its members. At pg. 3-8, the proponent identifies total residual radioactivity in 1988 and 2020. AOPFN and its members need more information in plain language on the implications of existing	CNL is requested to identify the estimated residual radioactivity at the NPD facility over time under full removal and ISD scenarios and how that compares to today? For example, how much radiological risk would be left at the site following the 1000-year timeframe identified in Section 4.1.2.3? We request that CNL think carefully about how to respond on these inquiries in plain language, in ways that have meaning to AOPFN members and staff. It is critical that CNL work with AOPFN to not just respond in a

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				residual radioactivity for the environment and people, and how it will change over time under different decommissioning scenarios.	technical fashion but in a way that properly characterizes changing risk profiles at and around the NPD site over time.
364	AOPFN		4.2 Alternative Means of Carrying out the Project	<p>AOPFN’s review of the updated EIS finds that CNL is still yet to demonstrate that the NPD site is the preferred location for the disposal of ILW. CNL needs to expand its focus beyond what is “acceptable and preferable to CNL” to what is “optimal and acceptable to Indigenous peoples”, given the UNDRIP positive consent requirement for siting of permanent hazardous waste disposal facilities.</p> <p>AOPFN is also repeating its concern that CNL has not performed a comprehensive exercise to determine the suitability of the site- i.e. technically superior and publicly acceptable. The proposed undertaking involves constructing a permanent hazardous waste disposal facility for radioactive waste. Based on modern best practices, the decision to construct such a facility at a given location would be preceded by a rigorous, transparent and highly consultative siting process. The overall goal of such a process would be to select a preferred site which: a) has superior physical/technical attributes; and b) has a “willing host” for the facility. CNL’s selection process did not include a siting process to confirm that the Rolphton site is the most technically appropriate location for a hazardous waste disposal facility, nor has a willing host been identified. Instead, CNL proposes to retrofit a pre-existing facility that was designed for another purpose and a limited operational life.</p> <p>This is inappropriate for the management of long-lived hazardous waste and a serious gap in CNL’s evaluation of alternative options for decommissioning.</p> <p>AOPFN also notes that Canada’s Integrated Strategy for Radioactive Waste calls for consent for ILW and HLW disposal locations and substantial siting efforts, with maximum engagement of impacted Indigenous peoples. AOPFN sees no reason to exempt NPD waste from this process required for all disposal facility siting. CNL’s argument that the waste is already in place is tantamount to victim blaming; AOPFN never was asked if it would host the original facility and cannot be saddled with it by default forever.</p>	<p>CNL is requested to identify:</p> <ol style="list-style-type: none"> Whether the ISD decommissioning plan would make the site a permanent hazardous waste disposal facility; If so, whether a “positive consent requirement” as per UNDRIP section 29.2 should apply; Whether CNL agrees that “Willing Host” should be a requirement for the disposal of ILW; What are the potential implications of the recent Federal Court finding in Kebaowek First Nation vs. Canadian Nuclear Laboratories, especially as it relates to the importance of consideration of UNDRIP, UNDRIPA and FPIC, for the NPD decommissioning proposal?; and How CNL will deal with the ISD decommissioning proposal for NPD, if AOPFN withholds its consent for this proposal?
365	AOPFN		4.2 Alternative Means of Carrying out the Project APPENDIX D: AOPFN Alternative Means Assessment	<p>Missing in the EIS is the engagement of Indigenous groups in the development of the process of assessing alternative means, which was not considered from the outset. This leaves us in a situation where the most affected Indigenous group - AOPFN - has a differing, justified, expectation of how the decommissioning should be undertaken, which while it is included as an annex to the revised draft EIS, the proponent has explicitly indicated it is dismissing.</p> <p>Further, AOPFN called for re-assessment of alternative means, since we were not properly engaged from the outset. The proponent has refused to accede to this request as well.</p> <p>We also note that the CNSC guidance for the development of the EIS requires that for all technically and economically feasible alternative means, that they be subject to characterization of environmental effects. We take this to be a characterization of effects with sufficient detail across all VCs, such that differential outcomes between such alternatives can inform determinations on preferred alternatives. Given the extremely high concern expressed by Indigenous peoples about ISD, the onus is on the proponent to</p>	<p>CNL to provide an update to its alternative means assessment that includes quantitative and qualitative assessment of estimated effects in the Project Case, for each VC, for each technically and economically feasible alternative means.</p>

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				conduct a meaningful effects characterization for all VCs across each technically and economically feasible alternative means. So far, that has not occurred.	
366	AOPFN		4.2.4 Analysis of Alternative Means	<p>AOPFN is following up on previous bilateral comments provided to CNL in 2021, on CNL’s refusal to assess the implications of potential retrofitting or waste retrieval should the ISD fail to properly encapsulate the radiological inventory (i.e., if greater than CNL-modelled radiological material gets out into the groundwater system in a larger ‘pulse’). We are following up as we find CNL’s assertion that it is “technically” possible to conduct these safely to be an inadequate response, as no substantive evidence of how has been provided by CNL.</p> <p>AOPFN cannot simply take CNL’s “word for it” that the facility has retrievability and reversibility built into planning. CNL should provide a description, showing how it would be done and showing examples of where it has been done.</p> <p>AOPFN remains dissatisfied by CNL’s reasoning over its refusal to include an assessment of the implications of potential retrofitting or waste retrieval into the analyses of potential disruptive scenarios. By design the placement of the grout/ cap will make it problematic to access the facility in the future, making any required remedial/retrieval action difficult to activate. While CNL asserts that it’s “technically” possible to conduct these safely, no substantive evidence of how has been provided, as requested by AOPFN and AOPFN has no confidence in this assertion.</p>	<p>A. CNL to provide a description of how retrievability and reversibility of the grouted monolith have been built into project planning, demonstrating how this would be done and providing relevant, detailed examples of where it has been done successfully.</p> <p>B. CNL to provide substantive evidence that it has contingency plans in place, should the facility fail to contain the radioactive materials adequately, including a scenario where the materials need to be removed.</p>
367	AOPFN		4.2.4.3.2 Injury to Workers	Table 4.2-7 identifies estimated potential injuries to workers for each alternative means scenario. In every instance, risk to workers is very slight but this is not readily apparent from the table and discussion.	A. CNL is requested to add analysis of "what are the chances of a fatality during decommissioning" as expressed by a percentage or proportion (1 in x) likelihood over the decommissioning time frame, for each alternative means.
368	AOPFN		4.2.4.8 CNL’s Response to AOPFN’s Alternative Means Assessment	<p>AOPFN is disappointed with the posture CNL has taken in the EIS, where its response to AOPFN’s input is limited to recording it within the document rather than substantially incorporating AOPFN perspectives and findings from studies into the EIS, or having serious follow-up engagement on this topic. AOPFN would argue that the “catch and release” nature of CNL’s treatment of the AOPFN Alternative Means Assessment, instead of showing that the proponent has meaningfully considered Algonquin Knowledge, suggests it has been considered in merely a trivial fashion. AOPFN notes for the record that including AOPFN inputs in the EIS does not mean that AOPFN’s inputs have been integrated into the actual effects characterization and significance determination process; indeed, they demonstrably have not been.</p> <p>AOPFN is following up on its request to CNL and CNSC for a clear commitment to a relationship aligned with the principles of UNDRIP would be to meet the requirement under UNDRIP article 29.2, to not dispose of hazardous materials without AOPFN’s Free, Prior and Informed Consent (FPIC) and evidence that AOPFN is a “Willing Host”. We strongly note that the NPD decommissioning is a proposed development requiring AOPFN FPIC and must be approached as such by CNL and CNSC. There must be demonstrable and defensible efforts on CNL and CNSC’s part to garner AOPFN consent for the project.</p>	<p>A. CNL is requested to identify all times when CNL and AOPFN have discussed the results of the AOPFN AMA since it was released, and what was discussed.</p> <p>B. CNL and AECL to describe their understanding of the Crown’s obligations to AOPFN in relation to its constitutional right to free, prior, and informed consent with respect to the proposed NPD decommissioning project.</p> <p>C. CNL and AECL to describe whether and how they will respect and adhere to AOPFN’s right to free, prior, and informed consent with respect to UNDRIP article 29.2, and adhere to Canada’s laws within the UNDRIPA which legislate Canada’s obligations to AOPFN on the topic of FPIC.</p> <p>See also AOPFN’s follow-up IR on Government of Quebec’s IR #8.</p>
369	AOPFN		4.2.4.8 CNL’s Response to AOPFN’s Alternative Means Assessment	CNL states that following the presentation of AOPFN’s AMA, it has conducted continued engagement with AOPFN “through meaningful dialogue, technical studies, and sharing of traditional knowledge and land use.”	A. CNL to clarify what “meaningful dialogue, technical studies, and sharing of traditional knowledge and land use” on the topic of alternative means have occurred between the presentation of the AOPFN AMA in 2022 and submission of the revised draft EIS in

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				AOPFN's records indicate that there has been minimal engagement between the parties on NPD in the intervening couple of years	late 2024, as well as subsequent technical studies and subsequent sharing of traditional knowledge and land use. B. CNL to provide the records of these interactions, listing all the dates and specific topics discussed, issues flagged by AOPFN representatives, and whether and how (in CNL's opinion) these were reconciled.
370	AOPFN		4.3.1.9 Final Site Restoration	AOPFN notes that no studies to establish land use and end state alternatives or preferences have been conducted for the NPD site. AOPFN notes that CNL has not engaged AOPFN on the topic of site restoration requirements, methods, and plant mixes.	CNL to identify when and how it plans to engage AOPFN on land use and end state planning and site restoration methods and planning. For the record, this should occur prior to the filing of the final EIS.
371	AOPFN		Table 4.3-3 Changes in Project Scope	In addition to the list of scope changes for the EA, it is important to what changes, if any, were proposed by other parties but not adopted by CNL.	In the spirit of transparency, CNL to provide information on any Project scope changes that were proposed by other parties but not adopted by CNL, accompanied by CNL's rationale for rejecting said scope changes.
372	AOPFN		4.4 Waste Strategy	The EIS states that "By selecting a strategy of in-situ disposal, the project end state results in a disposal facility for the waste inventory at the NPD site. As a follow up, AOPFN requires additional comment from CNL on the implications of a change to radioactive permanent waste storage.	A. Is the site currently considered and regulated as a permanent hazardous waste disposal facility? B. Does CNL agree that ISD will create a permanent hazardous waste disposal facility at the site? C. Does CNL respect AOPFN's right to consent to or not consent to such a facility as per section 29.2 of UNDRIP, and what will CNL do if AOPFN withholds its consent for this option?
373	AOPFN		4.4.1.1 Existing Radiological Inventory; Table 4.4-1 Reference Radiological Inventory for the NPDDF 3.2 Project Overview	Regarding the Porter (2020) table on radionuclide inventory at pg. 4- 56, the data has been presented in an inaccessible manner. An interpretation of the inventory needs to be provided alongside the table. In general, there continue to be gaps in the EIS in the accessibility of the EA-related data, especially as it relates to radiological issues. Plain language needs to be maintained in data presented. AOPFN requires more plain language information about ILW and LLW inventories at the NPD site, in order to fully understand the contaminant inventory nature and scale– volume of radioactive waste, type of waste, measure of the risk of exposure, and how radioactivity will reduce over time. NOTE: while this comment is provided here it also applies to a plethora of baseline and effects characterization tables talking (especially) about radiological inventories at the site and/or graduating into the groundwater system over time. We request that CNL improve how it is characterizing radiological inventories in each of those tables and accompanying descriptive text. AOPFN recognizes that this is not always easy to do, but it is important for risk communication and decision-making purposes with AOPFN.	A. At minimum, give each radionuclide a measure in terms of its physical size as well as its Bq across the various reactor components presented in the table. B. More information is needed on the rate of residual radioactivity reduction following shut down of the NPD facility 34 years ago mentioned in section 3.2 (pg. 3-8). In lay persons terms, please explain by what percentage the total residual radioactivity has reduced during this time period. Also present the trend downward: i. in the Project Case, and ii. if deferred decommissioning (storage with surveillance) continues.
374	AOPFN		5.2.1.2 Temporal Boundaries and Scale 4.3.3 Scope Changes	While the proponent effectively claims that the temporal boundary for the assessment covers risks of radiological exposure far enough into the future, it is not clear from the EIS that the proponent has indeed assessed effects into the far future. Given that for several radiological components, the greatest radiological leachate impacts will be into the far future, this should be characterized in a more detailed, but also plain language, manner. AOPFN cannot accept passing impacts on to future generations that may or may not be aware of or be prepared to deal with. The temporal scope of assessment should be tied to	CNL is requested to update Section 5.2.1.2 to provide an estimate of how many years into the future Project-related impacts are no longer likely to be measured or felt, with a supporting justification. The parties need to understand the temporal scope in crisper terms than "indefinite".

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				the point in the future when Project-related effects are no longer likely to be measurable. By adopting an “indefinite” future time period for the temporal scope of assessment, the proponent has avoided giving a sense of the real temporal scope of change associated with converting this facility to a permanent radiological waste disposal facility.	
375	AOPFN		Table 6.2-1 Identified Indigenous Nations, Communities and Organizations Engagement and Involvement	AOPFN is concerned that Table 6.2-1 gives the possible impression that the existing Long-Term Relationship Agreement is somehow related to the proposed NPD decommissioning project, which is incorrect.	Clarification is required from CNL on the record re: its understanding, as to whether and how the existing LTRA with AOPFN, applies to the NPD decommissioning project. CNL should engage with AOPFN prior to responding on this topic.
376	AOPFN		6.2.4.3.1 Engagement; pg. 6-42	The use of the acronym AAC is inaccurate in the EIS.	CNL to correct the language related to the acronym AAC. It’s named as “Algonquin Advisory Committee” in the revised draft EIS and should be AOPFN Advisory Committee (AAC).
377	AOPFN		6.2.4.3.5 Next Steps; pg. 6-66	<p>AOPFN first notes that there is no reference to a cumulative effects study (CES) in the revised draft EIS. AOPFN has conducted phase one of a CES in relation to AECL-owned, CNL-operated sites and CNL’s commitments to integrate that and results of any subsequent phase two CES should be identified under this section. High level findings and</p> <p>AOPFN first notes that there is no reference to a cumulative effects study (CES) in the revised draft EIS. AOPFN has conducted phase one of a CES in relation to AECL-owned, CNL-operated sites and CNL’s commitments to integrate that and results of any subsequent phase two CES should be identified under this section. High level findings and recommendations from the phase one CES should also be integrated into the EIS.</p> <p>The current timeline in the AOPFN commitments is identified as 10 years, starting from 2023. If a timeline is being kept it should be changed to reflect real time i.e. 2025 to 2035 or later. Or remove the start and end date keep it as a 10-year period to begin after the EA has been concluded and a decommissioning strategy finalized.</p> <p>Commitment AOPFN-3: AOPFN notes that we consider the application of the AOPFN Algonquin Foods Program at NPD to be relevant for a much longer period than 10 years, given there will be an extended Institutional Control Period and potentially a longer period of time (in part depending on the decommissioning approach ultimately applied) where alienation and loss of use continue in the area due in part to perceived risk and stigma associated with the site. AOPFN and CNL must have further discussions about the required longevity of support for the Algonquin Foods Program in relation to NPD and how this support will be applied.</p>	
378	AOPFN		Table 6.3-1 Indigenous Nations, Communities and Organizations’ Key Interests and Concerns Related to VCs	<p>At pg. 6-180, CNL states “The EIS discusses cultural sites around the NPD site. The AOPFN AKLUS report does not identify any known cultural features at the NPD site, and particularly not where proposed project activities will be conducted”.</p> <p>To be clear, it is not apparent that the proponent has done any archaeological work in relation to the approximately 375 hectares of the NPD site that are outside the immediate, previously impacted industrial area. Nor has AOPFN been afforded an opportunity to access the whole site to do on-territory cultural inventory. Thus, blanket statements about whether or not there are cultural features at the NPD site cannot be made. Finding of “no residual adverse effects” is premature. It remains an open question how ISD would impact</p>	As requested elsewhere, CNL to identify when it will support a whole of site inventory by NWGP and commit to integrate those findings into the final EIS.

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				on cultural use in the future. Overall, better characterization of relatively non-impacted areas of the site is critical.	
379	AOPFN		6.3.2.1 AOPFN Perspective on the use of Representative Species, and other VC-Related Issues	<p>GENERAL COMMENT: At Section 6.3.2.1 and at several other sections of the revised draft EIS, AOPFN's concerns and assessment findings (depending on the section, either or both may be offered by AOPFN) are respectfully integrated into the EIS by CNL. AOPFN appreciates this. We also note that without exception, those concerns remain outstanding and/or assessment findings remain supported by AOPFN as of March 26, 2025; CNL has not done anything in the interim between AOPFN drafting those materials and now to remove those concerns or alter AOPFN's assessment findings. AOPFN also notes that without fail, AOPFN's inputs – while integrated separately into the revised draft EIS – have not altered CNL's assessment findings.</p> <p>This is concerning to AOPFN as it suggests CNL is just “letting AOPFN blow off steam” rather than actually accommodating for/ reconciling with AOPFN in relation to the NPD Project proposal.</p>	A. For the record, where in the revised draft EIS AOPFN's concerns and/or assessment findings are provided in a discrete sub-section, those concerns and/or assessment findings remain outstanding as of March 26, 2025. Each of AOPFN's inputs need to be treated as outstanding issues and concerns that merit addressing by the proponent moving forward toward a final EIS.
380	AOPFN		8.2.3 Air Releases Also, Table 8.5-14 Average Radionuclide Concentrations in Groundwater in Various Classification Areas at the NPD Site (McVeigh 2018b)	<p>As previously noted, AOPFN is concerned with the lack of plain language characterization of radiological inventory at the NPD site, which makes it difficult to parse whether the radiological inventory is likely to be harmful or meet or exceed regulatory or guidance parameters.</p> <p>The values of airborne releases provided throughout Section 8.2 (e.g., at Tables 8.2-10 and 8.2-11) should be accompanied by identifying what percentage of acceptable limit the airborne releases represent. Where this is not feasible, an explanation should be provided, as well as alternative "consequence" metrics that give the reader a sense of whether the emissions are low, moderate or high risk.</p> <p>In Section 8.5, similar issues emerge related to groundwater tritium concentrations.</p> <p>Proportions (e.g., “1/10,000th”) may also be useful for describing emissions vs. regulated limits.</p>	<p>A. CNL to identify what percentage of acceptable limit the airborne release values provided in the section represent.</p> <p>B. CNL to provide comparisons of groundwater tritium concentrations at the site provided in Table 8.5-14, with acceptable levels, and specify the guideline(s) used.</p> <p>C. Wherever possible throughout the EIS (and especially in sections 8 and 9), CNL is requested to compare actual and/or predicted emissions (through whatever media and for whatever contaminant of potential concern) to regulatory, derived release limit, or guidance parameters.</p>
381	AOPFN		Section 8 (general)	In several places (e.g., in characterizing terrestrial, riparian and aquatic baseline environments in Section 8), the absence of comprehensive on- territory Algonquin baseline inventory is problematic. AOPFN understands that CNL is committed to a whole of site Algonquin Knowledge inventory by the NWGP. It is essential that this inventory inform the final EIS.	A. As requested elsewhere, CNL to identify when it will support a whole of site inventory by NWGP and commit to integrate those findings into the final EIS.
382	AOPFN		8.4.3.2 Regional Study Area	AOPFN notes there are no Algonquin Knowledge references in the baseline characterization of the Ottawa River (Kichi-Sibi).	A. The final EIS needs to more fully reflect Algonquin Knowledge of the Kichi-Sibi and other baseline characterizations in Section 8.
383	AOPFN		8.5.3 Soil Quality	The question of whether any soil remediation needs to be done at the NPD site in any decommissioning program should be posed, and preferably dealt with, in the final EIS.	<p>A. CNL to identify any locations at the NPD site that require soil remediation, as part of overall site decommissioning and rehabilitation, as the information may be relevant to assessment of cumulative effects, as well as potential end state of the site.</p> <p>B. For each location, CNL is requested to present a case for whether, where, how much, and what type of soil removal is appropriate to reach a land end use state that is amenable to jointly agreed upon ultimate land use for the site.</p>

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					CNL to commit to having the NWGP conduct a site survey of any such location at the NPD site, with the results informing both proposed actions and the final EIS.
384	AOPFN		8.8.3.1 Statistics Canada Health Profile	The baseline states that it includes “Well-being: includes perceived health, mental health and life stress;”. Notwithstanding this, there is no meaningful effects assessment on mental health. Why include it in the baseline if not including it in the effects assessment?	A. CNL is requested to ‘graduate’ consideration of mental health effects, specifically on Indigenous peoples, from baseline to effects assessment in the final EIS. A. CNL is requested to identify what data its collected on mental health (self-reported) in the Project Case and any plans to either gather additional data on this topic and/or consideration of relevant analogues.
385	AOPFN		8.9.2.1 Methods (Traditional Land and Resource Use)	CNL states that results of the AOPFN studies are being “discussed directly with AOPFN”. We know of no meaningful discussion of the results of those studies in the past few years.	A. CNL to identify how it is engaging AOPFN on the results of AOPFN’s multiple studies.
386	AOPFN		8.9.2.2.2 Algonquins of Pikwàkanagàn First Nation (AOPFN Diet and Harvest Study)	As with most of the input provided by AOPFN, findings from the Diet and Harvest Study still have not informed our requested re-evaluation of relevant VCs (listed in a prior comment/IR follow-up), nor effects characterization in section 9. Findings of the AOPFN studies make it clear that the presence and operation of CNL facilities, including NPD, bear a strong portion of the responsibility for AOPFN members’ ongoing experience of alienation and loss of access in this portion of the Kichi-Sibi watershed. As well, it is unclear if/ how effects of the NPD facility on AOPFN food security have been considered in the effects characterization in section 9.	A. CNL to provide an explanation on whether/ how the effect of the NPDDF (the Project Case) on AOPFN alienation and loss of access to traditional lands, and food security considered were evaluated in the effects characterization process used by CNL to identify “no residual adverse effects” on TLRU.
387	AOPFN		8.9.2.4 Hunting	AOPFN is concerned with the language used, in multiple instances with regard to hunting (between pg. 8-225 and 8-227) and gathering (pg. 8- 231) within CNL’s LSA and RSA to downplay the existence of traditional harvesting, by overemphasizing uncertainty (e.g., “it [AOPFN harvesting] cannot be ruled out”), despite the fact that CNL has previously in s.8.9.2.1 stated its approach of assuming the occurrence of harvesting within adjacent public lands. For instance, the section suggested that it is not possible to know if hunting occurs in the LSA, but the AOPFN AKLUS reported site specific data for Mónz and Wawàshkeshì harvesting within 1 km of the site (i.e., CNL project LSA) and 25 values within 7 km of the site.	A. CNL is requested to clarify whether it has assumed that harvesting occurs in the LSA, and whether it believes the AOPFN positive evidence that harvesting has occurred in the LSA, or not. Currently, CNL is providing confusing language in this regard in the revised draft EIS.
388	AOPFN		8.9.2.5 Fishing	The description of traditional fishing needs to provide more context on the volume of fishing reported in AOPFN’s three studies, rather than downplaying and underestimating the importance of fishing as a value to AOPFN. The section should clarify that fishing is limited within the RSA due to stigma and fear of contamination leading to alienation from traditional fishing sites, as a result of the siting and operation of the NPD facility. A focus on biophysical components simply contrives to mask impacts to fishing, making conclusions of “no residual effects” indefensible. A close examination of all factors supportive of AOPFN use of the land and potential impacts to enabling factors must be undertaken in the evaluation of impacts to fishing, and in general, any assessment of traditional use. We also caution that “sport fishing” should not be used in reference to fishing by Indigenous peoples anywhere in the EIS.	A. CNL is requested to revisit its framing of fishing baseline in Section 8.9.2.5 as against the concerns raised at left.

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389	AOPFN		8.9.3.1 Site Study Area (Cultural Resources and Ceremonies)	<p>At pg. 8 -233, CNL states “Although it was determined that there is high potential for cultural material to be present outside of the proposed project footprint, the Archaeology TSD did not recommend further archaeological assessment because these areas will not be impacted by the project.”</p> <p>AOPFN does not agree with this finding. If there are potential archaeological sites and high cultural values in other parts of the overall NPD site, there is potential they will remain alienated in an ISD future due to stigma associated with the permanent hazardous waste disposal facility in proximity. Thus, the extent of effects on Indigenous culture in the Project Case cannot be accurately predicted without understanding better the cultural values of the whole NPD site.</p>	A. AOPFN reiterates its call for a whole of site Algonquin cultural values inventory to be completed prior to the end of the EA.
390	AOPFN		8.10.1 Indigenous Socio-economic	<p>While the spatial boundary for socioeconomic conditions might be adequate (100 km), the overall description of baseline conditions is not, as it fails to go back far enough in time to adequately profile trends over time and current conditions to provide the actual context within which Project effects are being assessed. This heavy reliance on secondary government sourced data to characterize the baseline conditions comes from a failure to meaningfully consider and incorporate Indigenous input and Indigenous Knowledge to characterize local socio-economic contexts. The limited consideration of community-specific primary information creates a strong likelihood for the EA to underestimate adverse effects on Indigenous socio-economic values and interests.</p>	A. CNL is requested to revisit its framing of Indigenous socio-economic baseline conditions as against the concerns raised at left.
391	AOPFN		9.1.2.1 Identification of Residual Effects	<p>There is no mention in the section on methods for identifying residual effects on integration of Indigenous Knowledge of seeking inputs from impacted Indigenous communities. This is a striking gap in the effects characterization and significance estimation process.</p>	A. CNL to confirm whether and how it engaged Indigenous peoples and their knowledge in the effects characterization and significance estimation process, and if not, provide both a justification and an estimate of how this gap impacts on the confidence that can be held in the proponent’s estimation of residual effects.
392	AOPFN		Table 9.1-1 Criteria for Classification of Residual Effects	<p>This table suggests that the duration of an effect would be considered “moderate” if it extended to the end of the Institutional Control period. However, that period is 100 years at minimum, while any effects that last more than one human generation (+/- 25 years) are typically considered potentially high in duration.</p>	A. CNL is requested to revise its timeframe for a moderate vs. high duration effects as per the comment at left.
393	AOPFN		Figure 9.1-3 Methodology for Determination of Significance	<p>For the record, AOPFN is opposed to the narrow calculus considered in this Figure and in CNL’s estimation of significance. In 2025, Canada is required to assess the significance of effects in the Project Case on Indigenous health, social and economic conditions, and rights, whether the effects are caused by a change to the physical or biophysical environment or not. That approach is not being used in this EA or EIS to date and reflects a flawed, challengeable, and retrograde approach of convenience by the Crown and its agents.</p>	A. AOPFN continues to call for consideration of effects in the Project Case on all aspects of Indigenous health, social and economic conditions, regardless of whether they are the product of a change to the physical or biophysical environment or not.
394	AOPFN		Table 9.6-2 Summary of Interests and Concerns Raised During Indigenous Engagement Activities that Influenced the Scope of the Terrestrial Environment Assessment	<p>CNL states “The EIS discusses concerns about potential loss of connection to land and water, and loss of land and water use, as part of the assessment of effects on traditional land and resource use (Section 9.9.5). Changes to land and water use are discussed in the EIS as part of the expected outcomes of renaturalization during and after the Institutional Controls phase (Section 9.9.3). CNL’s Public Information Program enhances engagement with Indigenous peoples and address any potential feelings of loss of connection to and use of lands and water (Section 9.9.5).”</p> <p>AOPFN disagrees with both the contention that CNL has meaningfully assessed this potential loss of contention in the noted section, and the contention that CNL’s Public</p>	A. CNL is requested to either rescind the statements in Table 9.6-2 or provide compelling evidence that supports the statements.

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				Information Program “addresses any potential feelings of loss of connection to and use of lands and water”. For example, there is no evidence that the “PIP” has done anything to reduce fear, stigma, and alienation and loss of use to date in relation to the NPD site. Nor has CNL quantified or qualified the loss of connection and its effects on AOPFN in its effects characterization section, which is a major contributing factor to the different findings of effects on TLRU between CNL and AOPFN.	
395	AOPFN		9.6.3.3 Effects After Mitigation	AOPFN understands the reality that, whatever approach is used, ISD or full removal, there will be residual impacts on wildlife during execution. However, the key question for AOPFN, which is unanswered in CNL’s effects assessment, is the degree of differential post-decommissioning effects on wildlife. For instance, there would be slightly less habitat, slightly more habitat fragmentation, and slightly higher risks of contaminants in groundwater over the long term (impacting wildlife population) in a future with ISD than with full removal. But this question of differential effects on the wildlife VC is neither posed nor answered in either the proponent’s Alternative Means Assessment or the EIS.	<p>A. CNL to provide a comparison of direct and indirect effects to wildlife in both ISD and full removal scenarios.</p> <p>B. Provide data that calculates lost habitat compared against a pre-reactor timeline and how lost habitat will be offset.</p> <p>C. Provide an evaluation of how much of a zone of alienation and loss of use will continue in the Project case where traditional use is either/both not possible or not conducted due to unwillingness to practice culture and harvesting rights in an area with a permanent radioactive waste disposal facility.</p> <p>D. Describe the plans for offsetting impacts on TLRU in the Project Case, where a portion of the site will be off limits forever.</p>
396	AOPFN		9.6.5 Monitoring and Follow-up Table 9.6-6 Monitoring and Follow-up Activities in the Terrestrial Environment during	AOPFN finds inadequate, the proposed monitoring for terrestrial environment effects. It is unacceptable that it is currently limited to chimney swift and generic “vegetation,” and we note that more components and parameters need to be monitored, and the durations and timeframes need to be significantly higher than currently outlined, in order to increase confidence in proposed mitigations and management of effects. Additionally, we note the general lack of Indigenous involvement; for instance, in the absence of Indigenous Knowledge in the selection of environmental components and parameters, and lack of planning for involvement of Indigenous monitors in monitoring and validation of the proponent’s results.	A. CNL to respond to how it will remedy the gaps identified in the follow-up monitoring plan (FUMP) prior to the completion of the EA. More information on frequency and duration (in years) of the FUMP also needs to be provided and vetted by AOPFN.
397	AOPFN		9.8 Human Health 9.8.3.3 Effects After Mitigation	As requested for prior sections, the values of radiation exposure to humans provided should be accompanied by identifying what percentage of acceptable regulatory limit the dose rates represent in each instance. Where this is not feasible, an explanation should be provided, as well as alternative "consequence" metrics that give the lay reader a sense of whether the emissions are low, moderate or of high risk.	A. CNL to identify what percentage of acceptable regulatory limit the exposure doses rates provided in the section represent in each instance.
398	AOPFN		9.8 Human Health (general)	Regarding health effects, we note that against good practice Indigenous health assessment (as outlined in the FNMPC Guidance Appendices to the MPAS ; Appendix 4), CNL continues to adopt a relatively narrow perspective on Indigenous health that is focused on biophysical impacts to health, with little or no emphasis on other factors that influence Indigenous population health. We have communicated this gap in our comments on the various iterations of the EIS and are following up as CNL is yet to provide a meaningful response. This is particularly concerning to AOPFN because of the fear, stigma, and alienation experienced by our members, directly related to the nuclear industry in general, and specific concerns with the proposal to create a permanent radioactive waste disposal facility in AOPFN territory at the NPD site. AOPFN has recommended an approach be adopted by CNL that considers Indigenous determinants and overall impacts of health in a more detailed and holistic fashion, recognizing that health is an overall state of wellbeing caused by a combination of social, economic, cultural, mental and biophysical factors. We’ve also indicated the need to	<p>A monitoring plan has not been proposed to capture non-biophysical impacts on health in the EA Follow-up Monitoring Program.</p> <p>To this end we request:</p> <p>A. CNL to 1) identify whether it is aware of any studies in Canada on psychosocial impacts of ISD that identify differential fear and stigma associated with ISD compared with full removal, and 2) identify whether and how such studies were considered in the assessment of Indigenous health effects in the consideration of alternative means for the NPD decommissioning.</p> <p>B. CNL to provide a commitment to working with AOPFN to re-assess and address impacts to all Indigenous determinants of</p>

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				develop a trauma informed action plan due to the existing context. To date, CNL has not revised its approach to adopt a more holistic evaluation of human health and refuses to consider psychosocial impacts as a viable impact pathway from the NPD site in particular, and ISD in general. Despite mentioning mental health in the baseline description as an area to be included (s.8.8.3.1), this is not factored into the assessment of Project effects. Psychosocial impacts are only mentioned as an “input” or concern raised by AOPFN and the pathway is not incorporated in CNL’s effects characterization. Rather the assessment is restricted to biophysical contaminant-dose-receptor relationships, providing an incomplete examination of impact pathways. Similarly, culture, food security or other findings of AOPFN’s diet and harvest study have not informed baseline characterization or assessment of health effects.	health and wellbeing identified by AOPFN, prior to the completion of the NPD EA. See also AOPFN’s response to IR #69.
399	AOPFN		9.8 Human Health 9.8.5 Monitoring and Follow-up	Again, with regard to monitoring for health effects, AOPFN notes the absence of Indigenous involvement in the proposed follow-up monitoring plan. There need to be clear roles for AOPFN Neyagada Wabandangaki Guardian monitors in the monitoring of both radiological and non-radiological health components, to enable the tracking of objectives, indicators, and thresholds for values specific to AOPFN. The EIS states CNL’s commitment to an Indigenous-led risk communication program to address fears of contamination and negative risk perceptions; however, details are not provided on how this program would run and the level of support CNL would provide (e.g., compared to its public information program).	A. CNL to outline clear commitments and next steps to involve AOPFN Neyagada Wabandangaki Guardian monitors in its monitoring for health effects, including beyond the current ten-year funding support for guardians committed to by CNL.
400	AOPFN		9.9.2.2 Temporal Boundaries	AOPFN in its comments on CNL’s 2021 updates to the EIS, made it clear with regard to temporal scope, that when assessing project effects on rights and on traditional land and resource use, the project case needs to consider not only change from current day, but change in the project case against conditions when the rights/ traditional use were reasonably practicable. This gap remains to be addressed. In the case of the NPD, this means establishing a pre-fencing period at least 60 years in the past, and asking the critical question, “will existing impacts on access and use be continued into the longer-term future as a result of the physical works and activities proposed in the project?” AOPFN is also concerned that the EIS indicates that the temporal boundaries “continue indefinitely” (s.5.2.1.2), which calls into question the confidence that can be held in assessing impacts far into the future. Meanwhile in a full removal scenario, the timeframe for effects can be minimized, and possibly diminished within one or two generations, with the forest regenerated and all traces of the NPD facility gone.	A. AOPFN continues to request that the project case be reassessed not against the current, damaged condition of the site, but against natural conditions at the site, which were in place prior to the NPD being developed in the 1960s, and would reasonably be expected to be in place again in a future where full removal of the NPD infrastructure is achieved, which is a technically and economically feasible alternative means of decommissioning the site.
401	AOPFN		9.9.3	As communicated in previously bilateral comments to CNL in 2021, AOPFN disagrees with CNL’s flawed assessment approach and findings of no adverse effects from decommissioning and institutional control phases on traditional land and resource use on and near the NPD site. For one, missing from the delineation of effects in table 9.9-3 of the EIS, is the most important Project interaction, i.e., the permanent creation of a radioactive waste disposal facility near the Kichi-Sìbì as a result of the Project, considering the ongoing effects of alienation from this important landscape, and considering that AOPFN has continuously expressed that protection of the Kichi-Sìbì, and the riparian ecosystem is of high priority. Further, the EA fails to consider the Kichi-Sìbì as a value in itself, being a cultural landscape to AOPFN, and the resulting impacts to AOPFN culture, particularly within the context of existing impacts.	A. CNL is requested to engage with AOPFN to identify an agreeable approach to the reconsideration of effects on AOPFN TLRU and culture in the Project Case and report back to the CNSC.

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				We caution that the assessment conducted by CNL to date will be held in very low confidence and rely on the more realistic inputs for AOPFN and other Indigenous groups, who are the experts in these matters.	
402	AOPFN		9.9.3.3 Effects After Mitigation Table 9.9-3 Project-Environment Interactions with Traditional Land and Resource Use	<p>It is concerning that the only residual effect noted by CNL in Table 9.9- 3 happens to be falsely positive, which contradicts the evidence provided by AOPFN from three different studies. AOPFN’s assessment of traditional land and resource use has found substantial impacts on traditional land and resource use in the Project Case, to which CNL has not provided an adequate response. The proponent’s contrary finding of “no adverse effects” on traditional land and resource use cannot and should not be credited, as it is based on faulty assumptions, does not properly consider the evidence provided (on multiple occasions and in multiple studies) by AOPFN, and rests on a faulty assessment approach.</p> <p>AOPFN finds inadequate that proposed mitigation measures are limited to minimizing potential nuisance effects on traditional land use. The project has the potential for more than just nuisance effects, which would be greatest during the decommissioning execution phase. AOPFN is concerned about longer-term effects due to the continued presence of radioactive materials in the sub-surface, their potential for leaching out into the environment, communal fears and stigma associated with radioactive materials continuing the current alienation and loss of use for a much longer period of time, and the continued fencing off and unnatural conditions at the reactor site contributing to further alienation and loss of use to current and future generations of our members. This temporal extension of existing effects into the long distant future, in and of itself and in comparison, to a future where all the radioactive materials are removed, is of high concern and merits attention in this assessment that the proponent has not given.</p> <p>We note that it is poor practice to focus on possible (yet highly uncertain in effectiveness) mitigation measures, rather than focusing on the effect outcomes (which are understood). We note that this approach contradicts best practice adherence to the mitigation hierarchy by over- emphasizing the place of uncertain mitigation measures, rather than avoiding the impact in the first instance, or reducing it as much as possible.</p>	<p>A. The CNSC should either require CNL to reassess effects on traditional land and resource use or recognize that the assessment conducted by CNL to date will be held in very low confidence and rely on the more realistic inputs for AOPFN and other Indigenous groups, who are the experts in these matters.</p> <p>Based on the evidence provided to date, the CNSC must find that effects on traditional land and resource use in the Project Case will be significant and adverse in nature.</p>
403	AOPFN		9.9.5 Monitoring and Follow-up	<p>Considering the feedback AOPFN has provided CNL to date, it is disingenuous for CNL to suggest that monitoring for biophysical impact pathways is intended to address concerns related to separate and distinct human environment impact pathways (e.g., on Indigenous culture, food security, traditional land and resource use, and Indigenous health and wellness). Ecological monitoring on wildlife distribution, abundance and population health is not how you measure effects on traditional land and resource use, which involve human activities. In order to confirm its impact predictions, CNL must seek information from harvesters, directly, about their use and occupancy, and how they change over time.</p> <p>Further, AOPFN also has not seen any substantive evidence that CNL’s current programs in place for engagement have aspects to them currently that will address any potential negative perceptions of land use experiences. As previously communicated, what is required is a properly funded AOPFN Algonquin Foods Monitoring and Risk Communication Program. However, AOPFN is concerned that while CNL has included commitments to support the program, the proposed funding is only for a 10-year period which is grossly inadequate, considering the timeframe for the Project.</p> <p>AOPFN would like to reaffirm its requirement that proposed monitoring to verify CNL’s effects predictions during the decommissioning and institutional control phases must</p>	<p>A. CNL to identify more meaningful human environment data collection requirements in an updated follow-up monitoring plan.</p>

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				meaningfully involve affected Indigenous groups including AOPFN Neyagada Wabandangaki Guardians.	
404	AOPFN		9.9.5 Monitoring and Follow-up	<p>Section 9.9.5 of the EIS includes a statement that “<i>CNL acknowledges that the AOPFN have identified the key role of the country foods monitoring program in mitigating the concerns of the AOPFN.</i>”</p> <p>AOPFN is concerned with the misrepresentation of its position on country foods monitoring as a mitigation for impacts on traditional harvesting. AOPFN has identified, as an order of priority, much higher than any country foods monitoring program, that removal of all the radiological inventory, which is technically and economically feasible, is the BEST way to reduce the concerns of the AOPFN. That is what needs to be recognized, and any EIS entries with this misrepresentation must be updated to reflect AOPFN’s actual position.</p>	<p>A. CNL to correct its language to reflect AOPFN’s position that removal of all radiological inventory at the facility is what would be best at reducing or removing impacts on AOPFN traditional land and resource use and other related VCs.</p> <p>See also IR #357</p>
405	AOPFN		12.0 Follow-up Program 12.1 Scope	<p>In addition to the concern that the Follow-up Program is for a Project has not been demonstrated to be the best technically and economically feasible way to decommission this site, from an Indigenous perspective, AOPFN has several concerns with the currently proposed follow-up monitoring plan. It does not include:</p> <ol style="list-style-type: none"> roles for Indigenous peoples in the development; any oversight role for Indigenous peoples; any Indigenous Knowledge components or roles for Indigenous monitors; parameters or plans to monitor effects on Indigenous TLRU, health or culture. <p>This is despite the fact that the parties disagree on the likelihood of effects, and this disagreement should, in itself, necessitate follow up monitoring of values for concern.</p>	<p>A. CNL to communicate to AOPFN, concrete next steps for addressing gaps to the Follow-up Program identified by AOPFN.</p>
406	NRCAN		Reference to EIS: Section 8.12.2; 9.14.7; 4.1.2.5 Geosynthesis TSD Section 4.8; 5.2.4; 5.2.5	<p>At the request of CNSC, NRCAN has provided comments on Probabilistic Seismic Hazard Assessment (PSHA) studies for the NPD, including comments on Zhang et al. (2021). These have been communicated to CNSC (and CNL) but have not yet been fully dispositioned.</p>	<p>The EIS documentation should reflect the conclusions of the final approved PSHA report on the assessment of seismic hazard at the site</p>
407	NRCAN		Section 8.12.2 Geosynthesis TSD Section 4.8.1	<p>The description of the regional study area does not appropriately situate the NPD site within the larger context of the potential for seismicity in eastern Canada along reactivated geological features.</p> <p>The description is not fully aligned and consistent with the description in the sitespecific PSHA. There is no reference that supports the magnitude of completeness in the study area is less than magnitude 1. Historical seismicity figures are outdated, and the reference to the Mattawa and Petawawa faults are overly specific</p>	<p>The description of the regional study area should be aligned and consistent with that in the sitespecific PSHA.</p> <p>A reference supporting that the magnitude of completeness in the study area is less than magnitude 1 is required.</p> <p>The historical seismicity figures are outdated and should be replaced by more recent figures. The reference in EIS 8.12.2 to the Mattawa and Petawawa faults should be generalized to the larger Ottawa Bonnechere Graben and the faults therein. If faults are named, a map with the faults should be included.</p>
408	NRCAN		Section 9.14.7	<p>NRCAN should be referenced in place of the Geological Survey of Canada.</p>	<p>References to the Geological Survey of Canada should be replaced with “Natural Resources Canada”.</p>
409	NRCAN		Section 9.14.7	<p>The EIS references “This GSC model was recently used to update the 2015 National Building Code of Canada seismic design data”.</p>	<p>National Building Code of Canada 2020 (and its results) should be referenced in lieu of National Building Code of Canada 2015.</p>

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				The most recent NRCAN model is the 6 th Generation Seismic Hazard Model of Canada, and it is used as the basis for the seismic design values for the 2020 edition of the National Building Code of Canada	
410	NRCAN		Geosynthesis TSD Section 5.2.5	The description of extrapolating seismic hazard values to return periods longer than 2,500 years is misleading. NRCAN does not generally recommend this approach. NRCAN describes this approach only in the context of general guidance (with disclaimers) as a preliminary screening tool.	The seismic hazard values should reflect those of the final approved study (see IR 406). If the results of the extrapolation are included, additional caution around the approach and its expected use should be provided.
411	NRCAN		Table 9.14.7 Geosynthesis TSD Section 4.10, item 13 and 14	Some terminology on seismic hazard is used incorrectly in this section. An approximate magnitude for each hazard value requires a measurement of distance. The NPD site lies within a zone of moderate seismic hazard (not risk). Table 9.14.7 references an “earthquake” probability, but it is the return period of a particular ground shaking level.	These errors/omissions should be corrected.
412	KFN		Section 2.5 Aboriginal Engagement	See Additional Comments #1	<ul style="list-style-type: none"> A Consultation Framework Agreement is to be established; the requirements under CEAA 2012 legislation - that Indigenous peoples be consulted and the effects of the project take into consideration section 35 rights - does not meet the self-government and self-determination standards under UNDRIP. In order for this assessment and governing legislation to respect Indigenous rights to self-determination, Indigenous peoples must be included in the weighing of evidence and decision-making structures (i.e. for the assessment and approval of proposed industrial projects and their effects with respect to Indigenous rights, lands, territories and interests) <ul style="list-style-type: none"> Article 4 of UNDRIP recognizes that the right to self-determination encompasses the right to decision-making in matters relating to their internal and local affairs.
413	KFN		Section 3.3 NPD Site and Facility Description	Currently, descriptions of NPD on-site infrastructure are not contained in one, single and comprehensive source. Some infrastructure is described while others are not.	Provide comprehensive descriptions for all on-site NPD infrastructure
414	KFN		Section 3.5.3 Additional Regulatory Authorities & Legislation (Fisheries and Oceans Canada)	CNL has noted it does not have any specific plans to consult First Nations on any permits that may be required for the NPD project, including fisheries authorizations. Rather, CNL is passively deferring to KFN to direct and structure any consultation on these permits as desired – placing the burden of consultation on the nation. Significant gaps remain (<i>see also</i> comments in “Updated Groundwater Modeling Report” section below) about the nature and quantity of any effluent from the grout mixing plant is still unknown, and construction runoff during NPD closure activities is not comprehensively considered in the EIS.	<ul style="list-style-type: none"> Require KFN’s meaningful and full engagement and consultation for all federal authorizations and permits, including through specific KFN-NPD consultation framework agreement with CNSC <ul style="list-style-type: none"> Article 19 of UNDRIP requires that states must obtain the FPIC of Indigenous peoples before adopting and implementing legislative or administrative measures that may affect them

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					<ul style="list-style-type: none"> Due to outstanding information gaps (many of which are highlighted herein), CNL ought to remove the assumption in the EIS that no Fisheries Act permit will be required for the NPD
415	KFN		<p>Section 4.1.2 Natural Analogues</p> <p>Also applicable to Section 4.5 Potential Project- Related Releases to the Environment, Table 4.5-1</p> <p>Also applicable to the Alkaline Plume Modeling Report</p>	<p>In Ontario and Quebec, there have been growing concerns for over a decade about the presence of pyrrhotite in concrete. Over time, this mineral destabilizes concrete mixes, where the foundations of numerous buildings and houses have crumbled, costing tens of millions in damage).</p>	<p>More information is needed about how CNL evaluated its own grout mixture against more specific characteristics of ancient grouts in the referenced studies. This includes whether there is any pyrrhotite currently present in NPD concrete.</p>
416	KFN		<p>Section 4.2 Alternative Means of Carrying out the Project</p>	<p><u>Misleading Language</u></p> <p>‘Full removal’ is a misnomer as this option does not in fact require the removal of all NPD-related infrastructure. No alternatives considered in the EIS that would return the land to how it would have been before the NPD was constructed:</p> <ul style="list-style-type: none"> No option included the removal of lake intake or outfall pipes or tile drainage systems that divert shallow groundwater to the Kichi Sibi/Ottawa River. Neither of the two landfills on the NPD site would be removed in any of the four NPD closure options <p>Use of the terms ‘disposed of’ and ‘disposal’ is misleading. Claiming the waste has been ‘disposed of’ is misleading when in reality, it is still lying in the ground and will require thousands of years to decay.</p> <p>Referring to the <i>in-situ</i> plan as “disposal” masks the truth that the wastes will continue to be present and radioactive for thousands of years. Using the term ‘disposal’ also undervalues the land by making it a permanent receptacle for wastes without recognizing it as such. It would be more accurate to characterize it as plan for the permanent irretrievable storage of nuclear wastes.</p> <p><u>Costs</u></p> <p>Very little information is contained in the EIS relating to cost estimates and how they were identified for project alternatives.</p> <p>KFN requested from CNL a more detailed cost breakdown of activities associated with each alternative option for NPD decommissioning that inform the cost summaries in table 4.2-2 on p 4-24 of the EIS. CNL explained that detailed cost breakdowns were not performed for all alternatives considered. They argued that for a consideration of alternatives, projected costs are only required to be “order of magnitude estimates”.</p> <p>CNL’s preferred in-situ option, is the only one with more detailed cost breakdowns.</p>	<ul style="list-style-type: none"> ‘Full removal’ is not an accurate statement and should not be used when no alternatives considered in the EIS would return the land to how it would have been before the NPD was constructed ‘Disposal’ is misleading statement and should be disclosed as such; more accurate to state ‘permanent irretrievable storage of nuclear waste’ Costs, and how they were derived, ought to be transparently disclosed Cost determinations for all decommissioning options (not just preferred in-situ option) must be set out

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				<p><u>Sustainability Assessment</u> Alternatives must be assessed that lead to sustainability-enhancing outcomes.</p> <p><u>Environmental Justice</u> No consideration is made of environmental justice factors that may support the removal of the NPD facility from the site. The NPD in-situ management plan effectively makes the area a “sacrifice zone” where Algonquin Anishinabeg are expected to continue to carry disproportionate burdens of nuclear waste and contamination</p> <p><u>Definitions</u> No discussion as to how alternatives are defined and detailed comparisons of all four options against one another are currently lacking (i.e most of the comparison is indicated on a table with colour codes and symbols rather than more substantive written analysis).</p> <p>The phrase “regulatory risk” is referenced without any definition or clear explanation; CNL notes the in-situ disposal option carries more “regulatory risk” than other NPD closure options as it is not a method that has been employed yet at a Canadian-regulated nuclear facility. This concept remains ill defined in the EIS.</p> <p><u>Compliance with REGDOC 2.11.2</u> No attention has been spent setting out how the threshold for <i>in situ</i> decommissioning in REGDOC 2.11.2, section 5.1 (among other provisions) has been met.</p> <p><u>Other Sites</u> EIS lacks any detailed evaluation of an alternate site for waste management, including on other federally claimed lands.</p>	<ul style="list-style-type: none"> • Provide an assessment of sustainability-based criteria that were used to evaluate and compare the alternative means as well as the preferred option. • Set out how environmental justice factors were weighted/ considered in assessment of alternatives • Set out definitions for each of the alternatives and detailed comparisons among them • Define ‘regulatory risk’ and its intended meaning • Explain how the threshold for in situ decommissioning in REGDOC 2.11.2, section 5.1 has been met • Include other federally claimed lands within consideration of alternatives
417	KFN		<p>Section 5.2.4 Valued Components, Table 5.2-3 (d)</p> <p>Also applicable to Section 9.5 Geological and Hydrogeological Environment, p.9- 55</p>	<p><u>Indigenous Law</u> KFN has already clearly expressed in past submissions to the CNSC that its interventions are grounded in Anishinabeg duties to the natural world. The responsibilities to, and interrelatedness with, the health and wellbeing of the territory is a helpful framework for assessing the EIS discussions of “the environment”. Using such a framework can effectively assert Indigenous law and jurisdiction in the current EA process.</p> <p>Canadian law can also be interpreted to support these arguments beyond (but including) reconciliation as a complementary framework.</p> <p>CEAA 2012 defines the environment very broadly, implicitly requiring an ecosystem approach to the review of potential environmental impacts of proposed projects.</p>	<ul style="list-style-type: none"> • Indigenous laws and jurisdiction, UNDRIP and UNDA must be relied on in the current EA process; this would further reconciliation and be complementary to CEAA 2012’s framework which defines the environment very broadly, implicitly requiring an ecosystem approach to the review of potential environmental impacts of proposed projects <ul style="list-style-type: none"> ○ Article 29.2 of UNDRIP requires that states must take effective measures to ensure that hazardous materials are not stored or disposed of on the lands or territories of Indigenous peoples without their FPIC.

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				<p><u>Species Characterization and VCs</u> Species characterization and the selection of VCs appears to be based on a limited number of desktop reviews and field monitoring campaigns. CNL has confirmed no holistic ecosystem approach to their VC assessment was conducted, and confirmed no specific attention was paid to the trophic levels of species.</p>	<ul style="list-style-type: none"> ○ Article 32 states (emphasis added): <ol style="list-style-type: none"> 1. Indigenous Peoples' have the <u>right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.</u> 2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions <u>in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources,</u> particularly in connection with the development, utilization or exploitation of mineral, water or other resources. 3. States shall provide effective mechanisms for just and fair redress for any such activities, and <u>appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact.</u> • EIS must employ an approach inclusive of biodiversity loss – a requirement of Canada's 2030 biodiversity strategy and its international commitments to protect biodiversity • EIS must adopt an ecosystem approach • EIS ought to discuss whether or how species' presence at the NPD site was verified via any fieldwork EIS must include explicit consideration of species' interrelationships
418	KFN		Section 8.9.2 Traditional Land Use		Demonstrate implementation of and respect for Section 35 inherent rights and responsibilities, and UNDRIP.
419	KFN		Section 8.9.3 Cultural Resources and Ceremonies		Demonstrate implementation of and respect for UNDRIP Articles 25, 26, 11 and 12.
420	KFN		Section 8.11.2 Seismicity		Set out seismic study methodology and limitations, and respond to gaps and risks highlighted in this correspondence and publication: https://concernedcitizens.net/2024/04/15/geoscientist-raises-concerns-about-storage-of-radioactive-waste-in-the-ottawa-valley-due-to-earthquake-risk/
421	KFN		Section 8.11.4 Floods	<p>CNL's new climate change section models for changes in the number of future cold and hot days, heavy precipitation days, freeze-thaw cycles, frost and ice days, consecutive wet days and dry days, and projected warmest and coldest temperatures. While extreme low and high temperatures are considered in the EIS, there is:</p> <ul style="list-style-type: none"> • no consideration of extreme fluctuations in temperature which are becoming 	<ul style="list-style-type: none"> • Lack of consideration of extreme changes in temperature, including impact on materials used in NPD underground structure, must be remedied in the EIS climate assessment • Lack of assessment of extreme changes in temperature within

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			<p>Also applicable to Section 9.13.2 Climate Change and Section 9.13.6 Flood</p> <p>Also applicable to the Decommissioning Safety Assessment Technical Supporting Document, Section 4.3 (p.4-9) and Section 9.6.3 (p.9-65 to 9-69)</p>	<p>more frequent with climate change and can adversely impact the materials used in the NPD's underground structure</p> <ul style="list-style-type: none"> no assessment of extreme changes in temperature within short periods time (i.e seasons) <p>Modelling data is not current and has gaps:</p> <ul style="list-style-type: none"> storm event predictions begin in 2041 and these studies only drew from past storm events in 2013 and earlier storm predictions were not made for the NPD closure construction period last decade of increasingly severe storm events was not taken into account forest fires during construction works are not considered in the EIS. <p>Precipitation forecasts will directly impact wastewater volumes from the NPD facility as long as infiltration continues. This is not discussed in the NPD EIS.</p> <p>We understand CNL has sought to have a methodology consistent with the current National Building Code of Canada (last updated in 2020). However, the Canada Building Code may not provide a sufficient or appropriate set of standards for an unprecedented project like the NPD; never before approved by a Canadian regulator. The structural concerns for building safety addressed in the National Building Code's provisions do not consider the underground containment of radionuclides, nor the host of technical concerns specific to the NPD project.</p>	<p>short periods time (i.e seasonally) must be remedied in the EIS climate assessment</p> <ul style="list-style-type: none"> EIS must remedy gaps in modelling data including: <ul style="list-style-type: none"> Storm data more current than 2013 Storm predictions during construction period Forest fires during construction period Limitations of the National Building Code (i.e. its provisions do not consider the underground containment of radionuclides, nor the host of technical concerns specific to the NPD project) and its application to the project ought to be set out if the Code is to be relied on for consistency
422	KFN		Section 9.12.2 Assessment of Cumulative Effects	Only three pages of the EIS are devoted to cumulative effects. There is no reference to external supporting assessments elsewhere in these three pages.	<ul style="list-style-type: none"> The lack of detail and overly narrow scope of this section must be revised in the EIS and at a minimum, assess: <ul style="list-style-type: none"> Different combinations of actions or pathways (both interactive and additive) that could result in cumulative effects. Synergetic, compensatory, and additive effects, across spatial and temporal boundaries (e.g., at the ecosystem and watershed level), of all relevant past, present, and reasonably foreseeable future anthropogenic activities (including projects on federal lands, a.k.a. 'section 82' project assessments under the Impact Assessment Act) and natural processes with economic and social (i.e. cultural and spiritual) considerations.
423	KFN		Section 12.5 Preliminary EA Follow-up Monitoring Program, Table 12-5.1		<ul style="list-style-type: none"> EIS ought to be revised to include monitoring relating to surface soil and vegetation, greenhouse gases, and public dose for both the NPD construction and institutional control phases. EIS ought to be revised to require that environmental monitoring plans have an ecosystem approach to ecological

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					<p>receptors</p> <ul style="list-style-type: none"> EIS ought to be revised to expressly set out how adaptive management will be applied to the development of and carrying out of follow-up monitoring and programming. The process ought to be: <ul style="list-style-type: none"> Integrated; ecosystem-based Co-developed with communities; incorporate science and Indigenous knowledge; not be top down; require sharing, feedback and mutual learnings Be ongoing and responsive to changes
424	KFN		<p>Alternative Means TSD Section 2.2 Definition of Alternative Means</p> <p>Also applicable to Section 4.2 Alternative Means of Carrying out the Project of the main EIS, p.4-5 to 4-6</p>	See comments in “Section 4.2 Alternative Means of Carrying out the Project” (IR 416)	See comments in “Section 4.2 Alternative Means of Carrying out the Project” (IR 416)
425	KFN		<p>Decommissioning Safety Assessment TSD Section 8.5.2 Grout Fill Nuclear Area</p> <p>Also applicable to Section 9.8.3 Identification of Residual Effects</p>	In Ontario and Quebec, there have been growing concerns for over a decade about the presence of pyrrhotite in concrete. Over time, this mineral destabilizes concrete mixes, where the foundations of numerous buildings and houses have crumbled, costing tens of millions in damage).	More information is needed about how CNL evaluated its own grout mixture against more specific characteristics of ancient grouts in the referenced studies. This includes whether there is any pyrrhotite currently present in NPD concrete.
426	KFN		<p>Ecological Risk Assessment TSD</p> <p>Section 2.2 Receptor Selection</p> <p>Also applicable to Section 4.2 Toxicological Benchmarks, Table 4.6, p.4-9</p>		<ul style="list-style-type: none"> Indigenous People”, “self-sufficient Indigenous receptor group”, and “Indigenous Worker” have been identified in the EIS as specific receptor categories for the purpose of calculating exposure to potential health risks. <ul style="list-style-type: none"> EIS ought to be revised to include definitions (or at a minimum, working definitions) of these categories and descriptions of unique exposures EIS ought to be revised to set out how these categories overlap and what happens if an individual falls into multiple categories EIS modelling ought to be revised to factor in differences in age or sex, or pregnancy, within each category. For example, modelling does not make notice of differences in age within

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					<p>identified groups, despite specific age categories identified by the International Commission on Radiological Protection (ICRP) which is also referenced in CSA standard N 288.1:14.</p> <ul style="list-style-type: none"> EIS ought to be revised to include modelling for pregnant people
427	KFN		<p>ERA TSD Section 2.2 Receptor Selection, Tables 2.2 and 2.4 Also applicable to Section 5.3 Species at Risk, p.5-11</p>	<p>CNL has indicated it has no specific plans to consult First Nations on any permits that may be required or the NPD project including species at risk (SAR). Rather, CNL is passively deferring to KFN to direct and structure any consultation on these permits as desired – placing the burden of consultation on the nation, despite the uneven knowledge distribution relating to the contents of CNL’s permitting applications.</p> <p>KFN has asked CNL about the constitutional and regulatory aspects of SAR permitting assessments required for the NPD closure; CNL responded that they had no SAR-specific plans or strategies for consultation with Indigenous rights holders.</p>	<p>KFN ought to be involved ground truthing before any CNSC or ECCC decision is made on SARA permits.</p> <p>EIS ought to be revised in light of the considerable lack of information relating to potential fish, crustaceans, plants, insects, and other potential species at risk which may be present at or around the NPD site and in need of protection</p>
428	KFN		<p>Postclosure Safety Assessment TSD Section 5.1.3 Doses to Humans</p>	<p>The EIS has not adequately thought through the categories of people who may be exposed to radiation. This is a fundamental aspect of the EIS and the safety of managing the NPD site in-situ.</p>	<p>Underdeveloped discussion and lack of consultation related to exposure/dose calculations for Indigenous people and workers ought to be remedied and the section completed more thoroughly.</p>
429	KFN		<p>Calculated Radioactive Inventory General</p>	<p>KFN requested a series of reports referenced in the EIS discussions of wastes at the NPD site; CNL indicated that a comprehensive statement of the exact inventory is impossible because there are parts of the NPD that are not safe to examine.</p> <p>We understand that the NPD’s waste inventory is not completely known as there are portions of the facility where radioactivity is too high for it to be safe for people to take samples.</p>	<ul style="list-style-type: none"> EIS should be revised to be more transparent about reliance on modelling to calculate estimates EIS should be revised to fully explain the difficulties in getting a more accurate estimate of inventory (i.e. insufficient shielding or potential radioactive exposures too high for those who would have to sample) Plans and proposal for the site are based on conservative modelling. The EIS ought to be revised to be transparent about the limitations to fully characterizing the NPD’s waste inventory and be clear when estimates are based on modelling vs. verified measurements
430	KFN		<p>Updated Groundwater Modeling Report General</p>		<ul style="list-style-type: none"> EIS ought to be revised to address any potential legacy contamination that may be present in and around the NPD site including: <ul style="list-style-type: none"> areas where contaminated groundwater has been released directly into the Kichi Sibi/Ottawa River for decades Other larger waste projects such as the NSDF EIS is missing a comprehensive description of all the contaminant pathways from the NPD site. All current and proposed pathways should be clearly set out and explained. This includes: <ul style="list-style-type: none"> the pumped waste area sump (WAS) wastewater; the contaminated water passing through two tile drainage

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					<ul style="list-style-type: none"> ○ channels; and ○ the contaminated water passing surface ditches for stormwater management ○ equipment washout pit during propose closure work, and ○ the proposed grout mixing plant for the NPD decommissioning activities. <ul style="list-style-type: none"> ● EIS lacks comprehensive description of grout mixing plant including the water source, volume, or intake rate required for the grout mixing plant no details regarding consultation for the permit to take water are set out
431	CNSC		4.1.2 Natural Analogues	<p>Natural and anthropogenic analogues can provide useful information for gaining an understanding of how a disposal facility (or specific elements of a disposal system) could be expected to evolve in the post-closure period. They are also often illustrative.</p> <p>Analogues can be used to add robustness to supporting arguments for the disposal post-closure safety case (REGDOC 2.11.1 vol. III, ver. 2), providing information over timeframes typically longer than what can be evaluated experimentally. These analogues also contribute to reducing uncertainties associated with numerical models that predict the behaviour of the system (and/or some system subcomponents) in the post-closure period.</p> <p>However, while valuable for studying complex long-term processes over time and spatial scales larger than what can be studied experimentally (e.g. Fayek and Brown, 2021), natural and anthropogenic analogues do have limitations (as noted in CNL’s IR response) and should not be used in lieu of quantitative data from laboratory experiments (or other published data sources).</p>	<ul style="list-style-type: none"> ● Natural analogues should not be relied upon to perfectly reflect the system evolution, particularly when initial conditions (cementitious material composition) are known, and should not replace quantitative data that can be obtained from experimental studies that investigate degradation. CNL is expected to use data measured from experiments or obtained from the literature (and any information derived from these sources), to support assessment of barrier performance, in particular the cementitious barrier.
432	CNSC		9.9 Traditional Land and Resource Use	<p>The EIS notes that loss of connection to and use of land and water, and perceptions of safety and quality of the experience on the land as a result of the NPD Closure Project has been an ongoing topic of discussion between CNL and Indigenous Nations and communities.</p> <p>While CNL has proposed certain mitigation measures and commitments to Nations to continue to address these concerns going forward, it is not clear if CNL and Nations have agreed that these measures are sufficient to address ongoing concerns, and how they have been validated with Nations.</p>	<p>Please demonstrate that CNL has provided information regarding the effects to Aboriginal land and resource use and the concerns related to the loss of connection to and use of land and water, and related mitigation measures and commitments to identified Indigenous Nations and communities, and discussed, received feedback, responded to and validated the concerns of the identified Indigenous Nations and communities. If needed, CNL should provide a rationale where information was not obtained for some of the identified Indigenous Nations and communities</p>
433	CNSC		4.2.4.7 AOPFN Concerns about CNL’s Alternative Means Assessment (AMA)	<p>The EIS indicates that CNL has worked with AOPFN to understand their Free, Prior and Informed Consent (FPIC) position, and chapter 4.2.4.7 of the EIS provides AOPFN’s Consent position on the project:</p> <p><i>“AOPFN did not consent to have the NPD reactor constructed on its traditional lands in the first place. Nor does it agree to have the radioactive wastes from that facility permanently disposed of and leaking contaminants onto its lands and waters when other</i></p>	<p>Please provide updated details on how CNL has continued to work with AOPFN to understand their process for their Free, Prior and Informed Consent position on the NPD Project, and how it will continue to find a path forward with AOPFN on the NPD Closure Project.</p> <p>In addition to the work with AOPFN, CNL should demonstrate</p>

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				<p><i>viable alternatives exist. And AOPFN notes that all four of the alternatives identified by CNL are considered by CNL technically and economically achievable.”</i></p> <p>CNL also indicates that they are committed to working towards consensus and consent with AOPFN. CNSC notes that an update on this ongoing work should be provided.</p>	<p>how they have considered the FPIC process and position of all potentially impacted Indigenous Nations and communities and how they will continue to do so going forward.</p>
434	CNSC		General	<p>CNL has committed to undertaking several studies with certain interested Indigenous Nations and communities, that have been mentioned throughout the EIS. Where CNL has made commitments for studies, please clarify the timing and scope for each, and clarify how they will be considered by CNL in the assessment.</p>	<p>Please provide additional information regarding the studies that CNL has committed to undertaking with interested Indigenous Nations and communities, clarify the timing and scope of each, how they will be considered in the assessment and the development of mitigation and accommodation measures.</p>
435	CNSC		Indigenous Engagement Report	<p>CNSC notes that the flow and formatting of the Indigenous Engagement Report is inconsistent and confusing, rendering it challenging to navigate. Some areas for suggested improvement:</p> <ul style="list-style-type: none"> the Table of Contents appears to be missing sections, the sequencing of sections alternates abruptly between Nation-specific and topical content, sections and sub-sections are not indented in relation to one-another. 	<p>Please provide an updated Indigenous Engagement Report and revise the formatting in such a manner as to increase the ease of review and navigation in the document.</p>
436	Government of Quebec	Options pour la gestion des matières radioactives	<p>Reference To EIS:</p> <p>Chapitres de l'ÉIE (Étude d'impact environnemental et social) : 2.2.2, 2.2.3, 4.2.2, 4.2.4 et 4.4, les tableaux 4.2-1, 4.2-5, 4.2-6 et 4.4-2 et les pages 462 et 463 de l'ÉIE, les lignes 29, 38, 40, 56 et 59 du tableau des commentaires du Québec ainsi que les lignes 51 et 171 du tableau des commentaires des intervenants fédéraux et provinciaux.</p>	<p>Context:</p> <p>La Stratégie intégrée pour les déchets radioactifs (SIDR) recommande que les déchets de faible activité soient éliminés dans des installations près de la surface. La recommandation pour les déchets de moyenne et haute activité est l'élimination dans un dépôt géologique en profondeur.</p> <p>L'ÉIE du projet de fermeture du réacteur nucléaire de Rolphton évalue d'autres options que le confinement sur place des matières. L'option 3 (démantèlement complet et enlèvement) et dans une moindre mesure l'option 2 (démantèlement du réacteur et enlèvement) prévoient après le démantèlement un entreposage temporaire, l'élimination des matières radioactives de faible ou moyenne activité dans des lieux conformes aux recommandations générales de la SIDR lorsque ces lieux seront disponibles.</p> <p>Lorsque les options 2 et 3 sont comparées au confinement sur place (option retenue), les risques sont jugés équivalents pour la qualité de l'air et de l'eau après la période de contrôle institutionnel des mesures de confinement. Or, l'option retenue n'apparaît pas cohérente avec les recommandations générales de la SIDR, en particulier celles pour la gestion des matières radioactives d'activité moyenne qui est l'élimination dans un dépôt géologique en profondeur.</p> <p>Le confinement sur place est présenté dans la SIDR comme un choix exceptionnel, il n'est pas présenté sur le même pied que les recommandations générales. Malgré la possibilité de</p>	<p>Specific Question / Request for Information:</p> <p>a) Fournir la démarche suivie pour établir la pondération de chacun des éléments techniques et des quatre périodes concernées. De plus, LNC doit donner une valeur numérique totale pour chacune des alternatives.</p> <p>b) Estimer de manière quantitative les risques associés à chaque option envisagée.</p> <p>c) Revoir et confirmer le choix de confiner sur place en permanence les matières radioactives.</p> <p>d) Le tableau 4.2-6 de l'ÉIE doit être revu pour la période post-contrôle institutionnel afin de refléter que les options 2 ou 3 sont généralement privilégiées dans la SIDR.</p>

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				<p>se prévaloir de cette exclusion, une différence sur le plan des risques devrait se refléter dans l'évaluation des options 2 et 3 relativement au confinement sur place.</p> <p>À la section 4.2.4.2 « Relative Risk of Alternative Means » (ÉIE V4, version anglaise), on décrit le processus menant au choix de la méthode in situ pour le déclassement du site. En respect de la SIDR, cette approche ne doit être considérée que lorsque les autres alternatives ne sont pas viables.</p> <p>LNC doit démontrer que cette option est la meilleure. Bien que révisée par rapport à la version antérieure, il appert qu'aucune pondération n'est accordée aux différents éléments de l'analyse, comme cela se fait normalement dans les bonnes pratiques en ingénierie des systèmes ou en analyse de la valeur.</p>	
437	Government of Quebec	Gestion des matières radioactives de faible ou moyenne activité	Reference To EIS: Identiques à ceux de 436	<p>Context:</p> <p>Un des arguments à l'appui du confinement sur place des matières radioactives est l'absence d'installations d'élimination adéquates pour ces matières. La SIDR approuvée en octobre 2023 prévoit que les matières de faible activité seront éliminées dans des dépôts de surface mis en œuvre par les producteurs et les propriétaires de ces matières. Sur le site de Rolphton, les matières radioactives de faible activité sont par exemple, des filtres, des tuyaux ou des équipements de protection individuelle contaminés. Ces matières sont contenues dans 27 barils suremballés.</p> <p>La SIDR prévoit aussi que la Société de gestion des déchets nucléaires (SGDN) mette en œuvre un processus de sélection d'un site de dépôt géologique en profondeur pour des matières radioactives de moyenne activité. À Rolphton, les matières résiduelles d'activité moyenne sont des composantes du réacteur (tubes et calandre); elles ont un volume d'environ 125 m3. En application de la SIDR, il est prévisible que des installations d'élimination des matières radioactives avec une activité faible ou moyenne deviennent disponibles durant la période de contrôle institutionnel (au moins 100 ans) des mesures de confinement.</p>	<p>Specific Question / Request for Information:</p> <p>a) Démontrer que la mise en œuvre de laSIDR a été prise en compte lors del'évaluation des options de gestion desmatières radioactives au site deRolphton. Par exemple, pourl'option 3 (démantèlement complet et enlèvement), le tableau 4.2-5 de l'ÉIE doit faire une différence entre la période d'entreposage temporaire des matières radioactives et la période à partir de laquelle des installations d'élimination deviendront disponibles pour ces matières.</p> <p>b) Démontrer comment la disponibilité à moyen terme d'installations d'élimination adéquates pour les matières radioactives a bien été considérée dans le choix de les confiner sur place.</p>
438	Government of Quebec	Gestion des matières radioactives de faible ou moyenne activité	Reference To EIS: Identiques à ceux de 436	<p>Context:</p> <p>Selon notre compréhension, le réacteur aurait été vidé de son combustible usé. Ce serait une matière radioactive d'activité haute et elle serait entreposée temporairement à Chalk River.</p>	<p>Specific Question / Request for Information:</p> <p>LNC doit fournir les conditions d'entreposage du combustible usé à Chalk River et les mesures prises pour la protection de la santé humaine et de l'environnement, en particulier la rivière des Outaouais.</p>

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439	Government of Quebec	Gestion des matières radioactives de faible ou moyenne activité	Reference To EIS: Identiques à ceux de 436	Context: Dans la documentation déposée, LNC précise que : <ul style="list-style-type: none"> • Environ 225 tonnes métriques de plomb seraient laissées en place. Une partie de ce plomb serait difficile à enlever parce qu'il est intégré dans la structure de l'installation. • 165 m3 d'amiante auraient déjà été enlevés, sortis du bâtiment et entreposés dans des conteneurs à Rolphton. • Du mercure serait à gérer. Le réemploi ou le recyclage de certaines matières ne semblent pas avoir été évalués en application de la hiérarchie des 3RV (réduction, réemploi, recyclage et valorisation). Entre autres, il y aurait du plomb plus facile à enlever.	Specific Question / Request for Information: L'initiateur doit évaluer et discuter des possibilités suivantes: a) Recyclage du plomb; si ce plomb est contaminé en surface, son nettoyage et la valorisation doivent être envisagés. Par exemple, indiquer si le réemploi de briques ou feuilles de plomb qui servaient d'écran dans d'autres installations nucléaires peut être envisagé. b) Gestion durable de l'amiante hors site. c) Valorisation du mercure contenu dans des instruments dans un lieu autorisé même s'il s'agit d'une faible quantité (moins de 10 g).
440	Government of Quebec	Démarche d'information et de consultation	Reference To EIS: Public and Stakeholder Engagement- Documents en français pour le public et les partenaires du Québec (section 7 (ÉIE V4, version anglaise) Public and Stakeholder Engagement, section 7.4, Planned Future Engagements.	Context: LNC a fait le point sur la disponibilité des documents en français ainsi que sur les stratégies utilisées pour assurer des activités de consultation du public incluant la population francophone du Québec.	Specific Question / Request for Information: a) Préciser les activités de consultation du public réalisées depuis janvier 2024. b) Proposer, pour toutes les étapes du projet, des moyens de participation citoyenne pour les résidents du Québec avec des activités et des communications bilingues. Celles-ci doivent inclure les activités de consultation du public prévues ou envisagées à l'étape de contrôle institutionnel du projet afin d'informer la population avoisinante de l'avancement du projet et des résultats de suivi environnemental, avec des activités et des communications bilingues, et ce pour toutes les étapes du projet. (Stakeholder Engagement TSD: Chenette, R. 2024. Nuclear Power Demonstration (NPD) Stakeholder Engagement Report64-513440-REPT-002, Révision 1). c) Ces éléments doivent aussi être mis à jour dans le Document techniquecomplémentaire « StakeholderEngagement Report ».
441	Government of Quebec	Démarche d'information et de consultation	Reference To EIS: Identiques à ceux de 440	Context: Dans le cadre de la présente analyse, le rapport d'ÉIE en anglais et tous les documents techniques complémentaires ont bien été rendus disponibles aux partenaires gouvernementaux québécois. Cependant, l'ÉIE traduite en français ne comprenait pas les documents techniques.	Specific Question / Request for Information: Pour le public et les partenaires du Québec, LNC doit s'engager à déposer la version finale de l'étude d'impact incluant les résumés des documents techniques en français.
442	Government of Quebec	Démarche d'information et de consultation	Reference To EIS: Identiques à ceux de 440	Context:	Specific Question / Request for Information:

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				Concernant la communication et la conservation de l'information, il apparaît important de maintenir un plan d'archivage et de conservation des informations pertinentes sur le site et hors site.	LNC doit préciser le plan d'archivage des données associées au site et au projet de déclassement prévu pour documenter et assurer la pérennité de l'information dans le futur, incluant la période postinstitutionnelle.
443	Government of Quebec	Impacts sur l'eau et l'air	Reference To EIS: Le tableau 4.5-1 de la section 4.5 « Potential Project-Related Releases to the Environment » (ÉIE V4, version anglaise)	Context: Le tableau 4.5-1 de la section 4.5 « Potential Project-Related Releases to the Environment » (ÉIE V4, version anglaise), présente les caractérisations des rejets potentiels au projet, et ce, pour chaque phase et activité.	Specific Question / Request for Information: a) Préciser la nature et les concentrations des contaminants radiologiques et nonradiologiques (organiques et nonorganiques) qui seront dissoutes dans l'eau souterraine puis dans l'eau de surface. b) Préciser les contaminants qui seraient contenus dans le panache alcalin formé et dissous dans l'eau souterraine et dans la rivière des Outaouais (phénomène qui surviendrait à la suite de l'infiltration de l'eau souterraine dans la structure de béton coulé). c) À propos du Alkaline Plume Study, le document de l'ÉIE fait référence à l'étude de panache alcalin « alkaline plume study » à plusieurs endroits, sans préciser la source de cette information. Dans le tableau 4.5-1, il est notamment mentionné que « The alkaline plume study shows essentially no alkaline plume forming for at least 100,000 years post-closure. » La source de l'information sur le panache alcalin doit être précisée dans l'ÉIE. LNC doit donner plus de détails sur cette étude de panache alcalin dans le texte de l'ÉIE. d) Préciser les voies d'exposition et les doses d'exposition d'un utilisateur de la rivière des Outaouais (source d'eau potable, baignade, pêche, etc.), incluant la population vulnérable (nourrissons et enfants). e) LNC doit indiquer toute modification future potentielle quant aux contaminants, leurs doses et les voies d'exposition à la santé humaine, pouvant entraîner des changements pour le « offsite resident receptor group » ou d'autres impacts transfrontaliers via la qualité de l'eau souterraine ou de la rivière des Outaouais, ainsi que de l'air. f) Eu égard à ce qui précède, LNC doit faire le point sur l'impact potentiel du projet sur la santé humaine. Pour plus de clarté, les LNC doivent intégrer dans sa mise au point les références aux sections de l'ÉIE et/ou des documents techniques complémentaires qui fournissent les détails
444	Government of Quebec	Impacts sur le milieu biologique		Context:	Specific Question / Request for Information: a) Réaliser l'échantillonnage des sols et des végétaux et fournir les résultats, considérant que le dernier échantillonnage remonte à 2017.

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				Le dernier rapport de caractérisation des sols et des matériaux biologiques fournis par l'initiateur date de 2018. L'échantillonnage de la végétation ne répond pas aux préoccupations liées à la présence de la radiation dans la végétation.	<p>b) Revoir et déposer le programme d'échantillonnage et d'analyse des végétaux. Le programme doit prendre en considération les éléments suivants :</p> <ul style="list-style-type: none"> • Inclure des plantes indicatrices de la radiation, telles que des lichens, des champignons et des bryophytes, à part des herbacées et des arbustes ou des arbres. • Pour le calendrier du programme, la période de croissance des plantes puisque le prélèvement à la fin de la saison végétale (septembre-octobre) n'est pas informatif. Pour une meilleure compréhension des cycles des éléments radioactifs dans le système sol-plante, il est pertinent de réaliser l'échantillonnage des premiers champignons et des lichens au printemps. • L'échantillonnage et l'analyse chimique doivent être effectués séparément sur les parties aériennes et souterraines des plantes. • Inclure le programme et la méthode d'échantillonnage des végétaux et du sol pendant le suivi durant la phase de fermeture du réacteur. <p>Les publications suivantes peuvent guider LNC dans l'élaboration du programme d'échantillonnage :</p> <ul style="list-style-type: none"> • J. Anderson, N. Lévesque, F. Caron, P. Beckett, G.A. Spiers, 2022. A review on the use of lichens as a biomonitoring tool for environmental radioactivity; • C. Papastefanou, M. Manolopoulou, T. Sawidis, 1989. Lichens and mosses: Biological monitors of radioactive fallout from the Chernobyl reactor accident.
445	Government of Quebec	Effets sur la santé	<p>Reference To EIS: l'ÉIE V4, le contenu des tableaux 4.2-4 « Summary of Relative Risk for Decommissioning Execution Timeframe », 4.2-5 « Summary of Relative Risk for Institutional Controls Timeframe » et 4.2-6 « Summary of Relative Risk for Post Institutional Controls Timeframe » Section 4.2.2 « Identification of feasible Alternative Means », à la page 4-20</p>	<p>Context: Dans la version anglaise de l'ÉIE V4, le contenu des tableaux 4.2-4 « Summary of Relative Risk for Decommissioning Execution Timeframe », 4.2-5 « Summary of Relative Risk for Institutional Controls Timeframe » et 4.2-6 « Summary of Relative Risk for Post Institutional Controls Timeframe » a changé par rapport à la version antérieure de ces tableaux dans l'ÉIE V0 (2017). Les catégories de risques (humains et environnementaux) et le niveau de risque ont changé pour plusieurs variables. Or, peu de détail est fourni pour appuyer ces changements.</p>	<p>Specific Question / Request for Information:</p> <p>a) Expliquer et justifier ces changements.</p> <p>b) À la section 4.2.2 « Identification of feasible Alternative Means », à la page 4-20, confirmer que le passage « a proposed follow-up monitoring program [...] for groundwater, effluent and environmental monitoring » fait référence aux trois rapports qui sont maintenant disponibles, soit ceux de Gilbert et Kovacs, 2018, Kovacs, 2018 et McKee et Kovacs, 2018. Dans la négative, indiquer quelles références ont été utilisées et les fournir à l'appui du dossier.</p> <p>Pour plus de clarté (dans le futur), les références aux documents de suivi pertinents doivent être précisées dans la documentation déposée.</p> <p>Le code de couleur utilisé dans le document technique complémentaire Post Closure Safety Assessment (figures G-36 à G-40 (TSD_64-508760-ASD-003894_REV 0)) pour illustrer la concentration des nucléides dans</p>

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					la voûte du réacteur, dans la géosphère puis chez les humains (enfants), pour la période post-fermeture, rend la lecture des données de courbes très difficile. L'initiateur doit redéposer les figures en utilisant un code de couleurs et de textures plus discriminant afin de faciliter la compréhension des données présentées.
446	Government of Quebec	Effets sur la santé	Reference To EIS: Ecological Risk Assessment Report (Page 2-23 du Ecological Risk Assessment Report_64-509200-ASD- 004_REV 2), page 223; Pentreath et al., 2014 Publication 124: Protection of the environment under different exposure situations. Annals of the ICRP; Brown et coll., 2008, The ERICA tool. Journal of Environmental Radioactivity, Brown et coll., 2016, new version of the ERICA tool to facilitate impact assessments of radioactivity on wild plants and animals. Journal of environmental radioactivity	Context: Concernant les critères utilisés dans le document technique complémentaire Ecological Risk Assessment Report, les niveaux de référence radiologiques utilisés pour le filtrage donné à la page 223 sont nettement supérieurs à ceux donnés dans la publication 124 de la Commission internationale de protection radiologique pour les organismes terrestres ou celle de l'outil ERICA. La limite utilisée pour les animaux aquatiques est près de la limite haute proposée dans la publication 124 (10 mGy/j).	Specific Question / Request for Information: a) L'initiateur doit justifier pourquoi il n'a pas utilisé les critères plus sévères de la publication 124 et de l'outil ERICA. b) Dans le cas spécifique du risque radiologique, LNC doit fournir une évaluation de la dose populationnelle pour le groupe de personnes habitant le site en période post-institutionnelle de façon cohérente avec le scénario d'occupation proposé. (Référence: AIEA (2024) Report of the integrated regulatory review service).
447	Government of Quebec	Effets sur la santé	Reference To EIS: McVeigh_2018b_NPD Balance of Site Characterization Report_64-509410-REPT-009_REV 0 et Wills_2013_Environmental Baseline_64- 509200-ENA- 001_REV 1	Context: Les rapports McVeigh_2018b_NPD Balance of Site Characterization Report_64-509410-REPT-009_REV 0 et Wills_2013_Environmental Baseline_64- 509200-ENA-001_REV 1 signalent la présence de niveaux de radioactivité dans le sol et dans la végétation dans la zone du projet. Cette contamination représente un risque de migration de ces éléments radioactifs à travers les systèmes racinaires des plantes vers d'autres organismes de la chaîne alimentaire, même après les travaux de confinement du réacteur. Les communautés locales qui pratiquent la collecte de plantes dans cette zone pour diverses utilisations pourraient entrer en contact avec cette contamination, ce qui représente un risque pour leur santé. Néanmoins, l'initiateur mentionne ne pas avoir l'intention de dissuader les gens d'y faire la cueillette en identifiant la zone où se situait le réacteur.	Specific Question / Request for Information: a) LNC doit justifier son intention de ne pas indiquer la zone de confinement du réacteur puisque le site pourrait être utilisé par la population. b) LNC doit préciser les moyens qu'il mettra en place afin d'assurer la surveillance du confinement, tout en maintenant la population informée sur le danger de consommer des plantes provenant de cette zone.