



**Written submission from
Algonquins of Ontario**

**Mémoire des
Algonquins d'Ontario**

In the Matter of

À l'égard de

**Decision on the scope of an environmental
assessment of the proposed Micro Modular
Reactor Project at the Canadian Nuclear
Laboratories Ltd., in Chalk River**

**Décision sur la portée de l'évaluation
environnementale pour le projet de
microréacteur modulaire aux Laboratoires
Nucléaires Canadiens ltée, à Chalk River**

Hearing in writing based on written
submissions

Audience par écrit fondée sur des mémoires

June 2020

Juin 2020



Algonquins of Ontario

June 1, 2020

Aimee Rupert
Environmental Assessment Officer
Canadian Nuclear Safety Commission
Government of Canada
P.O. Box 1046, Station B
280 Slater Street
Ottawa, ON K1P 5S9

VIA ONLINE REQUEST FORM

Dear Ms. Rupert,

Subject: Request to Intervene and Submission of Comments on the Scope of Factors to be Considered in the Environmental Assessment (CEAA 2012) for the Micro Modular Reactor (MMR™) Project by Global First Power at the Chalk River Canadian Nuclear Laboratories Site (Our File CF 48-25)

On behalf of the Algonquins of Ontario (AOO), we write in response to the correspondence from the Canadian Nuclear Safety Commission (CNSC) dated March 24, 2020 (Ref. 2020-H-102). The purpose of this letter is to provide the CNSC and the Impact Assessment Agency of Canada (IAAC) with our request to intervene and provide comments on the scope of factors to be considered in the Environmental Assessment (EA) of Global First Power's (GFP) Micro Modular Reactor (MMR™) Project.

GFP's proposed MMR™ Project is located directly within the unceded Algonquins of Ontario Settlement Area, as referenced within the Agreement-in-Principle (AIP) signed by the AOO and the Governments of Ontario and Canada on October 18, 2016. The signing of the AIP was a key step toward a Final Agreement, and a modern-day Treaty, which negotiations remain ongoing and will eventually clarify the rights of all concerned.

By signing the AIP, the AOO and the Crown expressed their mutual intention and desire for a lasting partnership. This event signaled the beginning of a new relationship between the AOO and the Crown, one in which the mistakes of the past must be supplanted by a new type of relationship prefaced upon mutual respect and cooperation.

As holders of Aboriginal rights and title, the Algonquins are the original stewards of the land and resources within the unceded AOO Settlement Area. The AOO have consistently expressed a commitment to preserving and protecting the environment as well as preserving and protecting Algonquin rights, interests and values while also seeking a suitable land base to revitalize the

Algonquin Nation and to generate economic growth opportunities within Eastern Ontario.

Our rights and interests at Chalk River and the broader AOO Settlement Area are well known and currently subject to modern Treaty negotiations with the Governments of Ontario and Canada. As the primary impacted Indigenous community on this project, we are pleased to share our interest in continuing our active participation in the EA process and ensuring the AOO's rights, values and interests are reflected in the scope of factors.

Reference is made within your Commission Member Document requesting the determination of the scope of factors to be taken into account in the EA process letter to the alleged assertions of rights of various Indigenous groups, leading to a need for consultation with those groups. The AOO agree that consultations are necessary with the AOO, the Algonquins of Pikwakanagan, and the Algonquin Anishinabeg Tribal Council's member First Nations. However, the AOO seriously object to the inclusion of the Metis Nation of Ontario and the Williams Treaties First Nations as rights-holders in the vicinity of the proposed MMR project and ask that you exclude them from the scope of consultations.

Background on the Algonquins of Ontario

Algonquins have lived in present-day eastern Ontario for thousands of years prior to the arrival of Europeans. Since the submission of the Algonquin Petition to the Crown in 1772, the Algonquins have been on a journey of rebuilding and rediscovery. Today, the AOO are comprised of ten Algonquin communities. These include the Algonquins of Pikwakanagan First Nation, Antoine, Kijicho Manito Madaouskarini (Bancroft), Bonnechere, Greater Golden Lake, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan (Sharbot Lake), Snimikobi (Ardoch) and Whitney and Area.

With the signing of a Protocol agreement in 2004, these ten Algonquin communities have come together to form a unified approach to negotiate a modern-day Treaty and land claim. The elected representatives of the AOO, known as the Algonquin Negotiation Representatives, consist of the Chief and Council of the Algonquins of Pikwakanagan First Nation, who are elected under Pikwakanagan's Custom Election Code, and one representative from each of the nine other Algonquin communities elected by Voters within those communities. .

The AOO Settlement Area which is within the Algonquins Traditional Territory includes an area of more than 36,000 km² (9 million acres) centralized in the Kichi-Sibi¹ (Ottawa River) and the Mattawa River watersheds. The unceded territory covers most of eastern Ontario and contains more than 1.2 million people who live and work within the AOO Settlement Area. There are 84 municipal jurisdictions fully and partially located within the unceded AOO Settlement Area, including 75 lower and single tier municipalities and 9 upper tier counties. Importantly, the Canadian Nuclear Laboratories (CNL) Chalk River site (CRL) is located on the banks of Kichi-Sibi and directly within the unceded AOO Settlement Area.

"Sustainability" is a modern term, but sustainability has long been practiced by the Algonquin people as an inherent part of their relationship with the land and water. Since time immemorial Algonquins have lived in a close relationship with the environment, continuously monitoring and adapting to the changes. Algonquins had, and continue to have, deep connections to the land and water. Protection and interaction with the lands and waters of the Settlement Area have

¹ The Ottawa River, otherwise known as the Big River, has also been referred to in the Algonquin language as "Kichi-Sibi", "Kichissippi", "Kitchissippi" and "Kichissippi".

been central to the Algonquins' existence for thousands of years. This connection to the land and waters of the Settlement Area is vital to guide and strengthen the identity and culture of Algonquin peoples moving into the future.

Request for Intervenor Status

GFP's proposed MMR™ Project located at CNL's CRL has the potential to impact the AOO and its Algonquin communities' constitutionally protected rights and interests. As rights holders with a longstanding relationship with the lands and waters at CRL, the AOO as an Intervenor will offer an invaluable and distinctive perspective that will be integral to the EA process.

Our Algonquin Knowledge and Oral Histories provide a well-established record of historic and current use at CRL that will enhance the CNSC's understanding of how the environment may be impacted by the Project. In addition, the MMR™ Project comes with new environmental, cultural, and economic effects that Algonquin Knowledge values can assist in understanding. However, given that the Project is experimental in nature and is piloting flagship SMR technology that may lead to additional on-site projects, there are various unknowns that the AOO must understand to meaningfully engage and bring Algonquin Knowledge to bear in this EA process. Our concerns and issues have been clearly outlined in the AOO's previous submission for this Project dated September 23, 2019 (see Attachment 1), the AOO Submission of Written Comments on the Review of Canadian Nuclear Laboratories' (CNL) Nuclear Power Demonstration Closure Project (NPD), dated February 26, 2018 (see Attachment 2), as well as the AOO Review of the Discussion Paper on the Proposed Project List & Discussion Paper on Information Requirements and Time Management Regulatory Proposal, submitted to the Canadian Environmental Assessment Agency on May 31, 2019 (see Attachment 3). The AOO expect that the level of information and detail requested in these previous submissions will be provided during the EA process for our consideration.

Please see Appendix 1 for the information required by the CNSC to formally advance AOO's request to intervene in this regulatory and assessment process.

Comments and Recommendations on the Scope of Factors

We understand that the IAAC is currently undertaking the MMR™ Project through the former CEAA 2012 framework since the EA process was initiated just prior to the *Impact Assessment Act* (IAA) coming into effect.

With the advent of these relatively new SMR technologies, with many unknown and possibly significant adverse risks, it is our position that the Project deserves to be reviewed under the contemporary IAAC assessment framework². The Minister of Environment and Climate Change (the Minister) has the discretionary authority to designate a proposed project that is not on the Project List. The Minister's discretionary authority can be enabled in circumstances where carrying out the Project, by virtue of its characteristics (e.g., the project is a new or unique type of project) or location (e.g., the project is proposed in an environmentally or otherwise sensitive location) may cause adverse effects within federal jurisdiction or adverse direct or incidental effects, or public concerns related to those effects and thereby warrant that designation.

² Although we support the MMR™ Project being reviewed under the IAA framework and process, the AOO still disagrees with the IAAC's decision to decrease the threshold for nuclear fission and fusion reactors that trigger an impact assessment. AOO maintains that all new nuclear fission and fusion reactors, regardless of thermal capacity should be subject to an impact assessment.

Through previous submissions to the CNSC and IAAC (formerly CEEA) the AOO has continuously expressed its serious concerns with Small Modular Reactors (SMRs), like the MMR™ Project, and their potential impacts to the environment, human health and AOOs rights and interests. The MMR™ Project is a new and unique project, in an environmentally sensitive location, with potential adverse impacts within federal jurisdiction and with significant public concern related to those potential adverse impacts. We ask the CNSC to bring this request to the Minister expeditiously.

Further, we have observed other government agencies (e.g. Public Services and Procurement Canada on the Temiskaming Dam Project), adapt projects already on the CEEA tract to align with the IAAC and the increased imperatives regarding Indigenous participation and partnership in the impact assessment process. With these expectations and precedents being set on other assessments the AOO is participating in under federal jurisdiction, we believe that our requests and recommendations are entirely reasonable.

For the reasons outlined above, several of our comments and recommendations on the scope of factors pertain to bringing the review of this Project on par with the expectations and considerations currently required under the new IAA. Please see Appendix 2 for our full review and comments.

Conclusion

In closing, we highlight our ongoing interest in establishing collaborative Consultation and Accommodation processes with the Crown, CNSC, IAAC and GFP that support successful project development while upholding the Aboriginal rights and interests of the AOO. Over the last several months we have experienced minimal engagement and discussion in this regard and are hopeful that we can reinvigorate these discussions in the coming months.

Please note that the AOO, like many other Indigenous communities, have shifted capacity and resources to ensure the safety and well-being of its staff and community members due to COVID-19. AOO's physical offices are currently closed and although we are adapting to online and web-based technological tools to maintain business continuity, there may be delays in processing and response times. We respectfully request regulatory flexibility and patience where required given these exceptional circumstances.

We look forward to working with CNSC, IAAC and GFP on the MMR™ Project at CRL to ensure that the environment and the rights and interests of the AOO and its Algonquin communities are adequately considered and protected during the EA process.

If you have any questions on our submission or wish to discuss these matters further, please do not hesitate to contact Sarah Dougherty our Policy and Strategic Initiatives Advisor by email at sdougherty@tanakiwin.com.

Sincerely,

Original signed by

Janet Stavinga
Executive Director

- Attach 1 Correspondence to Aimee Rupert, Environmental Assessment Officer, Canadian Nuclear Safety Commission with regards to the AOO Submission of Preliminary Written Comments on the Micro Modular Reactor (MMR™) Project by Global First Power at the Chalk River Canadian Nuclear Laboratories Site, dated September 23, 2019
- Attach 2 Correspondence to Louise Levert, Senior Tribunal Officer, Secretariat Division, Canadian Nuclear Safety Commission with regards to the AOO Submission of Written Comments on the Review of Canadian Nuclear Laboratories' (CNL) Nuclear Power Demonstration Closure Project (NPD), dated February 26, 2018
- Attach 3 AOO Review of the Discussion Paper on the Proposed Project List & Discussion Paper on Information Requirements and Time Management Regulatory Proposal, submitted to the Canadian Environmental Assessment Agency on May 31, 2019
- c.c. The Honourable Jonathan Wilkinson, Minister of the Environment and Climate Change
 Ronald Doering, Chief Federal Negotiator
 David McGovern, President, Impact Assessment Agency of Canada
 Anjala Puvananathan, Director, Ontario Region, Impact Assessment Agency of Canada
 Louise Levert, Senior Tribunal Officer, Secretariat Division, Canadian Nuclear Safety Commission
 Joe Howieson, Chief Executive Officer, Global First Power
 David Train, Manager Regulatory Affairs, Ontario Power Generation
 Rosalie Ahlan, Director Project Manager – MMR at Chalk River, Global First Power
 Eric McGoey, Engagement and Communications Director, Global First Power
 Kenn Ross, Indigenous Relations Advisor, Ontario Power Generation
 Pat Quinn, Canadian Nuclear Laboratories
 Shannon Quinn, Atomic Energy of Canada Limited
 Algonquin Negotiation Representatives – AOO
 Robert Potts, Principal Negotiator and Senior Legal Counsel – AOO
 Don Richardson, Managing Partner, Shared Value Solutions (SVS)
 Meghan Buckham, Negotiations and Regulatory Specialist, SVS
 James Hunton, Vice-President, Jp2g Consultants Inc, Technical Advisor, AOO
 Sarah Dougherty, Policy and Strategic Initiatives Advisor – AOO

Appendix 1

The AOO will work with the Algonquin communities and technical experts to review EA documents and support our meaningful participation in the EA process. The comments shared on previous submissions for this Project, the comments contained in this submission and our review of documents in subsequent phases of the EA will be presented to the Commission. The nature of our insights and comments will be based on:

1. Community Expertise and Algonquin Knowledge

Key distinctive insights include:

- Greater understanding of the AOO and its Algonquin communities who assert existing Aboriginal rights and title throughout the AOO Settlement Area of which encompasses the Project site in its entirety.
- Insight and consideration into the AOO's ongoing Treaty negotiations with the Governments of Ontario and Canada and the Project's impact on these negotiations.
- Insights on the scope of environmental, cultural and economic impacts based on Algonquin Knowledge, values and perspectives of the AOO, direct and indirect potential impacts of the Project on Aboriginal Peoples, specifically the AOO, including use of lands, waters and resources.
- Support and provide insights into measures and approaches to avoid, mitigate and accommodate impacts to AOO's rights and interests.

2. Environmental and Technical Expertise to Support Assessment of Impacts

Key distinctive insights include:

- Insights and greater understanding of the environmental considerations, impacts, and risks that are critical to understanding the potential impacts of the Project on AOO's Aboriginal rights and interests.
- Insights and greater understanding of the socio-economic and health considerations impacts and risks that are critical to understanding the potential impacts of the Project on AOO's Aboriginal rights and interests.
- Support and provide insights into measures and approaches to avoid, mitigate and accommodate impacts to AOO's rights and interests.
- Integration of environmental/technical review and Algonquin Knowledge to present a coordinated and comprehensive submission to the CNSC.

Please Note: Elements of Algonquin Knowledge and land use data may be confidential, and it is our expectation that the IAAC, CNSC and GFP will work with AOO to ensure our Algonquin Knowledge is not shared publicly or used for any other process or purpose.

Requester Contact Information

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Appendix 2

The CNSC has recommended the scope of the factors for this EA be those mandated under CEAA 2012 and that no additional factors are required. The AOO have reviewed the factors and assert that additional factors must be considered to allow for an enhanced and comprehensive effects assessment as well as a stronger consideration of the effects of the Project on AOO's Aboriginal rights and interests.

Recommended Refinements to Factors Mandated under CEAA 2012

Additions and refinements from the AOO are provided in **red**.

19 (1) The environmental assessment of a designated project must take into account the following factors:

- a) the environmental, **cultural, health, social and economic** effects of the designated project, including the environmental, **cultural, health, social and economic** effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental, **cultural, health, social and economic** effects that are likely to result from the designated project in combination with **climate change and/or** other physical activities that have been or will be carried out;
- b) the **scope of effects considered and assessment of the** significance of the effects referred to in paragraph (a) **must be determined in partnership with the Algonquins of Ontario**;
- c) comments from the public **and the Algonquins of Ontario** — or, with respect to a designated project that requires that a certificate be issued in accordance with an order made under section 54 of the National Energy Board Act, any interested party — that are received in accordance with this Act;
- d) mitigation measures that are technically and economically feasible and that would mitigate any significant adverse environmental, **cultural, health, social and economic** effects of the designated project;
- e) the requirements of the follow-up program in respect of the designated project **which includes the development of an Algonquins of Ontario monitoring program with decision-making authority**;
- f) the purpose of the designated project;
- g) alternative means of carrying out the designated project that are technically and economically feasible and the environmental effects of any such alternative means;
- h) any change to the designated project that may be caused by the environment;
- i) the results of any relevant study conducted by a committee established under

section 73 or 74; and

- j) any other matter relevant to the environmental assessment that the responsible authority, or — if the environmental assessment is referred to a review panel — the Minister, requires to be taken into account.

(2) *The scope of the factors to be taken into account under paragraphs (1)(a), (b), (d), (e), (g), (h) and (j) is determined by*

a) *the responsible authority; or*

b) *the Minister, if the environmental assessment is referred to a review panel.*

(3) *The environmental assessment of a designated project ~~may~~ **must include an assessment of take into account** community knowledge and **Algonquin Aboriginal** traditional knowledge*

Recommended Additional Factors

1. **The impact that the designated project may have on the Algonquins of Ontario and any adverse impact that the designated project may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982*;**
2. **Algonquin knowledge provided with respect to the designated project;**
3. **The extent to which the designated project contributes to sustainability;**
4. **The intersection of sex and gender with other identity factors;**
5. **Consideration of the potential effects of safety and security during construction and operation of the Project, including emergency response planning in collaboration with the Algonquins of Ontario.**
6. **Consideration of alternative methods for using the substantial energy production of the Project, and the potential effects – both positive and negative – of this substantial energy production**



Algonquins of Ontario

September 23, 2019

Aimee Rupert
Environmental Assessment Officer
Canadian Nuclear Safety Commission
Government of Canada
P.O. Box 1046, Station B
280 Slater Street
Ottawa, ON K1P 5S9

BY EMAIL ONLY

cncs.ea-ee.ccsn@canada.ca

Dear Ms. Rupert,

Subject: Submission of Preliminary Written Comments on the Micro Modular Reactor (MMR™) Project by Global First Power at the Chalk River Canadian Nuclear Laboratories Site (Our File CF 48-25)

We are writing to provide the Canadian Nuclear Safety Commission (CNSC) and the Impact Assessment Agency of Canada (IAAC – formerly CEAA) with our comments and recommendations on the Project Description Summary for the Global First Power Micro Modular Reactor Project.

On behalf of the Algonquins of Ontario (AOO) thank you for the opportunity to provide our views and preliminary comments on the Micro Modular Reactor (MMR™) project by Global First Power (GFP) at the Canadian Nuclear Laboratories (CNL) site in Chalk River. The Project is located within the unceded Algonquin Traditional Territory. The AOO assert unextinguished and constitutionally protected Aboriginal rights and title the unceded Algonquin Traditional Territory in Eastern Ontario (referred to as the “AOO Settlement Area”) and are currently in negotiations towards a modern-day Treaty with the governments of Ontario and Canada.

The IAAC is currently undertaking a federal environmental assessment (EA) for the MMR™ project. The Algonquins of Ontario (AOO) are the primary affected Indigenous community for the purposes of this EA. The AOO previously submitted comments regarding the designation of the project, and we were pleased with the decision from CEAA to conduct a fulsome EA for the Project.

We are writing to provide CNSC and IAAC with our feedback on the Project Description Summary for GFP's proposed MMR™ Project at Chalk River Laboratories (CRL). Firstly, we wish to provide some background on the AOO, our Algonquin communities, our rights and

interests and our current Treaty negotiations with Canada and Ontario. As per our previous correspondence, we are seeking a meaningful Consultation and Accommodation process from the Crown, the Canadian Nuclear Safety Commission, and Global First Power (the Proponent). The AOO have met with Global First Power and underscores a need for continued direct dialogue and engagement with the Proponent.

Background on the Algonquins of Ontario

Algonquins have lived in present-day Ontario for thousands of years before Europeans arrives. Today, the AOO are comprised of ten Algonquin communities. These include the Algonquins of Pikwakanagan First Nation, Antoine, Kijicho Manito Madaouskarini (Bancroft), Bonnechere, Greater Golden Lake, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan (Sharbot Lake), Snimikobi (Ardoch) and Whitney and Area.

Since 1772, when the first Algonquin Petition was submitted to the Crown, the Algonquins have been on a journey of rebuilding and rediscovery. Based on a Protocol signed in 2004, these ten communities are working together to provide a unified approach to reach a settlement of the Algonquin land claim.

The Algonquin Negotiation Representatives consist of the Chief and Council of the Algonquins of Pikwakanagan First Nation, who are elected under Pikwakanagan's Custom Election Code, and one representative from each of the nine other Algonquin communities, each of whom is elected by the enrolled Algonquin Voters of each community for a three-year term.

The AOO Settlement Area includes an area of more than 9 million acres within the watersheds of the Kichi-Sìbì (Ottawa River) and the Mattawa River in Ontario, unceded territory that covers most of eastern Ontario, including the Chalk river Laboratories site. More than 1.2 million people live and work within the unceded AOO Settlement Area. There are 84 municipal jurisdictions fully and partially located within the unceded AOO Settlement Area, including 75 lower and single tier municipalities and 9 upper tier counties.

"Sustainability" is a modern term, but sustainability has long been practiced by the Algonquin people and their ancestors. Since time immemorial Algonquins have lived in a way that they constantly monitored the environment and when changes occurred, they adapted. Algonquins had, and continue to have, deep connections to the land. Protection and interaction with the lands and waters of the unceded Traditional Territory have been central to the Algonquins' existence for thousands of years.

Impacts to AOO Rights and Interests

GFP's proposed MMR™ Project located at CNL's CRL site has the potential to impact the rights and interests of AOO and its Algonquin communities from a cultural, environmental and socio-economic perspective. Based on known land use and cultural data, it is well-established that the CRL site is in an area where Algonquin people have a longstanding and well-documented record of historic and current use. Drawing on this knowledge and based on the AOO's constitutionally protected Aboriginal rights and title, the AOO have considered a number of potential issues related to our rights and interests. Our comments on these issues are further described below.

1. Given the experimental nature of GFP and new technology like MMRs, there are many potential risks to the environment, human health, and the Aboriginal rights and title of the

Algonquin people. Impacts from CRL and related projects have affected Algonquin people since 1944 (when they were not originally consulted or accommodated on the siting of facilities on lands currently overseen by CNL and managed by Atomic Energy of Canada Limited (AECL) representing the Crown). Impacts from the currently proposed MMR™ project from GFP and other projects will continue to affect the AOO well into the future. For this rationale, it is necessary to establish formal consultation and accommodation process between AOO and GFP. As a general comment GFP's Project Description lacked sufficient detail to properly assess the potential impact of the Project on the AOO's rights and interests. A higher level of detail is required to more fully understand the Project and evaluate potential impacts. At a high level, the AOO are concerned about the following potential impacts related to the Project.

- contamination of soil, vegetation, and harvested plants;
 - surface and ground water;
 - wildlife and their habitats;
 - air quality and dust contamination;
 - nuclear waste storage, transportation, and processing; and
 - impacts to traditional land and resource use
 - impacts to Aboriginal and Treaty rights
 - technological malfunctions and accidents during construction, operation, and decommissioning, and/or waste management.
2. The AOO seek further information about quantities and nature of waste resulting from the project. Currently, the description merely outlines that "low and intermediate level waste" that will be managed, stored, transported, and processed. The AOO need additional details that describe the amount, composition and concentrations of the waste generated by the MMR™ project as well as detailed descriptions of how the waste will be managed stored and transported. It is important to note that currently much of the storage of nuclear waste in Canada is temporary; there is currently not a permanent solution or location to store high-level nuclear waste, and large quantities of low and intermediate level waste remain in temporary storage in Canada.
 3. The project description outlines that "the CRL site contains several small drainage basins that drain directly to the Ottawa River or to smaller lakes and streams on CRL site, which in turn drain to the Ottawa River." This underscores the importance of understanding impacts should accidents or malfunctions occur. The description outlines in section 6.2.1 that "the project could, however, impact fish or fish habitat in nearby waterbodies due to the release of effluents." What is contained in the effluents being released? What are the concentrations of the contaminants contained in the effluent produced by the MMR™?
 4. In Section 6.2.3 the description outlines that tree clearing will be somewhat mitigated by avoiding Migratory Bird breeding season, AOO have concerns about the habitat reconstruction and long-term effects of the proposed tree and habitat clearing. Further details and habitat restoration plans are requested. The act of tree clearing does not simply affect the contained Chalk River site, but bird populations, land use, rights, and harvesting of the AOO community more broadly, and regionally. Are any of the migratory bird species and bat species that will be affected by the tree clearing, also contained within the confirmed populations of Endangered Wildlife? AOO request further information.

5. Given the interconnected nature of ecosystems within the Algonquin Settlement Area, the project description anticipating that the “environmental effects of this project are expected to be limited to the CRL site” fails to recognize the complex and dynamic nature of these ecosystems. Migratory birds, bats, fish, reptiles, groundwater, air, and other components of these ecosystems are not confined to private property lines. This interconnectedness of ecosystems is fundamental to the Algonquin worldview and identity.
6. The project description notes the “The Nuclear Plant would generate approximately 15 MWt of process heat that could supply electrical power and/or heat to the Chalk River Laboratories for CNL as the potential end user. The electrical power could also be supplied to the area grid, over an anticipated life span of 20 years.” The project description requires significant additional detail on the specific infrastructure, locations and potential impacts from these components of the Project. Additionally, should a formal agreement with CNL/AECL for use of process heat, or grid connection to Hydro One Networks Inc. not materialize, how does the proponent envision using the significant process heat? And, given that there may be several small modular reactors at this site, all producing significant process heat, how does the proponent envision assessing the cumulative impacts of very large quantities of process heat at this site?

In closing, we look forward to working with CNSC, IAAC and GFP on the MMR™ Project at CRL to ensure that the environment and the rights and interests of the Algonquins of Ontario are sufficiently considered and protected during the EA process.

If you have any questions on our submission or wish to discuss these matters further, please do not hesitate to the undersigned either by telephone at 613-735-3759 or by email at jestavinga@tanakiwin.com.

Sincerely,

Original signed by

Janet Stavinga
Executive Director

c.c. Louise Levert, Senior Tribunal Officer, Secretariat Division, Canadian Nuclear Safety Commission
Joe Howieson, Chief Executive Officer, Global First Power
Eric McGoey, Director, Remote Generation Development, Ontario Power Generation
Algonquin Negotiation Representatives – AOO
Robert Potts, Principal Negotiator and Senior Legal Counsel – AOO
Don Richardson, Managing Partner, Shared Value Solutions
John Glover, Environmental Management Consultant, Shared Value Solutions
James Hunton, Vice-President, Jp2g Consultants Inc. Technical Advisor – AOO
Sarah Dougherty, Policy and Strategic Initiatives Analyst – AOO



Algonquins of Ontario

February 26, 2018

Louise Levert
Senior Tribunal Officer, Secretariat Division
Canadian Nuclear Safety Commission
Government of Canada
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Ottawa, ON K1P 5S9

BY E-MAIL ONLY

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Dear Ms. Levert,

Subject: Submission of Written Comments on the Review of Canadian Nuclear Laboratories' (CNL) Nuclear Power Demonstration Closure Project (NPD) (Our File CF 48-2)

On behalf of the Algonquins of Ontario (AOO) thank you for the opportunity to provide our views on Canadian Nuclear Laboratories' (CNL) Nuclear Power Demonstration (NPD) Closure Project as part of the Canadian Nuclear Safety Commission (CNSC) environmental assessment process.

Algonquins of Ontario

Algonquins have lived in present-day Ontario for thousands of years before the Europeans arrived. Today, the AOO are comprised of ten Algonquin communities. These include the Algonquins of Pikwakanagan First Nation, Antoine, Kijicho Manito Madaouskarini (Bancroft), Bonnechere, Greater Golden Lake, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan (Sharbot Lake), Snimikobi (Ardoch) and Whitney and Area.

Based on a Protocol signed in 2004, these communities are working together to provide a unified approach to reach a settlement of the Algonquin land claim.

Most Canadians are likely unaware that Parliament Hill not only sits within Algonquin Traditional Territory but on unceded Algonquin land. The House of Commons, the Senate and the Supreme Court of Canada make laws for all Canadians while situated on land that was never lawfully surrendered to the Crown, contrary to formal legal rules established as far back as 1763.

The AOO are currently in treaty negotiations with Ontario and Canada pursuant to assertions of unextinguished Aboriginal rights and title of Algonquins in Eastern Ontario. The Algonquins land claim includes an area of 9 million acres within the watersheds of the Kichissippi (Ottawa River)

and the Mattawa River in Ontario, unceded territory that covers most of eastern Ontario. More than 1.2 million people live and work within the Settlement Area. There are 84 municipal jurisdictions fully and partially located within the Settlement Area, including 75 lower and single tier municipalities and 9 upper tier counties.

On October 18, 2016, the AOO and the Governments of Ontario and Canada reached a major milestone in their journey toward reconciliation and renewed relationships with the signing of the Agreement-in-Principle (AIP). The signing of the AIP is a key step toward a Final Agreement, and a modern-day Treaty, which will clarify the rights of all concerned and open new economic development opportunities for the benefit of the AOO and their neighbours in the Settlement Area in eastern Ontario.

By signing the AIP, the AOO and the Crown have expressed in a formal way their mutual intention and desire for a lasting partnership. This event signalled the beginning of a new relationship between the AOO and the Crown, one in which the mistakes of the past must be supplanted by a new type of mutual respect and cooperation.

Review of the Canadian Nuclear Laboratories (CNL) Nuclear Power Demonstration Closure Project (NDP) as it relates to the AOO

The NDP site is located within the unceded Algonquins of Ontario Settlement Area, on the west bank of to the Kitchissippi (Ottawa River), the Algonquins' most revered waterway. The NDP property is subject to the AOO's assertion of existing Aboriginal rights and title as a result of ongoing land claim agreements. As such, it is the AOO collectively who have declared an interest in the lands located within the watersheds of the Ottawa and Mattawa Rivers, and who regard this Territory as their traditional homelands.

The NDP was constructed without any consultation or consent from Algonquin communities that have used and occupied and who continue to use and occupy the lands and waters within and around the site. Due to the toxic and long life of nuclear contaminants, the NDP poses significant risks to the environment, health and the Aboriginal rights and title of Algonquin people.

It is important to note that the AOO have a significant interest in the NDP Closure Project and the NDP property given its location within the Algonquin Land Claim Settlement Area and its proximity to seven proposed land selections, as well as the Kitchissippi. The AOO wish to discuss potential land transfer agreements for portions of the NDP Property as part of the consultation and accommodation process with CNL/AECL. However, the AOO wishes to ensure that the contaminants on site are managed in the safest way possible.

Based on information provided by CNL in its Environmental Impact Statement (EIS) for the NDP Closure Project as submitted to the CNSC (EIS, 2017), this review focuses on the interactions between NDP Closure Project and the rights and interests of AOO members. Based on known land use and cultural heritage data, the AOO wish to emphasize that the NDP site is an area where Algonquin people have a longstanding and well-established record of historic and ongoing current use. Drawing on this knowledge, and based on AOO members' constitutionally protected Aboriginal rights and title, the AOO has considered the following potential issues related to the rights and interests of AOO members in our review of the NDP Closure Project:

- Potential impacts to the current use of lands and resources for traditional purposes by AOO members
- Potential impacts to the health of AOO members
- Potential impacts to AOO members' informal and formal socio-cultural and economic systems associated with the trade and sharing of resources or products from traditional land use
- Potential impacts to AOO members' commercial harvesting associated with traditional land use
- Potential impacts to AOO cultural heritage and archaeological resources

At the current time, no formal accommodation agreement exists between AOO and the CNSC representing the Crown, or the AOO and CNL. The results of our review provide a series of comments and accommodations that CNSC and CNL must consider prior to approval of the NPD Closure Project. The AOO are engaged in parallel discussions with the CNSC regarding accommodations with various facilities for which the CNSC provides Crown regulatory oversight.

This report provides a set of comments and accommodations that will enable us to work with the CNSC and CNL to move forward in a way that ensures Algonquin rights and interests are protected and promoted. We view this as an opportunity to set the stage for a productive relationship between the AOO, CNSC and CNL, rooted in respect and mutual benefit.

Should you wish to discuss this matter further, please do not hesitate to contact Janet Stavinga, Executive Director of the AOO Consultation Office by telephone at 613-735-3759 or by email at jstavinga@tanakiwin.com.

Yours truly,

Original signed by

Robert J. Potts
Principal Negotiator and Senior Legal Counsel
 Algonquin Treaty Negotiations

Attach 1 Review of the Canadian Nuclear Laboratories' (CNL) Nuclear Power
 Demonstration Closure Project (NPD)

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 Adam Zenobi, Participant Funding Program Administrator and Aboriginal Consultation Advisor, Policy, Aboriginal, and International Relations Division, Canadian Nuclear Safety Commission
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Nuclear Power Demonstration Closure Project - Technical Review

Technical Review of the Draft Environmental
Impact Statement

Prepared by:
Algonquins of Ontario

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Executive Summary

The Algonquins of Ontario (AOO) assert unextinguished and constitutionally protected Aboriginal rights and title to a traditional territory in Eastern Ontario (referred to as the “unceded AOO Settlement Area”) and are currently in negotiations towards a modern-day Treaty with the governments of Ontario and Canada. The AOO have conducted a review of the Canadian Nuclear Laboratories (CNL) Nuclear Power Demonstration (NPD) Closure Project as part of the Canadian Nuclear Safety Commission (CNSC) environmental assessment process. CNL is applying to the CNSC to decommission the NPD reactor beginning in 2019 using an in-situ decommissioning method, which would leave the NPD reactor and its residual radioactive material permanently entombed on the current NPD property. All major decommissioning work is expected to be completed by 2020, at which point the “institutional controls” begins and on-site monitoring and maintenance activities would commence for a minimum 100-year period.

The NPD is an out of service nuclear reactor facility that is located along the southern shores of the Ottawa River (known in the Algonquin language as “Kitchissippi”) near Rolphton, Ontario, within the boundaries of the unceded AOO Settlement Area. The NPD property covers an area of approximately 385 hectares. The Nuclear Power Demonstration Waste Facility (NPDWF), where the reactor and waste liabilities exist, is located on a 2.4 hectare parcel of land (roughly 140m wide by 180m deep) surrounded by a 380 hectare exclusion zone which is referred to in this document as the NPD property. There are no construction or development activities occurring in the exclusion zone.

The NPD site is located within unceded Algonquin Traditional Territory. The AOO have asserted existing Aboriginal rights and title throughout the Settlement Area, including the NPD site. At the time of the Crown decisions to establish and operate the NPD reactor in the unceded AOO Settlement Area, the Crown did not consult with the AOO, or provide accommodations for impacts to AOO rights and interests. It is time for CNL and the CNSC to formally acknowledge the use of the unceded Algonquin Settlement Area for the development of nuclear reactor technology, and as a site proposed for managing resulting radioactive waste materials. The NPD has significantly impacted the AOO through the displacement of our people, the loss of access for traditional purposes, the destruction of our cultural heritage resources and the release of radioactive, and other hazardous materials, into the environment.

It is important to note that the AOO have a significant interest in the NPD Closure Project and the NPD property given its location within the Algonquin Land Claim Settlement Area and its proximity to seven proposed land selections, as well as the Kitchissippi. The AOO wish to discuss potential land transfer agreements for portions of the NPD Property as part of the consultation and accommodation process with CNL/AECL. However, the AOO wishes to ensure that the contaminants on site are managed in the safest way possible.

Based on information provided by CNL in its Environmental Impact Statement (EIS) for the NPD Closure Project as submitted to the CNSC (EIS, 2017), this review focuses on the interactions between NPD Closure Project and the rights and interests of AOO members. Based on known land use and cultural heritage data, the AOO wish to emphasize that the NPD site is an area where Algonquin people have a

longstanding and well-established record of historic and ongoing current use. Drawing on this knowledge, and based on AOO members' constitutionally protected Aboriginal rights and title, the AOO has considered the following potential issues related to the rights and interests of AOO members in our review of the NPD Closure Project:

- Potential impacts to the current use of lands and resources for traditional purposes by AOO members
- Potential impacts to the health of AOO members
- Potential impacts to AOO members' informal and formal socio-cultural and economic systems associated with the trade and sharing of resources or products from traditional land use
- Potential impacts to AOO members' commercial harvesting associated with traditional land use
- Potential impacts to AOO cultural heritage and archaeological resources

At the current time, no formal accommodation agreement exists between AOO and the CNSC representing the Crown, or the AOO and CNL. The results of our review provide a series of comments and accommodations that CNSC and CNL must consider prior to approval of the NPD Closure Project. The AOO are engaged in parallel discussions with the CNSC regarding accommodations with various facilities for which the CNSC provides Crown regulatory oversight. The following list presents a high-level overview of the key accommodation measures identified by AOO with regard to CNL and its responsibilities:

- CNL must develop formal accommodation agreements with the AOO for past, present and future impacts through the development of a Long-Term Relationship Agreement, including land transfer arrangements for the NPD property.
- The CNL must provide formal responses to the issues and comments provided in this review. These should include detailed descriptions of the actions to be taken to provide additional information, collect missing data, and remedy shortcomings of the EIS.
- As noted in this review, additional data collection is required to adequately characterize the baseline environment. This includes data collection on groundwater quality, surface water quality (radiological and non-radiological), fish tissues, benthic invertebrates, and wetlands.
- CNL must provide detailed descriptions of follow up monitoring programs for a range of environmental parameters including groundwater, surface water, aquatic biota (i.e. fish tissue monitoring and benthic invertebrate monitoring), wetlands and the atmospheric environment. The CNL must engage in meaningful involvement of the AOO in the ongoing environmental, cultural heritage, and human health monitoring in and around NPD site.
- CNL must provide accessible information for Algonquin citizens, including communications protocols for informing communities about monitoring results, participation opportunities, and incidents such as spills, accidents or malfunctions.

- CNL should provide a framework for addressing the cumulative effects of CNSC-regulated projects (e.g. NRU reactor, Chalk River Laboratories, NSDF, etc.) and other activities in the region that affect AOO rights and interests across the unceded AOO Settlement Area
- CNL must engage in collaborative decision-making with the AOO, as part of the consultation delegated to it by the Crown, and the obligation to secure free, prior and informed consent for all projects. This decision-making must recognize and strengthen the jurisdiction that the AOO have with respect to this Project, the environment and culture.
- The CNL must create protocols to encourage transparency, accountability and credibility. Decisions should be based on rigorous science and the Indigenous Knowledge of the AOO. Where appropriate this must include the completion of comprehensive Indigenous Knowledge and land use studies with the AOO.
- To promote the effective participation of the AOO within the environmental management, monitoring, and remediation of the NPD site in coordination with CNSC regulation, we strongly suggest the creation of a Nuclear Environmental Review Board (NERB) composed of representatives from the AOO, CNSC and CNL. The NERB would be responsible for providing guidance to the operation monitoring programs. The NERB would also be responsible for reviewing annual reports, applications, licence renewals and other activities associated with the NPD. Resources must be provided to allow the NERB to dedicate the time required to complete these tasks. The NERB should have access to funding for obtaining guidance from technical experts, where appropriate.

This report provides a set of comments and accommodations that will enable us to work with the CNSC and CNL to move forward in a way that ensures Algonquin rights and interests are protected and promoted. We view this as an opportunity to set the stage for a productive relationship between the AOO, CNSC and CNL, rooted in respect and mutual benefit.

1.0 Introduction

Canadian Nuclear Laboratories (CNL or the Proponent) is applying to the Canadian Nuclear Safety Commission (CNSC) to demolish, remove and decommission the Nuclear Power Demonstration (NPD) facilities (the Project) in eastern Ontario. The Nuclear Power Demonstration Nuclear Generating Station (NPDNGS) was the first nuclear power reactor in Canada and was used as a prototype for the Canada Deuterium Uranium (CANDU®). CNL is proposing to decommission the NPD facilities using an in-situ decommissioning approach that isolates and contains the contaminated structures in a below-ground containment on the existing NPD property.

The NPD site located within the unceded Algonquins of Ontario Settlement Area, on the west bank of the Kitchissippi (Ottawa River), the Algonquins' most revered waterway. The NPD property is subject to the AOO's assertion of existing Aboriginal rights and title as a result of ongoing land claim agreements. As such, it is the AOO collectively who have declared an interest in the lands located within the watersheds of the Ottawa and Mattawa Rivers, and who regard this Territory as their traditional homelands.

The NPD was constructed without any consultation or consent from Algonquin communities that have used and occupied and who continue to use and occupy the lands and waters within and around the site. Due to the toxic and long life of nuclear contaminants, the NPD poses significant risks to the environment, health and the Aboriginal rights and title of Algonquin people.

The NPD site is located within the Algonquin Land Claim Settlement Area. The Algonquins of Ontario and the Governments of Canada and Ontario are negotiating towards a modern-day Treaty that will recognize and affirm the existing Aboriginal and treaty rights of the Algonquins of Ontario.

It is important to note that the AOO have a significant interest in the NPD Closure Project and the NPD property given its location within the unceded Algonquin Land Claim Settlement Area and its proximity to seven proposed land selections as well as the Kitchissippi. The AOO wish to discuss potential land transfer agreements for portions of the NPD Property as part of the consultation and accommodation process with CNL.

The AOO have an interest in ensuring that this Project occurs in a responsible manner that manages risks (both present and future), safeguards the environment, protects health and safety, and respects the Aboriginal rights and title of the AOO. To this end, we have completed a review of the Environmental Impact Statement (EIS) and supporting documents prepared on behalf of CNL. The objectives of this review are:

- to evaluate how the rights and interests of Algonquin people living in the unceded AOO Settlement Area overlap and may be impacted by the Project;
- to provide recommendations for actions that are needed to avoid, mitigate and/or accommodate any impacts to the AOO;
- to identify environmental and technical issues with the Project and provide recommendations for revisions to the EIS; and
- to identify strategies for involving the AOO in management and oversight of the Project;
- To identify appropriate consultation and accommodation measures for AOO.

1.1 Project Description

The NPD site is located in unceded AOO Traditional Territory along the Kitchissippi in eastern Ontario (Figure 1). The site is in the town of Laurentian Hills in Renfrew County approximately 25 km northwest (upstream) of the Chalk River Laboratories (CRL) site. The land around the site is primarily forested with many rivers and lakes that form part of the Ottawa River watershed.

The NPD property itself is approximately 385 hectares, while the Nuclear Power Demonstration Nuclear Generating Station (NPDNGS) and associated facilities make up less than 1% of this area. The NPDNGS is a 20 MWe Canada Deuterium Uranium (CANDU®) reactor that began operation in 1962. It was operated by Ontario Hydro until 1987 when it was permanently shut down, after which responsibility for the site was transferred to Atomic Energy of Canada Limited (AECL), a crown corporation. The NPD facilities are now referred to as the Nuclear Power Demonstration Waste Facility (NPDWF) and are considered a Class

I nuclear facility under the *Nuclear Safety and Control Act*. The NPDWF has a federal Decommissioning Waste Facility License and is authorized for storage and surveillance of nuclear waste (CNL EIS, 2017).

After permanent shutdown of the NPDWF, all systems not necessary for the safe storage of wastes were shutdown. Used fuel was moved to the Chalk River Laboratories (CRL) fuel storage facilities. Surplus equipment that could be moved was scavenged for re-use. Other equipment, including the turbine system, control room and support facilities were demolished to the extent possible. Underground storage tanks used for diesel, furnace oil and liquid radiological waste were removed, and the soil was remediated. There are two closed landfills on the NPD site located approximately 300m southwest (Landfill #1) and 600m northwest (Landfill #2) of the NPDWF. Remaining NPDWF structures include the reactor building, a diesel generator, the ventilation stack and a guardhouse (EIS, 2017).

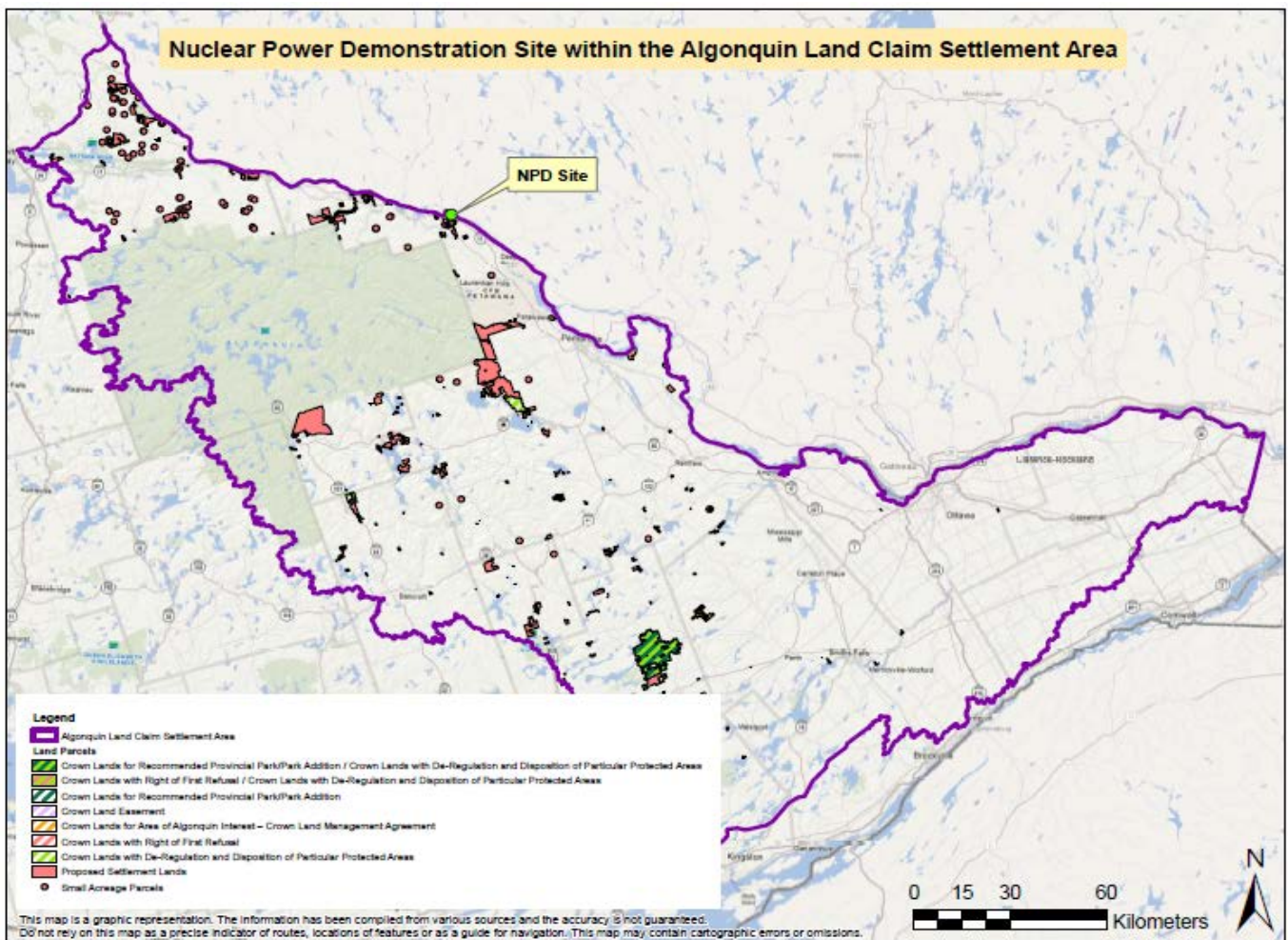


Figure 1- Location of the Nuclear Power Demonstration Site in AOO Settlement Area

Preliminary closure and decommissioning activities were completed in 1988. During this time, all spent nuclear fuel was removed and transferred to the CRL site. Since that time the NPD site has remained inactive and in a state of permanent shutdown to allow radioactive contamination to diminish. This

strategy is known as deferred decommissioning. It allowed the majority of short-lived radionuclides to decay, resulting in an estimated decrease of radioactivity from 2×10^{15} Bq in 1988 to 4.7×10^{13} in 2018. CNL has stated that this deferred decommissioning helps to reduce the hazards associated with working on the site and reduces the risk of decommissioning activities (EIS, 2017).

CNL is proposing to undertake in-situ decommissioning for the NPD site. The underlying rationale for using this method is that the underground facilities and barriers will contain the majority of nuclear contamination, allowing it to decay through time. Small amounts of nuclear contamination will be released through time but according to the proposed plan, these will be sufficiently small so that they pose minimal risks. For example, CNL claims that after 50,000 years, 98% of the radioactivity of contaminated materials will be retained within the below ground facilities.

CNL is proposing to complete decommissioning by first prepping the site and constructing a batch mixing plant for the fabrication of grout. This will be used to make a pourable type of Portland cement. The grout will be poured and pumped throughout the below ground structures to seal them in place. The grout is of a consistency that will allow it to be pumped so that it gets in all crevices of the facility. Next, the above ground structures will be demolished, broken down and used as a backfill overtop the underground facilities. After backfilling has been completed, a concrete cap and engineered barrier will be installed. Grading and drainage ditching will be installed to manage precipitation and runoff. The ventilation stack will be left in place for use by chimney swifts (a species at risk) that use it as roosting habitat. After demolition and grouting have been completed, the site will be rehabilitated and prepared for long-term maintenance and monitoring. After decommissioning activities have been completed the NPDWF will be fenced off and the site will be placed under institutional control, with restricted access. During institutional control, CNL will complete vegetation management, groundwater monitoring, site maintenance (e.g. fence and road), and inspections on engineered cover. Institutional control will continue for an undetermined amount of time.



Figure 2 - Nuclear Power Demonstration Waste Facility site and surrounding area (CNL EIS, 2017)

1.2 Regulatory Process

The NPD Project is subject to a Federal environmental assessment (EA) by Responsible Authority, as a “designated project” under Section 35 (Regulations Designating Physical Activities) of CEA, 2012 for “the construction, operation and decommissioning of a new nuclear fission or fusion reactor.” For this decommissioning project, the Responsible Authority is the Canadian Nuclear Safety Commission (CNSC).

The EA for this project is being conducted based on the standards and requirements laid out in the *Canadian Environmental Assessment Act (2012) (CEAA 2012)* and the Canadian Nuclear Safety Commission REGDOC 2.9.1 on *Environmental Protection: Environmental Policy, Assessments and Protection Measures*. The CNSC's REGDOC 2.9.1 document provides guidance on how the CNSC must carry out EAs that fall under CEAA 2012. Since the NPD Project is on CEAA's Designated Project List the EA is conducted under CEAA 2012 as opposed to the *Nuclear Safety and Control Act (NSCA 2000)* which is the other Act under which nuclear project assessments can be conducted.

The CNSC has been regulating the NPD site for the life of the project through the existing site license which was issued by CNSC. The current license for the site is a Class I Nuclear Facility License for Waste Facility Decommissioning and Prototype Waste Facilities; this particular license was issued under NSCA 2000.

CNSC REGDOC 2.9.1 is the regulatory document used by the Commission to assess the application and its associated environmental protection measures using the following scoping criteria:

- all licence applications that demonstrate potential interactions between the facility or activity and the environment are subject to an EA, either under the NSCA 2000 or under CEAA 2012
- for each facility or activity that has direct interactions with the environment, the applicant or licensee must demonstrate that environmental protection measures are or will be in place
- where an Environmental Risk Assessment (ERA) is required for a facility or activity:
 - the ERA is subject to regular updates (at least every five years, and whenever a significant change occurs in either the facility or activity that could alter the nature (type or magnitude) of the interaction with the environment
 - the licensee's ERA informs an EA under CEAA 2012

The assessment focuses on scale of complexity and level of environmental risk associated with the project.

As part of the CNSC's Environmental Protection the Commission requires the environmental effects of all facilities or activities to be evaluated and considered when licensing decisions are made as outlined in the figure below. For each licensing decision, the CNSC must be satisfied that the proponent (in this case CNL) will implement adequate environmental protection and health and safety provisions before a licence is issued.

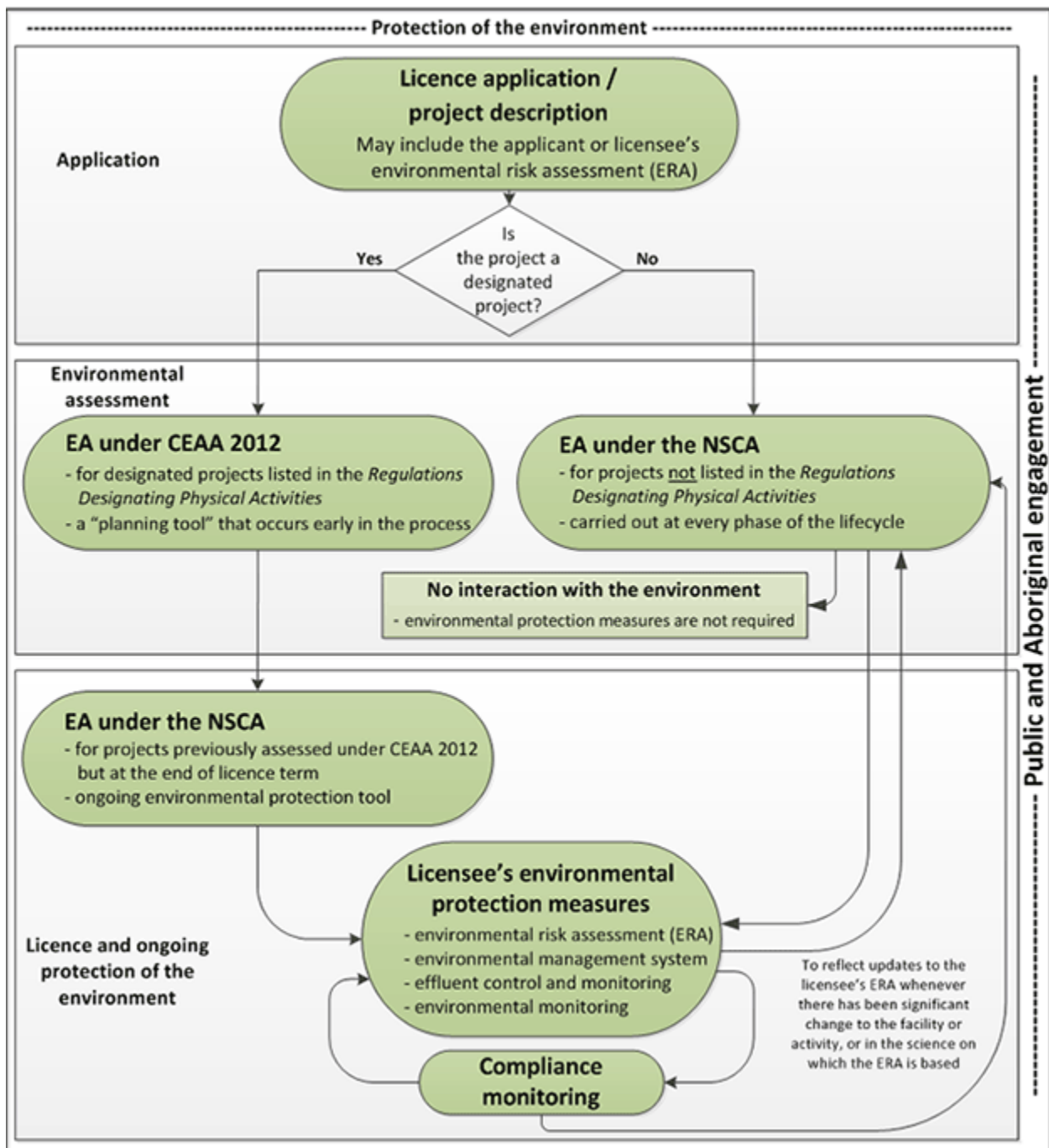


Figure 3 CNSC Environmental Protection Measures Framework (CNSC REGDOC 2.9.1)

Other federal and provincial permits, licenses, and authorizations that may be required include:

- Registration of on-site petroleum storage tanks with Environment Canada under the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*;
- a permit under the *Species at Risk Act* for decommissioning activities that would disturb chimney swift roosting in the ventilation stack; and

- authorization under the *Fisheries Act* for any in-water activities that have the potential to result in Serious Harm to fish or fish habitat (not expected at this time).

In addition to CEEA 2012, CNSC REGDOC 2.9.1, registration under *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, a *Species at Risk* permit, and *Fisheries Act* authorization the following regulations and technical guidance apply to the regulation of this project:

- *Migratory Birds Convention Act (1994)*
- *Nuclear Liability and Compensation Act (2015)*
- General Nuclear Safety and Control Regulations (SOR/2000-202);
- Radiation Protection Regulations (SOR/2000-203);
- Class I Nuclear Facility Regulations (SOR/2000-204);
- Nuclear Substances and Radiation Devices Regulations (SOR/2000-207);
- Packaging and Transport of Nuclear Substances Regulations, 2015 (SOR/2015-145);
- Nuclear Security Regulations (SOR/2000-209);
- Nuclear Non-Proliferation Import and Export Control Regulations (SOR/2000-210);
- Administrative Monetary Penalties Regulations (SOR/2013-139); and
- Canadian Nuclear Safety Commission Cost Recovery Fees Regulations (SOR/2000-212)
- CNSC (2000) *Regulatory Guide – Decommissioning Planning for Licensed Activities (G-219) [June 2000 version]*;
- CNSC (2004) *Regulatory Policy – Managing Radioactive Waste (P-290) [July 2004 version]*;
- CNSC (2006) *Regulatory Guide – Financial Guarantees for the Decommissioning of Licensed Activities (G-206) [June 2000 version]*;
- CNSC (2006) *Regulatory Guide – Assessing the Long-Term Safety of Radioactive Waste Management (G-320) [December 2006 version]*;
- CNSC (2014) *Safety Analysis – Deterministic Safety Analysis (REGDOC-2.4.1) [May 2014 version]*;
- CNSC (2012) *Public Information and Disclosure (RD/GD-99.3) [March 2012 version]*;
- CNSC (2016) *Public and Aboriginal Engagement – Aboriginal Engagement (REGDOC-3.2.2) [February 2016 version]*
- CSA (2000) *Phase II Environmental Site Assessment. (Z769-00) [Reaffirmed: 2013]*.
- CSA (2001) *Phase I Environmental Site Assessment. (Z768-01) [Reaffirmed: 2012]*.
- CSA (2010) *Environmental monitoring programs at Class I nuclear facilities and uranium mines and mills. (N288.4-10) [Reaffirmed: 2015]*.
- CSA (2011) *Effluent monitoring programs at Class I nuclear facilities and uranium mines and mills. (N288.5-11)*.
- CSA (2011) *Guidance for the exemption or clearance from regulatory control of materials that contain, or potentially contain, nuclear substances. (N292.5-11)*.
- CSA (2012) *Management system requirements for nuclear power plants (N286-12)*.
- CSA (2012) *Environmental risk assessments at Class I nuclear facilities and uranium mines and mills. (N288.6-12)*.
- CSA (2013) *Fire protection for facilities that process, handle, or store nuclear substances. (N393-13)*.
- CSA (2014) *Management of low-and intermediate-level radioactive waste. (N292.3-14)*.

- CSA (2014) *Decommissioning of facilities containing nuclear substances*. (N294-09) [Reaffirmed: 2014].
- CSA (2015) *Groundwater protection programs at Class I nuclear facilities and uranium mines and mills*. (N288.7-15).
- CSA (2016) Proposed new standard: *Long-term management and disposal of radioactive waste and irradiated fuel*. (N292.6) [In development].

The Environmental Impact Statement (EIS) is CNL's submission to the CNSC, which, if approved, will subsequently result in the CNSC issuing its own summary report on the Project and EA process as a basis for a regulatory decision regarding the decommissioning program. If it is determined that there are no significant adverse residual effects as a result of the Project, the CNSC will issue a decision to support the Project. If it is determined that there are significant residual effects from the Project, then the CNSC will issue a recommendation to the Minister of Natural Resources including the findings of their review. The final decision regarding whether such Project effects are justified under the circumstances, and subsequently, if the Project should be approved, rejected or approved with conditions, will be made by the Minister and Governor-in-Council (Cabinet).

All EA and permit processes for the NPD Closure Project involve Crown conduct that has the potential to trigger the Crown's duty to consult and, where appropriate, accommodate the AOO. CEAA 2012 also has specific requirements under Section 5 (c) of the Act for assessing the effects of changes to the biophysical environment on Aboriginal peoples which may be caused by a project, including:

- effects on current use of lands and resources for traditional purposes;
- effects on health or socio-economic conditions; and
- effects on archaeological or cultural heritage.

As such, the review of the EIS was conducted through the lens of potential impacts to AOO's rights and interests.

2.0 The Algonquins of Ontario

The Algonquins have lived in present-day Ontario for thousands of years before Europeans arrived. Today, ten Algonquin communities comprise the Algonquins of Ontario:

- the Algonquins of Pikwakanagan First Nation
- Antoine
- Kijicho Manito Madaouskarini (Bancroft)
- Bonnechere
- Greater Golden Lake
- Mattawa/North Bay
- Ottawa
- Shabot Obaadjiwan (Sharbot Lake)
- Snimikobi (Ardoch)
- Whitney and Area

Based on a Protocol signed in 2004, these communities are working together to provide a unified approach to negotiate a modern-day Treaty.

The Algonquin Negotiation Team consists of the Chief and Council of the Algonquins of Pikwakanagan First Nation, who are elected under the Pikwakanagan Custom Election Code, and one representative from each of the nine other Algonquin communities, each of whom is elected by the enrolled Algonquin Voters of each community for a three-year term.

The AOO Settlement Area includes an area of more than 9 million acres within the watersheds of the Kitchissippi (Ottawa River) and the Mattawa River in Ontario, unceded territory that covers most of eastern Ontario, including Ottawa, and most of Algonquin Park. More than 1.2 million people live and work within the unceded AOO Settlement Area. There are 84 municipal jurisdictions fully and partially located within the unceded AOO Settlement Area, including 75 lower and single tier municipalities and 9 upper tier counties.

On October 18, 2016, the AOO and the Governments of Ontario and Canada reached a major milestone in their journey toward reconciliation and renewed relationships with the signing of the Agreement-in-Principle (AIP). The signing of the AIP is a key step toward a Final Agreement, and a modern-day Treaty, which will clarify the rights of all concerned. By signing the AIP, the AOO and the Crown have expressed in a formal way their mutual intention and desire for a lasting partnership. This event signaled the beginning of a new relationship between the AOO and the Crown, one in which the mistakes of the past must be supplanted by a new type of mutual respect and cooperation.

2.1 Algonquin Values and Teachings

Today's Algonquins of Ontario share a history of common interests, traditions and needs arising from our common heritage. In the following section, we outline several Algonquin practices and teachings that are key to understanding the review comments that follow. We want to know that you understand who we are.

In developing these comments, we have been guided by the spirit and intent of the Teachings of the Seven Grandfathers. These teachings have been passed down from generation to generation and continue to be practiced today.

1. Honesty (Gwayakwaadiziwin): Honesty in facing a situation is to be brave
2. Humility (Dabaadendiziwin): Humility is to know yourself as a sacred part of Creation
3. Respect (Minaadendamowin): To honour all Creation is to have Respect
4. Bravery (Aakode'ewin): Bravery is to face the foe with integrity
5. Wisdom (Nibwaakaawin): To cherish knowledge is to know Wisdom
6. Love (Zaagi'idiwin): To know Love is to know peace
7. Truth (Debwewin): Truth is to know all of these things

Our survival on this land for thousands of years has required us to apply our teachings to ensure the protection of the lands and waters that we rely on. These teachings serve as the original instructions or "natural laws" that were built into our way of life. "Sustainability" is a modern term, but sustainability

has long been in practice by our people and our ancestors. There were consequences that occurred when we strayed from our natural teachings, instructions and laws. We were constantly monitoring the environment, and if changes occurred, we would adapt. It was (and is) a matter of survival. We had, and continue to have, deep connections to the land.

Industrial developments such as mines, hydroelectric dams and nuclear developments have significantly impacted the lands and waters that we rely upon. Protection and interaction with the lands and waters of our territory has been central to our existence for thousands of years. We maintained this connection to the land in spite of the arrival of Europeans to our territory. Nonetheless, this arrival dramatically affected our way of life. Because we are confined to harvesting in specific locations, resources have and can become depleted. We are in great competition with so many others on this land now for the resources that are here.

Algonquin oral history is also recorded by the Seven Fires wampum belt, which has been held by hereditary belt-keepers for centuries. The story concerns eight prophets who appeared to the Algonquins on seven occasions before a council fire just prior to crucial periods in their history. Each “Fire” can be correlated either with geological time periods, named after postglacial lakes and rivers, or to well-known events in Algonquin Post Contact history (Swayze, 2017). The First and Second Fires occurred during the existence of Glacial Lake Algonquin and the Champlain Sea, while the long Third Fire correlates to the phases of postglacial Lake Mattawa and spanned the entire Archaic period. The two prophets of the Fourth Fire spoke at the advent of the Protohistoric period. The Fifth Fire prophet warned of the changes that would happen during the Fur Trade. The Sixth Fire prophet warned that British and Canadian Colonialism would reduce the Algonquin to the lowest point in their history. The prophet of the Seventh Fire spoke of the opportunity that would arise in our time, when the Algonquin and “Rainbow People” who share the Algonquins’ land, will together face challenges to determine if the environment, and people who depend on it, will survive or perish (Swayze, 2017).

2.2 Algonquins of Ontario Rights and Interests and the Nuclear Power Property

2.2.1 AOO Rights and Interests and the NPD Closure Project

The NPD falls within lands to which AOO members assert their Aboriginal rights and title, and over which they will exercise Treaty rights once their Treaty negotiations with the Crown are complete. The NPD property occupies approximately 385 hectares of the unceded AOO Settlement Area along a portion of Kitchissippi that is significant to Algonquin people from a land use and cultural heritage perspective. No consultation or engagement occurred with Algonquin people in the original decision to build or operate this facility within AOO Territory. AOO members have exercised, and will continue to exercise, their inherent and Treaty rights around the NPD site without limitation. In addition, the environmental issues (such as leaks of radioactive contaminants or groundwater seepage of hazardous materials) associated with NPD have impacted the unceded AOO Settlement Area.

Based on known land use and cultural heritage data, it is well-known that the NPD property and adjacent areas is an area where Algonquin people have a longstanding and well-established record of historic and ongoing current use. Drawing on this knowledge, and based on AOO members' constitutionally protected rights, AOO has considered the following potential issues and concerns related to the rights and interests of AOO members in our review of the NPD Closure Project:

- Potential impacts to the current use of lands and resources for traditional purposes by AOO members must be avoided, mitigated, or accommodated
- Potential impacts to the health of AOO members—including, but not limited to those conditions reliant on the current use of lands and resources for traditional purposes—must be avoided, mitigated, or accommodated
- Potential impacts to AOO members' informal and formal socio-cultural and economic systems associated with the trade and sharing of resources or products from traditional land use must be avoided, mitigated, or accommodated
- Potential impacts to AOO members' commercial harvesting associated with traditional land use must be avoided, mitigated, or compensated
- Potential impacts to AOO cultural heritage and archaeological resources must be avoided, mitigated, or compensated

In addition to the NPD site being fully located within the Algonquin Settlement Area, it is also important for the CNSC and CNL to appreciate that the NPD property is in close proximity to AOO Proposed Land Selections (Figure 4). There are seven AOO proposed land selections located within 8 km of the NPD site. Should the AOO's land claim negotiations with Canada and Ontario culminate in a Final Agreement, these proposed land selections would be transferred to the AOO in fee simple absolute. Consequently, the AOO have a unique and special interest in the NPD Closure Project. These proposed land selections were identified as part of the Agreement-in-Principle initialed by the Negotiators for the AOO, Canada and Ontario in June 2015.

In addition, the AOO have as part of the federal surplus settlement land selection process indicated an interest in acquiring approximately 364 hectares (900 acres) of residual NPD lands after the decommissioned footprint is fenced off and environmental liabilities are addressed. AOO wish to formally discuss land transfer agreements with CNL and AECL.

The AOO recognizes that the best alternative for protecting the environment and human health would be the deferral of decommissioning and complete removal of all radioactive contamination to a long-term facility. This would help mitigate the long-term risk of the NPD site and reduce potential future impacts on AOO land users. However, as there are no existing long-term storage options for nuclear waste in Canada, this would require postponing the transfer of the residual NPD property to the AOO indefinitely. It is therefore important that all reasonable measures for protection of the environment be implemented. Moreover, as identified throughout this report, the CNL must ensure that best practices

for decommission and rigorous long-term monitoring programs are in place to evaluate on-going risks associated with contamination.

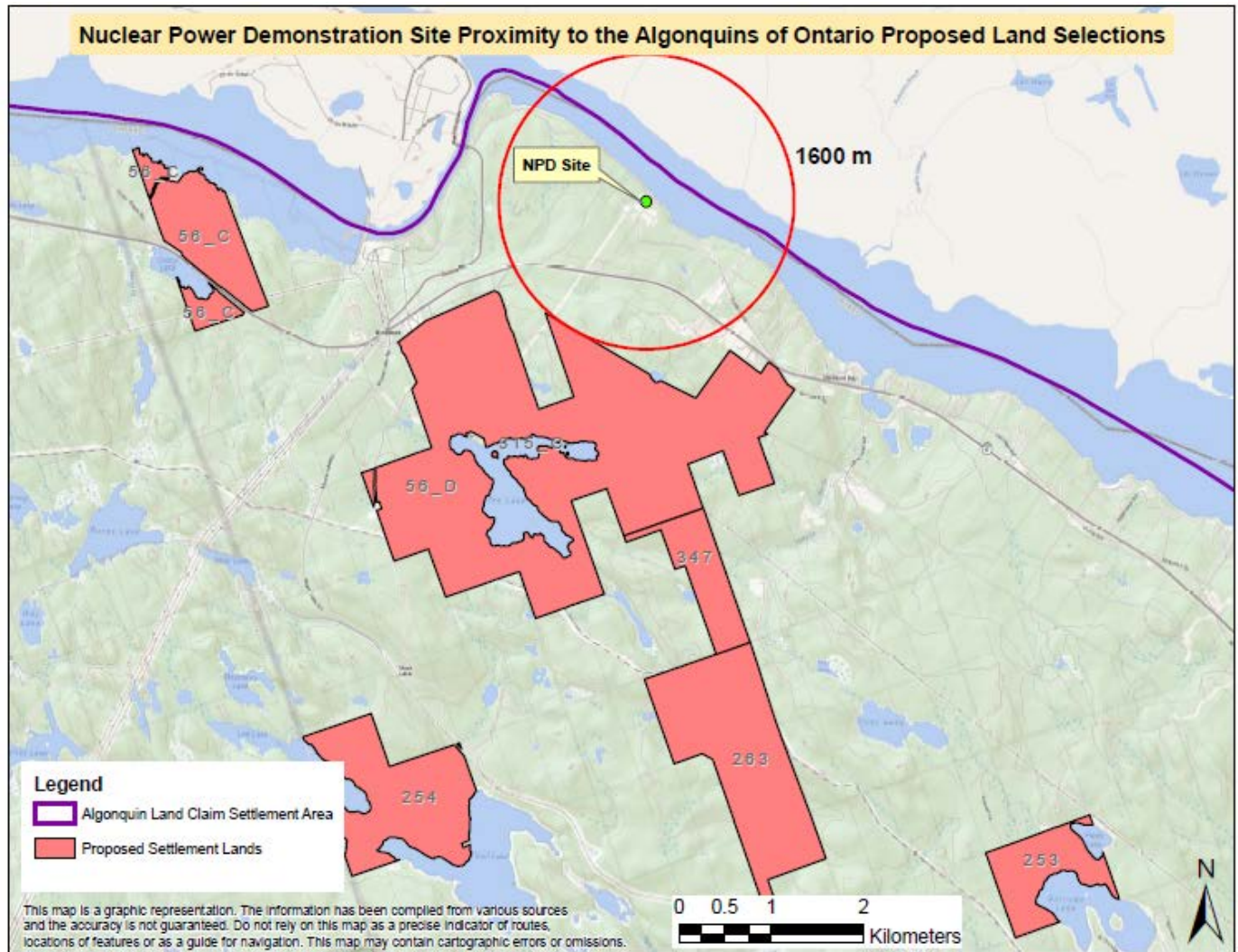


Figure 4 - AOO Land Selections in relation to the NPD property

For the Algonquin people, land has long been recognized as the source of strength and the basis of Nationhood. An appropriate Algonquin land base will provide Algonquin people with opportunities to exercise our ongoing relationship with Mother Earth, protect cultural, environmental and historically significant areas and provide support for economic development and the provision of job opportunities for Algonquins going forward.

2.2.1.1 The Duty to Consult and Accommodate

Algonquin people have always had a very close connection and reliance on the lands and waters for subsistence and cultural well-being. This connection to the land, combined with Algonquin peoples' established Aboriginal rights and interests as well as the fact that the NPD project falls within the Algonquin's Land Claim Settlement Area, demonstrate how necessary it is to appropriately and

adequately consult and accommodate Algonquin people in the matter of the Nuclear Power Demonstration Project.

In addition to the above, Algonquin people have protected rights under Section 35 of the Constitution Act which state:

35. (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.

Definition of “*aboriginal peoples of Canada*”

(2) In this Act, “*aboriginal peoples of Canada*” includes the Indian, Inuit and Métis peoples of Canada.

Land claims agreements

(3) For greater certainty, in subsection (1) “*treaty rights*” includes rights that now exist by way of land claims agreements or may be so acquired.

The above sections demonstrate that the rights of Indigenous people must be recognized and affirmed. In addition to Section 35, the AOO is also in the process of negotiating a modern-day Treaty with the Crown. While this Treaty is being negotiated, a Consultation Process Interim Measures Agreement is in place between the Algonquins of Ontario, Her Majesty the Queen in Right of Ontario, and Her Majesty the Queen in Right of Canada. Some key components of the agreement that highlight the importance of adequate consultation and accommodation for AOO are as follows:

- Where a Federal department, Provincial ministry or other Crown agency proposes a particular decision or activity that is applicable to the territory as depicted on the map attached as Appendix "A," and where such decision or activity gives rise to a duty to consult with the Algonquins, it shall provide to the Algonquin Consultation Office appropriate notice and information of the proposed decision or activity.
- The Algonquin Consultation Office shall acknowledge receipt of the notice and information referred to in Article 6 in a timely manner, and duly advise the Federal department, Provincial ministry or other Crown agency providing notice that:
 - a. no further consultation is sought and that the Algonquins will take no action to oppose the decision or activity, or
 - b. the proposed decision or activity might have an adverse effect on Algonquin Aboriginal rights and the reasons therefore, and indicate that further consultation is sought.
- If the Algonquin Negotiation Office fails to duly respond pursuant to Article 7, nothing in this Agreement prohibits the Federal department, Provincial ministry or other Crown agency from proceeding with the decision or activity.

- Where further consultation is sought pursuant to Article 7 (b), the Federal department, Provincial ministry or other Crown agency shall consider the views and reasons of the Algonquin Consultation Office, and
 - a. if further consultation is required by law, offer to conduct further consultations with the Algonquins and, if appropriate, discuss potential accommodation with the Algonquins.

As an agent of the Crown, CNSC must uphold the requirements outlined within this agreement to ensure the requirements of consultation are being adequately met and ultimately AOO rights and interests are protected or accommodated where necessary in relation to the NPD site.

3.0 Algonquin Land Use and Occupancy near the Nuclear Power Demonstration Site

This section provides a high-level summary of Indigenous knowledge and cultural heritage considerations important to the AOO near the NPD site. Due to the limited scope, time and budget to complete this report, a fulsome Indigenous knowledge and cultural heritage study was not undertaken. Instead, input from AOO's archaeological specialist, Ken Swayze (Nipissing University and Kinickinick Consulting) was provided on February 8th, 2018 to examine the cultural heritage and historic use of areas near NPD property.

Disclaimer: This information should not be considered inclusive of all AOO land use, knowledge or cultural heritage values within the areas discussed, rather as a snapshot of land use and cultural heritage based on the professional opinion of AOO's licensed professional archaeologist and consultant.

3.1 Summary of Algonquin Land Use Activities near Chalk River Laboratories

3.1.1 Hunting

Hunting small and large game is an important aspect of Algonquin culture and identity, both past and present. Hunting by the AOO members is an activity that is constitutionally protected as an Aboriginal right. Prior to the site restrictions that were imposed upon the NPD property, the NPD site was utilized by Algonquin people as a hunting ground for mammals and birds such as deer, bear, moose, partridge and duck.

According to an Algonquin elders, Algonquins who used to live in the vicinity of the NPD site relied on deer for fresh meat throughout the year, and organized hunts in the autumn to drive the deer down the mountain slopes into the river where they were taken in the water.

3.1.2 Fishing

Fishing is an integral component of Algonquin culture and identity, both past and present and is also a constitutionally protected activity. Prior to the site restrictions that were imposed by AECL, the NPD site was utilized by Algonquin people for a variety of fishing practices. Some of the species of interest to Algonquin fishers included muskellunge, sturgeon, northern pike, suckers, whitefish and American eel.

The area of Kitchissippi adjacent to the NPD property was an area regularly used for fishing by Algonquin people due to its close proximity to a set of rapids upstream that acted as a prime fishing grounds for Algonquins.

3.1.3 Trapping

Trapping is an important land use activity for Algonquin people from a traditional use perspective, but also from an income perspective. It is constitutionally protected as an Aboriginal right of the AOO. Prior to the site restrictions imposed by AECL, the NPD site was utilized as an important trapping area by Algonquin people for small furbearers that could be used for making clothing, blankets or sold to fur traders. The primary species of interest to Algonquin trappers on the NPD site were beaver, muskrat, marten and mink. Algonquin people trapped for sustenance, but also for commercial purposes as a way to generate income for their families. Since Algonquin people are not permitted to enter the NPD site for trapping, this represents a permanent loss of use.

3.1.4 Gathering

Gathering is a critically significant component of Algonquin culture and identity and is also a constitutionally protected activity. Prior to the establishment of NPD, the lands were a productive gathering area for Algonquin people for a variety of medicinal and edible plants, as well as other materials, such as firewood or building supplies. Important medicinal plants such as gold thread and sweet grass are plentiful on the NPD site. Edible plants such as blueberries, raspberries and wintergreen are abundant throughout the NPD site and were gathered by Algonquin people during summer months prior to site restrictions.

3.1.5 Occupancy

The NPD property was extensively utilized by Algonquin people in the exercise of their Aboriginal rights as a settlement site due to the abundance of food and access to key waterways. In addition to the probable archaeological remnants the NPD site was utilized as a gathering and staging area for Algonquin people during the fur trade, as the Hudson's Bay Company had a nearby trading post.

3.1.6 Access

As the NPD site is located near a significant set of rapids, the NPD property was used extensively by Algonquin people as a portage route.

4.0 Review Methodology and Approach

The review of the Draft Environmental Impact Statement (EIS) for the NPD Decommissioning considers the entire area of the Project and any potential effects, including cumulative effects. The review was conducted through analyzing the connections between proposed activities and potential risks and impacts to AOO citizens. In our review, we have:

- i) assessed adequacy of baseline information and data, Valued Components (“VCs”), effects assessment, mitigation, management, and monitoring plans;
- ii) assessed adequacy of information provided in the EIS; and
- iii) evaluated the use of local knowledge, traditional knowledge and land use incorporated in the EIS.

Using the results of the review, we provide specific accommodations to address the identified issues and concerns, which are representative of Algonquin values, rights and interests (Section 5.0). These accommodations include best practice mitigations, management and monitoring plans for respective subject areas, as well as recommendations for emergency response planning. These issues and accommodations reflect potential impacts from the Project on Algonquin rights and interests, and are meant to inform CNL and the CNSC of priority issues for resolution/accommodation. The review was completed by focusing on the following categories of concern that are of priority to the AOO:

Section 5.1 Surface and groundwater

Section 5.2 Aquatic environment

Section 5.3 Terrestrial environment

Section 5.4 Traditional land use and cultural resources

Section 5.5 Archeological resources

Section 5.6 Ecological and human health risk assessment

Section 5.7 Socioeconomics and community well-being

Section 5.8 Environmental monitoring

5.0 Review Findings

5.1 Surface Water and Groundwater

5.1.1 Summary of EIS Content

The Nuclear Demonstration Closure Project site is situated on the south bank of the Ottawa River in Ontario, near Rolphton and 3km downstream of the Des Joachims Generating Station. The Ottawa River at the NDP site is very wide and deep (approximately 500m wide, up to 60m deep) and with a mean annual flow rate of 807m³/s. Water levels and flow are regulated by a series of dams upstream,

including the Des Joachim Dam and generating station. All surface drainage from the Project Study Area, including a network of ditches and tile drains will ultimately flow into the Ottawa River.

The geology and hydrogeology of the site consists of quartz and granite gneiss bedrock with low hydraulic conductivity overlain by a thin overburden (1.5-7.5m) of sand-gravel alluvial deposits that are very well-drained. Topography ranges from 160m above sea level (masl) at Highway 17, 125masl at the Study Site Area and 111masl at the average water level of the Ottawa River, and groundwater follows the surface topography, eventually discharging to the Ottawa River. Several monitoring wells are sampled semi-annually as part of the groundwater monitoring for tritium and other radiological and non-radiological (metals, other contaminants) parameters.

The decommissioning strategy of in-situ entombment requires the creation of an on-site concrete batch mixing plant and associated wash pits during the decommissioning phase. The 5 underground stories of the NDP site will be grouted (filled with concrete) and capped with an engineered cap of geotextile and fill. Groundwater is expected to fill the relatively porous grout pore spaces below the water table in the Facility over several decades, and slowly leach towards the Ottawa River.

5.1.2 Evaluation and Accommodations

Issue 1- The greatest concern for the hydrogeology of the area is that groundwater quality will be compromised by the leachate emerging from the NPD site that has come in contact with radioactive materials. The integrity of the existing underground structures, grouting, capping and collection system of this in-situ decommissioning option has not been adequately assessed to provide a level of comfort to the AOO. The modeling has many assumptions, has varying levels of uncertainty, and has inadequate mitigation measures for the possible level of contamination that will remain in on site and potentially leach into local groundwater systems and ultimately into the Ottawa River.

Accommodation 1a – CNL should provide additional monitoring and mitigation measures, and assurances to AOO, that in-situ decommissioning as planned in this EIS involves internationally recognized best management practices. In-situ decommissioning is not the preferred strategy for decommissioning nuclear facilities, based on research on international standards (Candesco, 2014). The Proponent should seek the advice and recommendations of Canadian and international standards (i.e. International Atomic Energy Agency, IAEA) and employ informative (non-mandatory) clauses to provide additional assurances that the site is adequately decommissioned.

Accommodation 1b – A monitoring well and collection system should be installed that that allows for the sampling of the groundwater downgradient of the Facility and possible capture, treatment and appropriate management of contaminated groundwater with radionuclides or other non-radioactive contaminants.

Issue 2 – The assessment of the release of tritium from the Facility is expected to peak at 1M Bq/Year (1,000,000 Bq/year, or 10^6 Bq/year), or about 1000 Bq/L of groundwater, as stated in the Post Closure Safety Assessment Report. This amount of contaminant will enter the Ottawa River, which is already experiencing elevated levels of radionuclides due to past nuclear facilities and activities in the area (CNSC, 2009). Several drinking water intakes occur downstream of the NPD site on the Ottawa River, as

well as being in the traditional territory of the AOO that rely on the land and water for their livelihoods as well as being spiritually and culturally important.

Accommodation 2 – The Proponent should provide additional mitigation measures to limit the introduction of tritium and radionuclides from the NDP into the Ottawa River, through capture and management of the leachate and groundwater flow, or other appropriate measures.

Issue 3 – Water quality of the groundwater and surface water from the Project site was sampled for radiological and non-radiological parameters. Non-radiological sampling of contaminants were compared to the CCME Environmental Quality Guidelines (EQG) for metals, other inorganic and organic compounds. Several of the parameters sampled from the Wells Area Sump (WAS) were an order of magnitude higher than the EQG, including iron, mercury, total dioxins/furans and Bis(2-ethylhexyl)phthalate.

Additionally, several parameters were several orders of magnitude above the EQG, including cadmium, copper, lead, zinc and total PCBs. As the water table is closely connected to the surface water system, these contaminants have high potential to affect the aquatic environment downgradient of the Facility.

Many of these contaminants have serious physiological implications for aquatic species, especially at these concentrations. If not properly managed or mitigated, contaminants can cause lethal and sub-lethal toxicological effects on fish, other aquatic species, and can reduce the productivity of the affected ecosystems.

Accommodation 3a - The Proponent did not provide mitigation measures for the poor water quality of the Project Site. The Proponent needs to provide additional mitigation measures to address water quality issues, regularly monitor the WAS, and provide reporting to the AOO on the exceedances.

Accommodation 3b - The Proponent needs to provide a monitoring plan including frequency, parameters and locations of surface water and groundwater sampling for review by the AOO during the decommissioning phase, the Institutional Controls Phase and the Post-Institutional Controls Phase.

Issue 4 – While surface water and groundwater were considered pathways for Valued Components (VCs) and not VCs themselves, these components of the ecosystem are culturally, spiritually and traditionally very important to the AOO. Water is a sacred entity for these First Nation communities. The Project has the potential to negatively affect the hydrological and hydrogeological systems in the Regional Study Area, yet there are very few details on how these systems will be monitored throughout the various phases from decommissioning through to Post-Institutional Controls. The Proponent has only offered only periodic inspections, incident-specific water quality monitoring, event-based (i.e. due to a spill or accident), periodic surface water quality monitoring on a quarterly basis. These descriptions are too vague to determine whether the sampling and protection of surface water and groundwater will be adequate.

Accommodation 4a - The Proponent needs to provide a more detailed and specific monitoring plan, and reporting to the AOO, for surface water and groundwater resources. Additional locations for sampling should include the water within the tile drains and the water quality at the outlet of these tile

drains, as well as the groundwater downgradient of the Facility for both radiological and non-radiological parameters of concern. The AOO should be provided an opportunity to review the monitoring plans and provide input into the need for additional frequency, location and/or parameters for the monitoring program.

Accommodation 4b – The Proponent should employ AOO citizens as Environmental Monitors during any and all phases of the Project as they have familiarity of the area from generations of traditional land use. The Proponent should provide training for these positions.

Information Gap 5 – The batch mixing plant will require the construction of wash pits that will act as settling ponds. The Project description does not include detail regarding a liner underneath these ponds to prevent the water from contaminating local groundwater and surface water, however, in Section 9.3.3.1 there is mention of a watertight material lining.

Information/Clarification Requirement 5 - The Proponent needs to provide additional clarification on the construction and details of the wash out pits as well as how their design and materials will prevent contamination of the local groundwater and surface water from the decommissioning activities.

5.2 Aquatic Environment

5.2.1 Summary of EIS Content

The NPD site borders the Kitchissippi along a stretch of approximately 2,800m. All surface water runoff from precipitation, snowmelt and shallow groundwater is directed through ditches, subsurface drainage systems and overland flow to the Ottawa River. This includes two tile drains that discharge approximately 60m upstream and 100m downstream of the NPDWF process drain. Water from drainage ditches are tested twice annually for average gross beta and tritium levels at each of three monitoring locations. The process drain from the NPDWF discharges effluent collected from the well sump area into the Ottawa River.

Radioactive effluent from the NPDWF collects in the well sump area located approximately 25m below surface (104 m asl) under the reactor hall. This effluent is discharged in controlled batch releases once the sump is mostly full. The number of times the sump is discharged varies year to year but has been between 0 and 5 releases per year from 1997 – 2015. Prior to discharge, effluent is tested to ensure contaminants are below Derived Release Limits (DRL) which governs the discharge of radionuclides. Since 2010, all discharges of tritium, gross beta/gamma radionuclides and C-14 from the well sump area have been below 0.01% of DRL. Water quality testing in 2015 measured non-radiological contaminants in the well sump area. This showed that 11 parameters were above CCME guidelines (Table 1).

Table 1. Effluent Contaminants from the Well Sump Area (WAS) that exceed Canadian Council of Ministers of the Environment (CNL EIS, 2017)

Contaminant	Unit	[WAS]	[WAS duplicate]	CCME EQG
Nitrate	mg/L	25.23	25.83	13
Cadmium (Cd)	mg/L	0.051	0.035	0.00009
Copper (Cu)	mg/L	1.37	1.26	0.002
Iron (Fe)	mg/L	7.45	9.02	0.3
Mercury (Hg)	ng/L	647	651	26
Lead (Pb)	mg/L	1.90	1.55	0.001
Zinc (Zn)	mg/L	1.16	0.874	0.03
Pyrene	µg/L	<1.0	1.3	0.025
Bis(2-ethylhexyl)phthalate	µg/L	14	15	2.2 ¹
Total dioxins/furans (detected)	pgTEQ/L	204.6	189.1	23
Total PCB	µg/L	4.9	6.0	0.026

Water quality sampling on the Kitchissippi both upstream (near the Rapides de Joachim) and downstream (near the town of Deep River) of the NPD site show that levels of radioactive Tritium, Cs-137, and Sr-90 are comparable. These values are well below the guidelines for Maximum Allowable Concentration from Health Canada (2017). Sediment samples were collected in 2014 from the Kitchissippi near the outlet of the process drain (Figure 5). Radionuclide concentrations (Bk/kg) for several contaminants were measured. Sediment samples were collected and tested for non-radiological contaminants in 2016. Results of this testing showed average values all below CCME Interim Sediment Quality Guidelines.

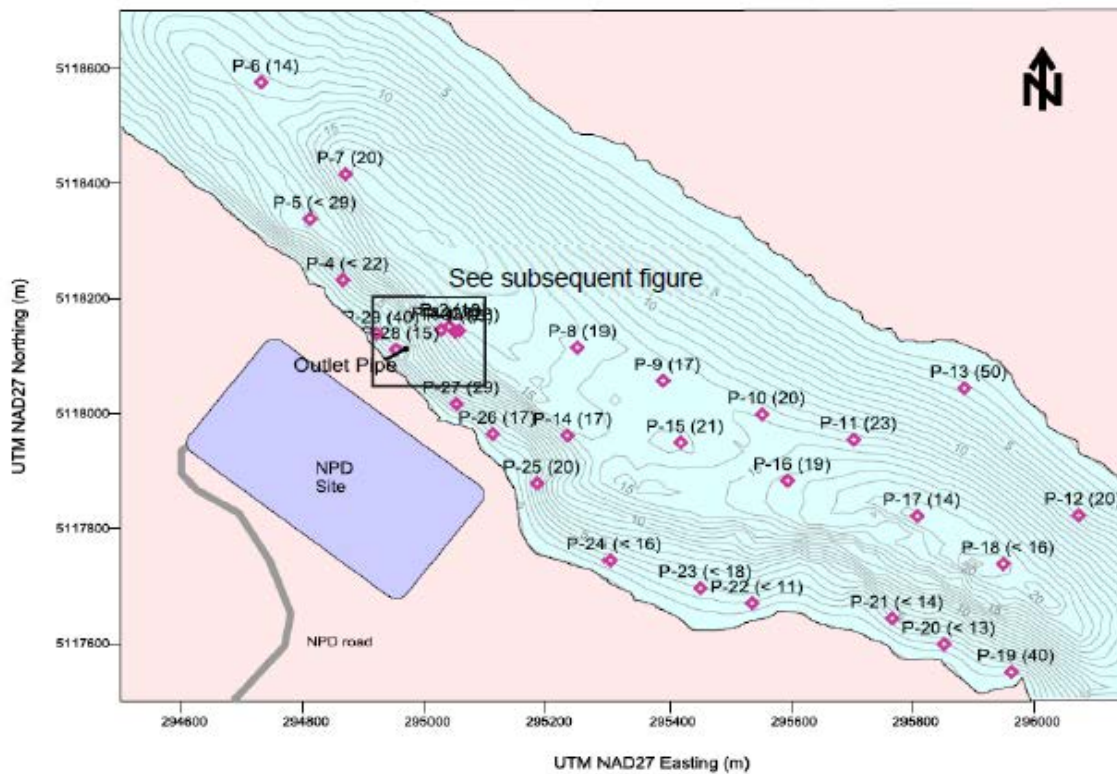


Figure 5 - Sediment Sampling Locations near the NPDWF (CNL EIS, 2017)

The Proponent reports that there are at least 55 species of fish found within the Kitchissippi in the RSA. This includes American eel (listed as threatened by COSEWIC and endangered under the *Ontario Species at Risk Act [SAR]*), lake sturgeon (listed as threatened by COSEWIC and the *Ontario SAR*), northern brook lamprey (a species of special concern under the *Species at Risk Act (SARA)* and the *Ontario SAR*) and the river redhorse (a species of special concern under SARA and the *Ontario SAR*). Other species present include several gamefish (e.g. walleye, lake trout, lake whitefish, northern pike and smallmouth bass) and forage fish (e.g. minnows and darters). Benthic invertebrates present are typical of oligotrophic (low nutrient) riverine systems. The hickorynut mussel (listed as endangered under the *Ontario SAR*) may also be present within the study area, although this has not been confirmed.

5.2.2 Evaluation and Accommodations

AOO has concerns related to the rights and interests of the Algonquin people. The Algonquins have lived near the Kitchissippi since time immemorial, catching fish, harvesting medicines and travelling the waterways. As stewards of the land, the AOO strive to protect and manage the land within the unceded AOO Settlement Area, including the land and water potentially affected by the Project. The decommissioning of the NPDWF may cause negative impacts to the aquatic environment through a variety of means. Of primary concern to the AOO are:

- discharges to the Ottawa River from the process pipe prior to completion of decommissioning;
- spills of fuel, oil or other contaminants from heavy equipment operating on-site during the active decommissioning phase;
- surface runoff of grout or other contaminated materials during the active decommissioning phase; and
- seepage of contaminated groundwater from the NPDWF to the Ottawa River during institutional control and post institutional control.

The risks from the Project must be managed appropriately so that impacts to the aquatic environment and the traditional activities of AOO members are minimized. A review of the EIS was completed focusing on adequacy of baseline data collection, effects assessment, mitigation and monitoring of the aquatic environment. The goal of this review is to ensure adequate protections are in place for ensuring the sustainability of aquatic ecosystems and the AOO members that rely on them. This includes fish, fish habitat, benthic invertebrates, sediment and surface water.

Issue 1- During the Decommissioning Execution phase, there are significant environmental risks associated with a range of activities. For example, the grout used for entombing the below-ground facilities has a low viscosity and is highly mobile; poorly managed grouting or equipment washout could result in grout entering the Ottawa River. Improper mesh over water intake could result in fish impingement during pumping from the Ottawa River. Spills or leaks from heavy equipment or refuelling activities could contaminate surface water.

Accommodation 1 – As stewards of the lands and waters, Algonquins must have a role in the environmental monitoring of the Project. An environmental monitor from the AOO must be on-site to

monitor the environmental risks during the Decommissioning Execution phase. Training and capacity funding must be provided to allow this monitor to be effective in their role.

Issue 2 – Section 5.2.4.2 Identified emerald shiner, lake whitefish and lake sturgeon as VCs for the aquatic environment. It is unclear why these species were singled out, rather than choosing all fishes as the VC. If these species were chosen as representative of the fish community then there is a clear gap in that no piscivorous fishes (e.g. northern pike, walleye, sauger, smallmouth bass, muskellunge) were not chosen as a VC. These predators play a critical role in complex riverine communities and are likely to experience different exposure pathways to contaminants and different effects from the Project than fish from other guilds. In addition, it is these piscivorous fishes that are most often targeted by AOO citizens fishing on the Ottawa River.

Accommodation 2 – All species are of importance to the AOO, therefore limiting the effects assessment to these VCs is problematic. Moreover, the lack of a piscivorous fish (fish that eat other fish that are important in the aquatic ecosystem, and important to the AOO) chosen as a VC represents a critical gap for the effects assessment of the Project. The rationale for the species chosen as aquatic VCs must be provided, and the AOO should be consulted on choosing VCs. The effects assessment for the Project must be updated with additional fish, including piscivorous fishes, as VCs.

Issue 3 – There has not been any targeted data collection of benthic invertebrate abundance/diversity or of nearfield water quality downstream of the NPDWF. This baseline information is critical to characterize the current state of the environment and to evaluate the potential effects of historic activities on aquatic fauna (e.g. fishes and invertebrates). This data can then be used to evaluate any changes associated with the Project.

For example, the nearest downstream monitoring station for radioactive contamination of surface water releases is located near the town of Deep River, several kilometers downstream. Such monitoring is unable to exclude the possibility for contamination of upstream aquatic environments and is unacceptably low level of detail for a project with this level of risk. Moreover, many non-radiological contaminants found in the WAS, including mercury, lead, dioxins/furans and PCBs were not tested for in surface water.

Accommodation 3a – CNL must complete baseline monitoring in the LSA for:

- water quality (radiological and non-radiological); and
- benthic invertebrates.

This data will provide CNL and the AOO with information on the effects of historic contamination that has occurred through operation and during closure. This data will be used to evaluate the current state of these aquatic receptors.

Accommodation 3b - To monitor the risks associated with future releases of contaminants and groundwater leaching, the Proponent should engage in monitoring of water quality and benthic invertebrates during the period of institutional control. Details on the locations and schedule of monitoring should be described in detail and provided to the AOO.

Accommodation 3c – As stewards of the lands and waters, AOO citizens should be given the opportunity and training necessary to be included in follow-up environmental monitoring of the site.

Issue 4 – The NPDGS began operation in 1962. Effluent from the well sump area and other activities on site have been discharged to the Kitchissippi since this time. After decommissioning, dissolved contamination will continue to reach the Kitchissippi through groundwater as the NPDWF degrades. These contaminants (radiological and non-radiological) are likely to enter the food chain and contaminate game fish that are consumed by AOO citizens. Despite this risk, no studies of fish tissues have been completed. As a result, it is unclear what the current level of contamination in fish tissues is or how that may change because of the Project. Moreover, CNL has not described any follow up monitoring of contaminants in fish tissues, therefore any spike in contaminants will not be detected.

AOO community members regularly harvest fish in the Kitchissippi for baitfish and consumption (e.g. smallmouth bass, walleye, sauger, northern pike, whitefish and suckers). The risk of health effects from eating contaminated fish must be taken seriously.

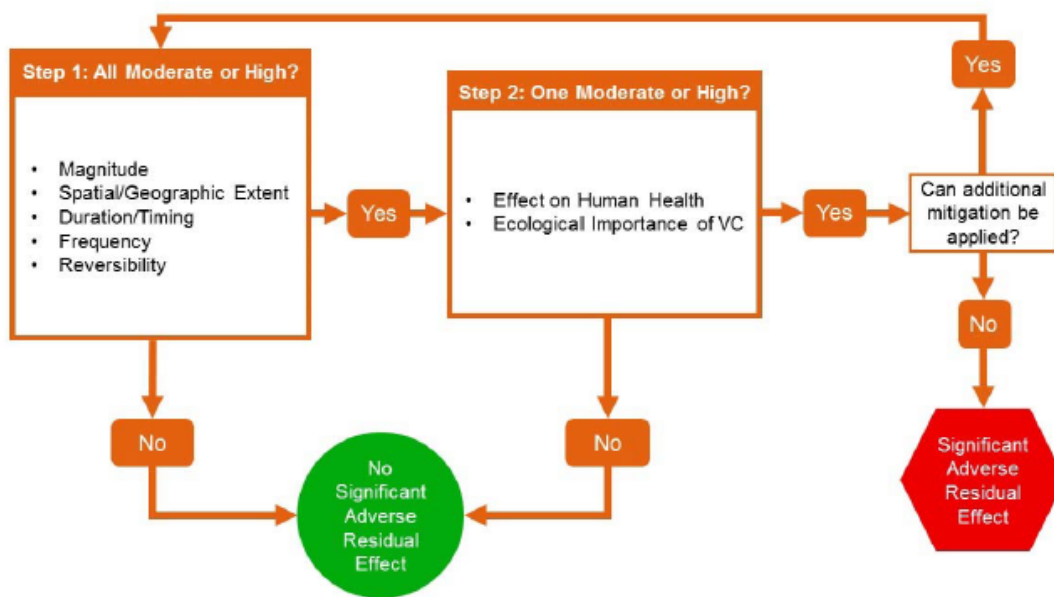
Accommodation 4a – In order to evaluate the risk associated with contamination of fish tissues the proponent must complete baseline fish tissue analysis on the Kitchissippi. Fish should be collected – with AOO environmental monitors - at locations within the vicinity and downstream of the effluent discharge and from a reference site upstream, above the falls. A minimum of two sentinel species should be used for this tissue monitoring. Species selected should include a gamefish species (e.g. walleye, smallmouth, northern pike) and a small bodied baitfish species.

Accommodation 4b – To monitor the risks associated with consumption of contaminated fish, the Proponent should engage in follow-up monitoring of fish tissues during the period of institutional control. Sampling methodology can be maintained from the initial fish tissue analysis described above. A description of proposed monitoring activities must be shared with AOO for review.

Issue 5 – The determination for significance of the adverse residual effects is not reasonable. According to the Proponent’s methodology (CNL EIS, 2017, Section 2.7), a significant adverse residual effect can only occur if a moderate or high rating is applied to all effects criteria, including:

- magnitude;
- spatial (geographic) extent;
- duration/timing;
- frequency/probability; and
- reversibility.

Then if that is the case, the effects assessment is carried through to evaluation of effect on human health and ecological importance of VC. If additional mitigation is not possible the effect will be considered a significant adverse residual effect. According to this definition, an activity with high level of effect for magnitude; spatial (geographic) extent; duration/timing; and reversibility but low frequency/probability would not be carried forward for assessment of significance. An event that would fit this description includes a massive failure of containment resulting in contaminant release to the Kitchissippi (summarized below).



Accommodation 5: A lower threshold for determination of significant adverse residual effects must be employed. Effects must also be carried forward for assessment of significance where there is a high rating is applied to any effects criteria.

Information Gap 6 –The level of radioactive releases for all contaminants measured in the Well Sump Area are several orders of magnitude higher than the Maximum Allowable Concentration (MAC) of the Health Canada Drinking Water Guidelines (CNL EIS, 2017, Table 8.3-1). For example, levels of tritium measured in the sump in 2015 were 66,100,000,000 Bq, more than 900,000 times the MAC guidelines of 7,000 Bq (Health Canada, 2007). While, the total volume of effluent released is small and mixing will occur once this water is pumped to the river, the Proponent has not completed any modeling of mixing zones to show the area where contamination would exceed these guidelines. As a result, it is unclear what downstream concentrations can be expected from these releases throughout the different phases of the Project. Secondly, the contamination from groundwater to the Kitchissippi has not been modelled. It is therefore unclear how the seepage plume from the facility may affect aquatic organisms as the grouted NPDWF facility degrades.

Information/Clarification Requirement 6 – CNL must complete dispersion modelling to assess the predicted mixing zone for all radioactive contaminants using the drinking water MAC (Health Canada, 2007) as the threshold. This should be completed for periodic discharges from the well sump area and for groundwater seepage at different periods of closure and post-closure.

Information Gap 7 – The Derived Release Limits for the NPDWF have not been described in the EIS. These are important to share so that AOO can evaluate whether the project complies with CSA Standards N288.1-14 (CSA, 2016).

Information/Clarification Requirement 7 - Provide the Derived Release Limits for the NPDWF.

Information Gap 8 – The Proponent has utilized an effects assessment protocol so that radionuclides were “screened out” of the Ecological Risk Assessment if no “dose coefficient” was available. They have stated:

“In the EcoRA screening process for radiological contaminants, if the radionuclide concentration was below the no effects concentration (NEC) value, then that radionuclide was “screened out” or excluded from the assessment for the particular scenario being screened. If the radionuclide concentration was greater than the NEC value and a dose coefficient was available, then the radionuclide was “screened in” or included for assessment in the EcoRA; if a dose coefficient was not available, then the radionuclide was “screened out.” [...] “It is noted that excluding a radionuclide from assessment because a dose coefficient is not available would result in an underestimation of the total dose and perhaps any potential effects; however, the radiation dose cannot be estimated without a dose coefficient.” (CNL EIS, 2017, pp 9-8)

It is unclear from the EIS how excluding these radiological contaminants will influence the evaluation of risk and potential impacts of the Project.

Information/Clarification Requirement 8 - The Proponent must provide additional justification for this methodological decision. The Proponent must also provide a list of all radiological contaminants that have been screened out of the risk assessment. This information is necessary for the AOO to complete its evaluation of the adequacy of the EIS.

5.3 Terrestrial Environment

5.3.1 Summary of EIS Content

With respect to terrestrial vegetation, both the Site Study Area (SSA) and Local Study Areas (LSA) support diverse mixed upland forest and cultural communities with some wetlands areas scattered throughout. The upland forest habitats are primarily coniferous with a canopy dominated by white pine, red pine, and jack pine. While sub-canopy vegetation of upland forest varies by locations, it predominantly includes a mix of red maple, black spruce, white birch, balsam fir, white spruce, eastern hemlock and sugar maple. The Proponent describes “cultural communities” in RSA as those vegetated areas that have been heavily influenced by past human disturbance (e.g. roads, abandoned/reclaimed land, decommissioned structures, tree plantations). The local study area features a scattering of several wetlands, including a complex on the western side of the property that spans the entire north-south length of the site. The wetland types present include shallow marshes, meadow marshes, and shallow ponds. These ecosystems support a variety of vegetative species including sedges, jewelweed, hairy goldenrod, white meadow sweet, alder, white pine, fireweed, meadow rue, cattails, and a variety of pond lilies. During baseline studies the wetlands were found to be habitat for beavers, raccoons, white-tailed deer, moose, turtles, frogs, hairy woodpeckers, and minnows. At least one wetland on site is likely groundwater-fed. Groundwater contour figures developed as part of the hydrogeological survey indicate that all wetlands on site are upgradient of the Nuclear Power Demonstration Waste Facility (NPDWF) footprint. All wetlands on the property are also at a higher elevation than the NPDWF. As such, the wetlands on site are not expected to be impacted by surface water or groundwater flows originating at

the NPDWF, with the Draft EIS predicting that the project will have no adverse effects on these wetlands.

The Regional Study Area (RSA) contains forest that is more mixed and deciduous than the SSA and LSA, as well as open sand dunes, sand barrens, rock barrens, and several Provincially Significant Wetlands (PSWs). The upland forest consists mainly of white pine, red maple poplar, red pine and birch trees. Overall, a total of 103 vascular plant species were recorded on the NPD site, 21% of which are non-native and none of which are provincially or federally listed Species At Risk (SAR).

The wildlife species found within the SSA, LSA, and RSA are typical of the boreal region. Those that are listed in the EIS as present or potentially present within this area consists of 25 herpetiles species (including SAR such as eastern milksnake, western chorus frog, eastern musk turtle, eastern hog-nosed snake, eastern ribbonsnake, eastern spiny softshell, northern map turtle, snapping turtle), 152 avian species (including SAR such as bank swallow, barn swallow, black tern, Canada warbler, cerulean warbler, common nighthawk, eastern whip-poor-will, eastern wood peewee, golden-winged warbler, grasshopper sparrow, Kirtland's warbler, least bittern, loggerhead shrike, olive-sided flycatcher, peregrine falcon, red-headed woodpecker, red-shouldered hawk, rusty blackbird, short-eared owl and wood thrush), 35 mammal species (including three bat SAR eastern small-footed bat, little brown myotis, northern myotis), and 3 SAR insects (monarch butterfly, northern barrens tiger beetle, rusty patched bumblebee).

Several notable species occurrences have been recorded within the NPD/NPDWF properties, including juvenile eastern milksnake (observed on the NPDWF site), chimney swifts (annually migrate to the NPD ventilation stack), and the three endangered bat species previously mentioned (found hibernating in site infrastructure). The NPD ventilation stack currently provides habitat for Ontario's largest known roost of chimney swift, a threatened aerial insectivore that experienced a 95% population decline between 1968-2005. There is also an active bald eagle nest located roughly 875m northwest of the facility. Culturally important species that may be present on-site include various waterfowl, black bear, white-tailed deer, marten, mink, moose, muskrat, and white-tailed deer.

The project's activities, including demolition, operation of machinery and vehicles have the potential to negatively affect terrestrial vegetation, wetlands, and wildlife species through the creation of dust, noise, vibration, habitat encroachment, disturbance, and mortality due to vehicle collisions. These impacts are expected to be most prominent during the Decommissioning Execution phase of the project. The proponent has decided to retain the existing ventilation stack due to the large annual chimney swift roost it support and due to the fact that the construction of artificial roosting structures is often met with little success. Wildlife sweeps for herpetilian and mammalian SAR will be completed prior to undertaking specific project activities to prevent wildlife mortalities.

5.3.2 Evaluation and Accommodations

The AOO recognize terrestrial ecosystems as providing habitat for many ecologically and economically important species, as well as many critical ecosystem services. The wetlands and terrestrial vegetation on-site are no exception, and also provide conditions that support culturally significant species.

The NPDWF project site falls within the unceded Algonquin Settlement Area, which is subject to the AOO's Aboriginal rights and title. The AOO is therefore interested in ensuring that this project does not bring any detrimental effects to the terrestrial environment (including wildlife, vegetation, and wetlands), and that the ecosystem integrity is maintained to support future traditional use of the area (e.g. hunting, trapping, and harvesting).

Specific issues and information gaps in the NPD Closure Project EIS relating to the terrestrial environment are identified below.

Issue 1 - In Table 9.6-2, the proponent states that Ventilation Stack Isolation (e.g. modification of ventilation stack for roosting requirement) will improve conditions for chimney swifts. However, Table 4.3-1 states that these activities, which will last for 16 days, are projected to start in April 2019. According to Environment and Climate Change's guidance on general nesting period of migratory birds, open field and forest dwelling birds (including chimney swifts) in region C3 arrive at their nesting sites as early as mid-April. (EIS Table 9.6-2 and Table 4.3-1)

Accommodation 1 – To conservatively avoid disturbance to chimney swifts during migratory and nesting periods, the proponent should commit to completing the Ventilation Stack Isolation work before April 1st.

Issue 2 – As part of the mitigation measures outlined in EIS Section 9.6.3.2 (p. 9-75), the proponent has committed to avoiding tree clearing activities during the breeding bird season (April 15-August 20) wherever possible, as per the Migratory Birds Convention Act. They have also committed to conducting (tree and ground) nest surveys within 2 days of unavoidable disruptive activities that may need to occur during this time-period. (EIS 9.6.3.2)

Accommodation 2 – In addition to avoiding disruptive activities (e.g. tree clearing) during the breeding bird season (April 15-August 20) and conducting nest surveys, the proponent should commit to implementing setback distances associated with medium-disturbance levels in the event that any of the avian SAR listed as present or potentially present on-site (EIS Table 8.6-3) are discovered nesting in the Site Study Area. Setback distances for the following avian SAR should be implemented: Canada warbler (300m), bobolink (250m), common nighthawk (200m), eastern wood peewee (150m), loggerhead shrike (250m), peregrine falcon (500m), eastern whip-poor-will (200m), grasshopper sparrow (250m), red-headed woodpecker (100m) (MCDC, 2014).

Issue 3 – In EIS Section 9.6.5, the proponent outlines their plan for Terrestrial Environment monitoring and follow-up activities but does not commit to involving AOO environmental monitors in this plan. (EIS 9.6.5)

Accommodation 3 – Commit to providing capacity funding to train and hire AOO environmental monitors to complete all terrestrial environment monitoring and follow-up activities (e.g. routine checks for barn swallows, monarch butterflies, bats and eastern milksnakes; chimney swift roost counts, inclement weather behavioural monitoring; work area SAR sweeps, etc.).

Issue 4 – The installation of exclusion fencing for eastern milksnakes and other reptilian SAR present or potentially present in the SSA (e.g. snapping turtle, eastern ribbonsnake, eastern musk turtle, etc.) will

only be undertaken if required. It is unclear what circumstances will trigger the installation of exclusion fencing. Further, there are few details on the proponent's planned design and installation techniques for reptilian exclusion fencing. (EIS 9.6.3.2 & Table 9.6-3)

Accommodation 4 – The Proponent should provide AOO with a description of the circumstances (e.g. quantifiable targets and thresholds) under which the installation of exclusion fencing for SAR reptiles will be triggered. Otherwise, the Proponent should take a conservative approach and commit to installing exclusion fencing around the SSA in accordance with the Ontario Ministry of Natural Resource and Forestry's Reptile and Amphibian Exclusion Fencing Best Practices (OMNR, 2013). Installation of exclusion fencing should be completed prior to species emergence from hibernation.

Issue 5 - The demolition of above-grade structures will result in the production of dust. Given the historical use of lead bricks for shielding and of lead paint on the existing structures, the dust generated will contain lead particulates. Researchers have shown that lead fallout resulting from settling atmospheric particles can occur at distances of up to 8.6 km from the source (Munksgaard and Parry, 1998). The dust produced from demolition activities will also contain radionuclides such as tritium. Most wetlands on site are less than 2 km away from the NPDWF and are therefore at risk to being exposed to contaminated dust fallout from the demolition activities. (EIS9.6.3.1/p.9-72)

Accommodation 5a – The Draft EIS states that dust suppression will occur during demolition and material sizing activities but does not describe the methods or extent of this mitigation measure. The parameters of the proposed dust suppression methods need to be identified in order to adequately assess their potential effectiveness.

Accommodation 5b – Baseline studies have determined that the prevailing winds on site are northwesterly and southeasterly, and that the wetlands present are to the west/northwest of the NPDWF footprint. To further minimize dust fallout in the wetland areas, demolition activities should not occur during high wind events or when the winds are originating from the southeast.

Accommodation 5c – To ensure that wetlands are not being affected by atmospheric transport of contaminated dust, a sampling location within the wetland closest to the NPDWF should be added to the ongoing routine monitoring program. The chemical analyses of these samples should include quantitative measurements of radionuclide and lead concentrations.

Issue 6 – Monitoring and follow-up activities will be conducted during the Institutional Controls phase to confirm effects to the terrestrial environment. There are no details provided in the Draft EIS about the scope, extent, frequency, or temporal duration of this monitoring. The Draft EIS also mentions that if any parameters are above applicable guidelines or notable changes are observed, that CNL biologist(s) will be consulted. Based on the information provided it is currently unclear if future monitoring will adequately capture any potential effects to the site's wetlands. (EIS 9.6.5/p.9-90)

Accommodation 6 – In close consultation with the AOO, develop and confirm details on the environmental components to be monitored, proposed monitoring locations, frequency of monitoring, threshold and trigger values, and temporal duration. The proposed program should also include monitoring locations within the wetland of closest proximity to the project site.

Issue 7 – The Proponent has stated that the disturbed areas (e.g. non-essential roadways, NPD site) final will be restored with native vegetation once the final cap system has been completed and temporary facilities are removed (EIS Sect. 4.3.1.9). However, there are too few details on how the proponent intends to restore these disturbed areas as well as monitor them (including measures of success, monitoring intervals and scheduling) and report on progress (Sect. 9.6.3.2). Because of this, it is not possible to adequately review the proponent’s restoration program. (EIS 4.3.1.9 & 9.6.3.2)

Accommodation 7 – Development of the detailed site restoration plan (including specific monitoring protocols) should be completed in close consultation with AOO. Since the NPD Project Closure site falls within the unceded Algonquin Settlement Area, revegetation efforts have the potential to affect future AOO land use activities. The Proponent should also consider providing capacity funding to train and hire AOO members to complete revegetation activities and long-term environmental monitoring. Specific activities of importance to the AOO include seeding to support pollinator species, tree planting to support ungulate browsing habitat, and monitoring of flora and fauna abundance and distribution through follow-up activities.

Information Gap 8 – The proponent’s rationale for establishing the Terrestrial Environment RSA boundary is not clearly described in the EIS. It is also unclear what methodologies were used to characterize the wildlife distribution and abundance in the Existing Terrestrial environment and to document the SAR occurrences (e.g. juvenile eastern milksnake, eastern small-footed bat, little brown myotis, and northern myotis) within the SSA and LSA that are described in EIS Sections 8.6.2 through 8.6.4. The Proponent has based the description of the existing environment entirely on background information rather than targeted field surveys (aside from an Ecological Land Classification (ELC) that was undertaken in 2016). The baseline description of the terrestrial environment is critical for understanding the current state of environmental VCs and for evaluating the Project-related effects during follow-up monitoring. (EIS 8.6.2 – 8.6.4)

Information/Clarification Requirement 8a – Provide the AOO with a rationale for establishing the Terrestrial Environment RSA boundary so they may complete an informed and fulsome review of the EIS.

Information/Clarification Requirement 8b – Provide the AOO with a description of the methodologies used to characterize the existing Terrestrial Environment, particularly the methods used to document SAR occurrence in the SSA and LSA, so they may complete an informed and fulsome review of the EIS. If targeted field surveys were not undertaken to document baseline data (e.g. on wildlife occurrence, distribution, and habitat use), provide the AOO with a rationale as to why they were not necessary.

Information Gap 9 – The Draft EIS states that the locations of the batch mixing plant, staging areas, and on-site trucking routes have not yet been finalized for this project. The proposed project activities also include the production of wastewater from runoff and wash out pit discharges. (EIS 9.6.3.4/p.9-81)

Information/Clarification Requirement 9 – The exact locations of project activities (batch mixing plant, staging areas, etc.) need to be specified to adequately determine their potential effects on the site’s terrestrial vegetation and wetland areas.

5.4 Traditional Land Use and Cultural Resources

5.4.1 Summary of EIS Content

The following documents related to traditional land and resource use and cultural resources were reviewed through the lens of AOO rights and interests:

- Sec 7 Aboriginal Engagement of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Sec 8.9 Description of the Existing Environment: Aboriginal Land and Resource Use of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Sec 9.9 Assessment and Mitigation of Environmental Effects: Aboriginal Land and Resource Use of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Sec 10 Mitigation Measures of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Nuclear Power Demonstration Aboriginal Engagement Report Revision 2 September 2017

Engagement with Algonquins of Pikwakanagan First Nation (AOPFN), one of the ten Communities represented by the AOO commenced in September 2015. However, the AOO was not being included in consultation activities at that point in time. As a result, the AOO included comments requesting that the AOO be engaged in future consultation activities in the Preliminary Comments on the CNL NPD Closure (File no. CF 48-2). These comments were submitted on June 24, 2016.

Formal engagement with the Algonquins of Ontario around the project commenced on July 15, 2016 with CNL sending the AOO a project introduction letter and request for input on any effects the Project may have on AOO rights and interests. Since the issuance of the Project Introduction Letter the following engagement activities have taken place with the AOO according to the EIS:

- On August 10, 2016 two engagement meetings were held. One meeting was an information session with AOO Consultation and Technical Staff and the other was a visit with AOO Consultation Staff to the NPD site and Chalk River Laboratories Site
- From November 1, 2016 to June 19, 2017 three tele-conferences occurred between the AOO and CNL on various project updates
- From November 1, 2016 to June 19, 2017 eleven instances of email correspondence occurred between the AOO and CNL on various project updates
- From November 1, 2016 to June 19, 2017 two instances of letter correspondence occurred between the AOO and CNL on various project updates
- From November 1, 2016 to June 19, 2017 one in-person meetings occurred between the AOO Algonquin Negotiation Representations and CNL to discuss the project and opportunities for AOO involvement including employment, procurement, and participation in field work/ monitoring
- On June 9, 2017 a site-visit occurred between the AOO and CNL to the NPD facility occurred

- On June 19, 2017 the only public information session recorded in the EIS took place to inform and gather AOO citizens input about the project

According to the EIS, the above engagements identified biodiversity and cultural heritage studies as topics on interest to the AOO and other Indigenous groups. In response to these interests, CNL has:

- provided copies to communities, where an interest has been expressed, of project documents related to biodiversity, archaeology and the NPD site in general, as well as images and topographical maps of the site;
- shared informational posters with all identified communities and/or organizations;
- shared updated project information with communities and/or organizations at periodic intervals; and
- provided opportunities for participation of First Nations community members in archaeological assessment field studies undertaken as part of the project.

Regarding CNL's invitation for First Nations to participate in archaeological field studies as part of the project it is important to note that correspondence between AOO and CNL on November 9, 2016 outlined in Appendix E of the Aboriginal Engagement Report, version 2 indicates that CNL failed to acknowledge AOO's desire to have AOO Archaeological Liaisons engaged in the Stage 1 Archaeological Assessment. In the correspondence it also outlined that AOO was not included in a Stage 1 field visit despite AOO's request for involvement and further requests that AOO be properly informed and in a timely way of the commencement of the Stage 2 archaeological assessment.

CNL acknowledges in their EIS that engagement around understanding and integration of traditional land and resource use (TLRU) use in the EIS has been limited, at best, and state a commitment to ongoing engagement around incorporating TLRU into the project. Further to that point, the EIS states that thus far all TLRU incorporated was from existing studies and reports, formal and informal engagement, and publicly available literature and that NPD project-specific studies have not been conducted. Although NPD project-specific TLRU studies have not been conducted, CNL has identified study areas for traditional land and resource use to assess effects based on existing data. The study areas identified are:

- The Site Study Area (SSA) extends 50 m from the NPD site into the Kitchissippi to capture releases from the NPD site (for example, sub-surface Drain 1 discharges onto the shore of the Kitchissippi, and the wells area sump (WAS) discharges roughly 20 m from the shoreline into the Kitchissippi;
- The Local Study Area (LSA) has been defined as the Site Study Area plus a 1-km radius beyond that area;
- The Regional Study Area (RSA) has been defined as the Site Study Area plus a 5-km radius beyond that area

The EIS further acknowledges that the project occurs within the AOO Settlement Boundary and that the area is subject to the Algonquin Land Claim, as a result CNL assumes that AOO citizens continue to

practice traditional land use in the region. However, CNL also states that this assumption has not been directly confirmed with the AOO.

According to the EIS, CNL has carried out some preliminary engagement with the Algonquins of Ontario and is aware through the Agreement-in-Principle signed by the Algonquins of Ontario, provincial and federal governments that several land parcels near the NPD site (within the Local and Regional Study Areas) have been identified as “Proposed Settlement Lands” that are to be transferred to some Algonquin institution. It is unclear what purposes these lands might be for but as they are currently Crown lands upon which Algonquins could practice traditional activities, CNL has assumed that those activities might also occur in the future.

The EIS provide some specific information regarding trapping, hunting, fishing, and gathering. In terms of trapping, CNL has identified that there is one registered Trapline Area (PE026) within the LSA and an additional registered Trapline Area (PE027) within the RSA. However, CNL has not yet determined if there are traplines held by Algonquin people. The EIS does also note that there is private land adjacent to the CNL NPD site where trapping may or may not be occurring.

CNL has identified that hunting is actively happening in the Ottawa Valley Forest and that species that are harvested include moose, elk, deer, small game such as partridge, waterfowl, and possibly black bear. The EIS also acknowledges that AOO citizens continue to hunt in present day, prepare an annual Algonquin Harvest Management Plan, and that harvesting wildlife is outlined in a section of the AOO’s Agreement-in-principle. CNL has stated that there is no confirmed hunting in the LSA due to restricted access but do acknowledge that it could be occurring in adjacent privately-owned land. Lastly, CNL acknowledges that hunting could be occurring in the RSA but do not have data to confirm this. However, CNL does state that the project is within the MNRF Wildlife Management Area # 48 and that Algonquin people are known to harvest in this area based on information from the AOO.

The EIS states that the Kitchissippi (is a site that is used actively for sport and subsistence fishing and the Kitchissippi is within the SSA. Fish species likely harvested according to the EIS are walleye, smallmouth bass, and northern pike. The harvesting of fish is also outlined in the AOO’s Agreement-in-Principle. CNL has stated that fishing is likely not occurring in the LSA due to restricted access. However, fishing likely is occurring in the RSA in the Kitchissippi and adjacent lakes such as Tee Lake.

In terms of gathering, CNL acknowledge that Algonquin citizens harvest plant resources such as spruce roots, mushrooms, White Birch, and Cedar. The harvesting of plants is outlined in section 8.5 of the Algonquins of Ontario Agreement-In-Principle. CNL has stated that plant gathering is likely not occurring in the LSA due to restricted access. However, gathering likely is occurring in the RSA in the provincial land and designated AOO Settlement Lands.

In terms of cultural resources and ceremonies, CNL states that there has been no indication of ceremonies occurring within the SSA. However, CNL further elaborates that A Stage 1 Archaeological Assessment of the NPD site (Archaeology TSD) was undertaken by Kinickiniick Heritage Consulting. The Stage 1 Assessment determined that there is no archaeological potential within the decommissioning

footprint due to extensive disturbance during facility construction, however CNL contracted Kinickiniick to undertake a Stage 1 assessment in order to provide background information about the history and archaeological potential of the NPD property.

In terms of ceremonies and cultural resources in the RSA, CNL acknowledges that there are proposed Algonquin land claim settlement lands located near the NPD site (near Tee Lake) that likely are of significance to certain members of the Algonquins of Ontario. There may be cultural ceremonies associated with this area, which is situated south of the NPD property.

As a result of the above findings around TLRU, CNL has proposed the following preliminary mitigation measures:

- dust suppression measures;
- construction activities scheduling that will generally occur between 7 am and 7 pm with the overall objective of minimizing nuisance effects (i.e. noise and traffic) on traditional resource users in the LSA and RSA.
 - CNL does note that this should be subject to further discussion with potentially impacted Aboriginal groups including AOO. It is noted that special or emergency circumstances may require deviation from this restriction; and,
- periodic communication updates on project construction activities to Aboriginal groups, including: construction schedule, activities, dedicated contact person for inquiries and emergencies, etc.

CNL acknowledges that as the project approaches detailed work planning, additional mitigation measures may be developed as required.

At this point, no specific environmental monitoring has been identified for TLRU. CNL is planning to use monitoring in other environmental components to confirm its EIS predictions (i.e., that no effects are expected on Aboriginal land and resource use). In addition, CNL intends to carry out ongoing Aboriginal engagement activities throughout the Decommissioning Execution and Institutional Controls phases to identify any changing concerns or perceptions related to the project.

Moving forward, CNL has stated in the EIS that they intend to develop community specific Aboriginal engagement plans. These plans are intended to:

- Clarify communities and community representatives the CNL will continue to engage with;
- Schedule times of engagements on areas of interests such as valued components, potential environmental effects, and proposed mitigation measures;
- Outline the documentation that will be shared with Indigenous groups and the anticipated release date of those documents;
- Outline any additional engagement opportunities between CNL and Indigenous communities

5.4.2 Evaluation and Accommodations

At this point the EIS integrates TLRU in a vague, non-specific manner that acknowledges TLRU could be occurring but does not provide any AOO-specific values that are being actively monitored or mitigated both within the LSA and RSA.

Issue 1 – The AOO were not directly consulted regarding the NPD Project until an express request was made to be included in the consultation record for this project despite the project being located directly within the Proposed AOO Land Claim Settlement Area.

Accommodation 1 – Continue to engage the AOO and ensure said engagement is conducted using best practices on engaging Indigenous peoples. This includes but is not limited to the provision of adequate capacity funding for participation, establishing or following a communications protocol as set out by the AOO, and providing information in an accessible and timely manner.

Issue 2 – AOO was not initially provided with adequate notice to participate in the Stage 1 archaeological assessment field visit as outlined in communications between CNL and AOO on November 9, 2016 despite express requests for such engagement.

Accommodation 2 – Provide adequate notice and capacity resources for AOO to participate in archaeological site visits/ field assessments from this point forward with the NPD project. This includes directly engaging with Archaeological Liaisons identified by and serving as representatives of the AOO.

Issue 3 – No AOO specific Aboriginal Engagement Plan has been developed on how CNL will continue to conduct its engagement with the AOO, including how CNL intends to incorporate AOO-specific TLRU values or how AOO will be involved in environmental monitoring or emergency response.

Accommodation 3 – Work with AOO Consultation Staff on developing an AOO-specific Aboriginal Engagement Plan that includes establishing a clear communications protocol between CNL and the AOO, provides a schedule for engagement opportunities between CNL and the AOO, and identifies what opportunities will be provided for further input on the project.

Issue 4 – CNL has acknowledged that the NPD project is within the unceded AOO Land Claim Settlement Area and recognizes that there is potential AOO traditional land and resource use happening within the RSA and in some cases the LSA. However, there are no specific harvesting, cultural, and/ or ecological values that have been identified nor is it evident how CNL plans to incorporate AOO TLRU in a meaningful way beyond acknowledging the potential that it is occurring. This lack of consultation and engagement for the collection of TLRU and Algonquin Ecological Knowledge (AEK) is unacceptable.

Accommodation 4 - Incorporate AOO-specific harvesting, cultural, and/ or ecological values into project planning, monitoring, and emergency response either through engaging the AOO in conducting a TLRU study or other methodology (i.e. community cultural values mapping; oral history study etc.) decided upon by the AOO for sharing TLRU information related to the NPD project. This information is best collected at early phases of the Project. Despite having failed to collect this information early, the CNL must collaborate with AOO for the collection of TLRU before the EA process continues. In summary, CNL

must provide adequate capacity funding for AOO to conduct an Algonquin Knowledge and Land Use Study in order to better understand Algonquin land use patterns

Issue 5 – The current proposed mitigation measures around TLRU values are very generic, limited in scope, and lack details on how AOO-specific values and cultural resources will be mitigated for in the SSA, LSA, and RSA.

Accommodation 5 – Engage and consult with the AOO regarding the development of AOO-specific mitigation measures that ensure cultural resources, harvesting locations, and areas of traditional ecological knowledge significance are properly protected and mitigated.

Issue 6 – The mitigation measure around construction scheduling is vague, simply stating, “construction activities scheduling that will generally occur between 7 am and 7 pm with the overall objective of minimizing nuisance effects.” The EIS also goes on to state that this mitigation measure will ensure construction activities will not interfere with TLRU activities or cause disturbance to species and wildlife.

Accommodation 6 – Engage and consult the AOO on developing specific measures to minimize nuisance effects of construction on TLRU including traditionally important species and their habitat.

Issue 7 – At this point no environmental effects monitoring for TLRU impacts is planned despite the EIS stating there is potential TLRU within the RSA as well as harvesting occurring within MNRF Wildlife Management Area #48 which intersects with the SSA.

Accommodation 7 - Work with the AOO on developing an AOO-specific environmental effects monitoring plan and program for protecting and mitigating areas of AOO traditional land use and areas of cultural significance to the AOO.

Issue 8 – In the trapping section of the TLRU section, CNL identifies that there are 2 registered trapline holders within the RSA. However, it is not clear if the traplines are held by AOO citizens or if mitigation or compensation measures have been developed for those trapline holders if necessary.

Accommodation 8 – Ensure the trapline holders within the RSA are adequately accommodated and compensated for any impacts experienced as a result of the project.

5.5 Archaeological Resources

5.5.1 Summary of EIS Content

The NPD property underwent a Stage 1 archaeological assessment in 2016, completed by Ken Swayze, AOO’s preferred archaeological consultant. Based on the findings of the report, the archaeological potential of the NPD property can be considered high. However, the lands within the NPDWF are considered to have little to no archaeological potential due to significant past disturbance. Historical photographs of NPD under construction clearly show that disturbance throughout the nuclear power plant grounds was deep and extensive, including the river shore (Swayze, 2016). This disturbance would have likely impacted or destroyed all Algonquin archaeological resources present on the NPDWF site.

According to the Stage 1 report, areas on, and adjacent to the NPD property demonstrate high archaeological potential due to close proximity to rapids on the Kitchissippi and evidence of seven historical shorelines on the NPD property. However, to date only a Stage 1 desktop assessment has been completed so future fieldwork is required on the NPD property to locate specific archaeological sites.

Currently, there are no recorded archaeological sites on the NPD property, however, there are several beyond the NPD property boundary, including Meilleur Bay (CbGj-3), Boom Creek (CbGj-1), Fraser Bay (CbGj-2) and Postes des Rapides-des-Joachim (CbGk-1), which has archaeological material spanning the 19th century that relates to the local Algonquin people (Swayze, 2016).

“Given that Pre-Contact archaeological potential is predicted primarily by proximity to water, and given that every elevation of the NPD property was once an active river shoreline, the whole property between 200 m and the modern waterline is one big relic shoreline and therefore, it all has archaeological potential (Swayze, 2016).”

The NPD property is surrounded by two areas of historical Algonquin importance, the first is near the Rapides-des-Joachim, an island between courses of white-water. The island is known as “Swisha” and it was first an Indigenous village and later became well known as a trading post (Swayze, 2016). The NPD is located just upstream from Stewarts Point, a well known sandy beach which was a gathering place for Algonquins and non-Indigenous people prior to site restrictions (Swayze, 2016).

The Stage 1 Archaeological Assessment report concludes that although the plant itself has nil archaeological potential, there is high archaeological potential widely across the NPD property, for Pre-Contact sites of every age (Swayze, 2016).

5.5.2 Evaluation and Accommodations

Issue 1 – The AOO have reviewed the Stage 1 Archaeological Report and wish to develop a deeper understanding of the archaeological potential on the NPD property. We understand no activities are planned outside of the NPDWF, however due to the significant disturbance of cultural heritage resources during NPD construction, it is important for AOO to understand and preserve the remaining Algonquin cultural heritage resources on the NPD site. Based on the findings of the Stage 1 Archaeological Report, the potential for archaeological resources on the NPD property is high, and the site has value from an archaeological research perspective.

Accommodation 1 – CNL, in collaboration with AOO should undertake additional field research at the NPD property for areas that have demonstrated high archaeological potential (e.g. relic shorelines) in the Stage 1 Archaeological Report and modelling. The AOO recommends that the NPD property be further investigated by the CNL Archaeological Field School in order to better understand the site and build capacity within AOO members for cultural heritage research.

Issue 2 – The Algonquins have lost a significant part of their history through development of the NPD property.

Accommodation 2 – CNL should negotiate a long-term archaeological agreement with the AOO, which will provide educational, training, and research related to remaining AOO cultural heritage resources on the site.

Issue 3 – In regard to archaeological resources within the NPDWF site, the AOO wish to play a direct role in the monitoring of the site during construction and decommissioning activities. Although there has been extensive disturbance at the NPDWF, there is potential for archaeological resources to be present within the decommissioning footprint. Past disturbance and use of a site does not discharge CNL from its obligation to protect any artifacts that may still be existing.

Accommodation 3 – The AOO requires that CNL provide an archaeological monitor chosen by the AOO to oversee construction activities at NPDWF to ensure that Algonquin archaeological resources are properly identified and protected during construction.

5.6 Ecological and Human Health Risk Assessment

5.6.1 Summary of EIS Content

This review is a technical evaluation of the Ecological and Human Health risk assessment of the EIS and supporting technical documents. The major focus of the review is the process used to estimate releases of radioactivity and other contaminants from the decommissioned reactor to the local environment. A key component of the risk analysis is how well the local environment (e.g., air quality, surface and ground water and the receiving environment) is characterised, how releases of radioactivity from the facility are estimated and how well the risk analysis for human health is estimated. Human health risk is estimated for aboriginal groups that may follow a more traditional lifestyle near the NPD in the future, the general public and non-human species living on or near the NPD site.

The proposed *in-situ* decommissioning of the reactor involves the grouting of the NPD vault and associated structures and placing an engineered concrete cap over the whole structure. Through time the vault is expected to degrade and fill with ground water and radioactivity transported to the Ottawa River, where the radionuclides are released through sediment to the water column. The levels of radioactivity and the dose to non-human biota and humans is estimated to be low and well below benchmarks for human health and the safety of non-human species. The first peak of radioactivity is predicted to be released at 40 years followed by higher doses after about 1000 years. The highest dose to humans is the hunter who is hunting, trapping and fishing near the site. There is no consideration for how the presence of radioactivity on the site will impact the use of the land in the future (e.g., avoidance due to the radioactivity on the site).

The EIS generally follows the guidance from the CNSC and CEAA in terms of the topics to be covered and areas of emphasis. The consideration of alternatives to the *in-situ* decommissioning is cursory and more information needs to be provided on costs and how each alternative affects government liability, a key driver of the decommissioning process. Aboriginal engagement is weak, particularly in terms of the selection of the VCs and should be improved, especially given that the highest dose to be received from the radionuclides entering the Ottawa River is for the hunter scenario, and not the critical farm group

living on or near the NPD in the future. This is a significant concern for AOO, as the Algonquin people regularly hunt within the RSA.

The methods used to estimate exposure and radiation dose in humans and non-human species are standard protocols used by several international organisations (and CSA, CNSC, Health Canada, etc.). Exposure/dose coefficients are taken from several sources but appear to be standard. The benchmark radiation dose used for the non-human species (which are important for species hunted, trapped and fishes by AOO members) is outdated. Recent methods recommended for the international ERICA modelling exercise use a more conservative approach and safety factors, however adopting the newer methods are not likely change the conclusions of the effects assessment.

The EIS is surprisingly weak in the chemical and biological characterisation of the NDP site and the receiving environment for the nuclides transported by groundwater. For some media, the assessment relies on data from Chalk River Laboratories, while for other media there are no data available (see below). Given the requirements of modelling groundwater transport and the interactions of nuclides with dissolved and particulate compounds after discharge in the river, much more site-specific data should be used. In some cases, it isn't clear what data are used (e.g., the chemistry of groundwater entering and exiting the vault). As described below, a program to measure water chemistry in bore holes between the NPD and river did not analyse for several standard water quality components. The lack of site specific data undermines the validity of conclusions related to the effects assessment for the Project.

The alternative methods of decommissioning considered by CNL include allowing the NPD to remain as it is until radioactivity declines further or the removal of the most radioactive sections for storage at Chalk River Laboratories until a national permanent disposal site is constructed. These alternatives are required by the CEAA guidelines, but none of the alternatives are presented in any depth. As indicated from the history of the NPD assessment process outlined in the Post Closure Safety Assessment Report, *in-situ* decommissioning has been the preferred option since the beginning of the process and has been the only alternative considered rigorously. The best alternative for protecting safety and human health would be the deferral of decommissioning and complete removal of all radioactive contamination to a long-term facility. However, as there are no existing long-term storage options for nuclear waste in Canada, this would require postponing the transfer of the residual NPD property to AOO for the foreseeable future. Acknowledging the risks of the preferred approach by CNL, it is therefore important that best practices for protection of the environment associated with in-situ decommissioning be implemented. Moreover, as identified in various places in this report, the CNL must ensure that rigorous long-term monitoring programs are in place to evaluate on-going risks associated with contamination.

The Post Closure Safety analysis supporting document provides a background for the development of the assessment which includes human health and ecological risk estimates (EIS, pp 1-2). The report recognizes the iterative nature of the assessment which began in 1999 and the modifications as data were collected, and the assessment matured. The problem with this approach is that the parts of the assessment are not fully coordinated which causes confusion and individual assessments may contradict statements within the EIS. The ecological risk assessment is presented in a supporting document, but there is a second iteration which is listed as Appendix D. The second iteration contains different

scenarios and a reanalysis of older scenarios. Some environmental concerns, such as high lead concentration being released in postclosure, become non-issues in the new assessment. The screening of compounds, and the changing scenarios and conclusions, significantly reduce the confidence in the general approach.

The intent of the decommissioning is to reduce the liabilities of the federal government. It is stated in supporting material: “As indicated in the project description (section 3.1.2), the objective of the proposed project is to safely decommission Nuclear Power Demonstration Waste Facility (NPDWF) ensuring the prompt reduction of Canadian legacy long-term liabilities.” What factors are involved in determining the liability to the government, and whether alternative methods of decommissioning address these, while achieving similar safety outcomes, is not discussed in the EIS. *In-situ* decommissioning will not remove the radioactivity from the site, but, conversely, the radioactivity will continue to transfer to the Ottawa River for several thousand years. Full removal of the radioactive sources from the site seems to be a more acceptable method of reducing liability.

5.6.2 Evaluation and Accommodations

Issue 1 - Insufficient discussion of alternatives to In-situ Decommissioning

Accommodation 1 – Provide detailed assessments of the alternatives in the EIS, and provide the AOO with a workshop on alternatives, so that AOO can evaluate the options and their strengths and weaknesses. The topics should include cost, liability, the magnitude and timing of risks to human health and non-human species.

Issue 2 – Inadequate characterisation of the NPD Environment

Accommodation 2 – The proponent should conduct a detailed environmental survey of the physical, chemical, and biological conditions of the NPD, in close collaboration with the AOO. Much of the physical environment is mapped, but the chemical composition of groundwater, surface water, sediment, and the receiving environment are missing. The results will help reviewers to interpret the conditions of the receiving environment and the importance of water quality factors in transport in groundwater, through sediment and in the water column. Biological surveys conducted with the AOO will establish the species present, their numbers, distribution and timing on the NPD site, and importance of those species, habitats and activities to the AOO.

Issue 3 – The Ecological Risk Report does not include the second iteration of the models (as described above).

Accommodation 3 – The ecoRisk report needs to be amended to incorporate the second iteration of models and the re-interpretation of results. A full suite of radionuclides should be included in the estimation of dose in VCs and the VCs reconsidered to include fish important to the AOO, sport fish and potentially commercial fish. The doses to such fish might be lower than those species associated with the sediment but will provide information to those actively using the resource.

Issue 4 – Algonquin Scenarios of Land Use and Interpretation of Results.

Accommodation 4 A greater effort must be made to engage AOO in the development of critical group scenarios and resource use. Models of AOO citizen exposure and dose should be discussed with AOO to determine if they are accurate and feedback encouraged. The maximum dose from the NPD is expected to be in the hunter and that information should be communicated to the AOO.

Information Gap 5 - Several terms used throughout the EIS are unclear as to their meaning and need to be better defined for a full evaluation. For example:

Disposal: the term is used throughout the EIS but the proposed decommissioning does not “dispose” radioactivity and places it into long-term storage to allow it to seep into the surface environment. The term “disposal” suggests the removal of the radioactivity from the biosphere (such as placing it deep in the Canadian Shield or in the deep ocean) but the *in-situ* decommissioning just delays its release to the receiving environment.

Normal Evolution: the term is used in all model simulations for human health and ecological risk assessment. The term implies that the physical, chemical, biological, and socio-economic environment hundreds and thousands of years in the future are predictable and largely the same as it is today. There is no way to test this, making the estimation of effects to humans and non-human species difficult to validate.

Cumulative effects: The EIS does not conduct an assessment of cumulative effects because no impacts are predicted from the releases of radioactivity and non-radioactive contaminants from the facility. An analysis should be conducted on the release from NPD with those from the Chalk River Laboratories and other industries and cities on the Ottawa River. Also, an assessment of the overall NPD site, including all sources of contamination (landfills, wetlands, stored materials, etc.) should be conducted.

Institutional Control and Post Closure: What is involved with Institutional Control? Security and monitoring of the site, verification and validation of modelling scenarios, in particular the release of tritium after 40 years? Will monitoring be continued in the Post Closure period and, if so, for how long? Commitments on programs need to be scoped out before decommissioning is considered, although programs can be altered or suspended at any time.

Information/Clarification Requirement 5 – CNL must provide additional description for the terms used. CNL must provide responses to the issues noted above.

Information Gap 6 - As described above, the description of the chemical and biological environment at the NPD is very weak and the most basic environmental quality data have not been collected or reported in the EIS. Data from the Chalk River Lab is used in the place of site specific data but appears to be inappropriate. For example, the chemistry and level of contamination of groundwater at CRL is probably different from NPD. Other examples include:

EIS, pp 8-16- “Climate normals on bright sunshine and cloud cover are not available at or near the CRL or NPD sites.”

EIS, pp 8-18- “Climate normals on atmospheric pressure data are not available at or near the CRL or NPD sites.”

EIS, pp 8-29- “Measurements of noise along Highway 17 in the Regional Study Area are not available; however, outdoor noise at receptors close to the highway is likely to range from 50-70 dBA, depending on traffic volume (CHC 2016).”

EIS, pp 8-45- “Chemical levels in surface water in the part of the Ottawa River located in the Site and Local Study Areas are not available.”

EIS, pp 8-51- “Chemical levels in surface water in the part of the Ottawa River located in the Regional Study Area are not available.”

EIS, pp 8-51 Sediment Quality – Table 8.3-8 and 8.3-9 report data on radionuclides in sediments near the outfall but does not report data from sites P-28 (included in Table 8.3-9), P-32, P-31, P-33 or P-34 that are closest to the outfall.” Why are data from these sites not included with the others?

EIS, pp 8-81 – Table 8.5-8 The “BH” sites (with water) located between the NPD and the shoreline have not been analyzed for a number of parameters (anions & DOC, TKN, alkalinity, major cations, trace metals, volatiles and PCBs). Why is the analysis so selective? Aren’t the data on groundwater chemistry required for modelling the transport of radionuclides and other contaminants?

EIS, pp 8-86 8.6.3 Vegetation Species and 8.6.4 Wildlife Species. Several general species lists are provided but there have been no actual surveys of species that are present on the NPD site. Are these resident species or migrating species (for birds)? Have they been identified and recorded on the NPD site? What is their distribution and numbers relative to the landscape at NPD? Chimney swifts seem to be the only species confirmed on the site.

“As the NPD site is not currently used for traditional purposes (hunting, fishing, trapping etc) the project is not expected to affect the health of aboriginal peoples. Consultation of aboriginal peoples during the project was discussed in Section 2.3.” This lack of use is not surprising considering it is a controlled federal facility, however, the use of the site may change over the length of time that the radioactivity remains on the site. Land use can change significantly over time, particularly given the ongoing Algonquin Land Claim Agreement and negotiations. Traditional land use activities such as hunting, trapping, fishing, or even construction of businesses and residences by the AOO on the NPD site could be expected to occur in the future.

Information/Clarification Requirement 6 – The baseline characterization of the environment is not acceptable for a Project with this level of risk. Additional information must be provided before the Environmental Assessment process can continue. Moreover, the CNL must provide responses to the issues noted above.

Other specific comments on the EIS for which additional information is required:

Issue 7 - Executive Summary Pg 12 “For example, the use of grout to fill the structure is expected to slow down the release of contaminants to groundwater and subsequently to the Kitchissippi, and allow more time for radioactive decay.” The maximum release of some nuclides, and a peak dose, will occur 40 years after decommissioning according to the Post Closure Assessment report. Other nuclides will be released much later but the peak at 40 years probably would not occur if the facility is left in its current state for several more years.

Issue 8 - Executive summary - Pg 27 “The cement being considered for radioactive disposal systems is similar to early cements used by the Romans in the 3rd century or those used in Tiryns and Mycenae approximately 1,000 years earlier. These cements demonstrate little degradation over approximately 2,000 years.” This statement is misleading. Roman cement is a mix of volcanic ash and seawater which form metallic crystals. The proposed grout is based on Portland cement, which is not as durable. The expected lifetime of the grout is not discussed in detail but is probably much less than 2,000 years.

Issue 9 - Pg 2-12 – How long will the drainage system that is currently in place function? The current design relies on the drainage system now in place to transport groundwater to the river. Presumably there is a lifespan for the system. What is expected to happen to groundwater flows when the system degrades?

Issue 10 - Section 5.2.2 Project-Environment Interactions –“Project-environment interactions were developed by screening potential effects of project-related activities within each relevant component of the environment. At this stage of the EA process, the identification of the potential project-environment interactions was based on the experience and professional judgement of technical specialists involved with the assessment.” Is this selection process based entirely on professional judgement of CNL and its consultants? There is no way to track or understand the reasoning behind many of the decisions taken by the technical staff. Some of these pathways are considered in the FEPs analysis of the Post Closure Assessment report. However, there is a need for the process of peer review to ensure that technical decisions have support of evidence and appropriate interpretation. That process does not appear to be followed here.

Issue 11 -Table 5.2-2 – Chemical COPC screening – “Baseline screening. For example, under “Soil” “The presence of these contaminants is associated with *natural background or past NPD operations*, not with NPD closure project activities [emphasis added].” The assessment needs to look at all contaminants from all activities if they exceed guidelines. Similarly, high manganese in groundwater is dismissed as it is “not associated with NPD closure project activities” although there is no supporting evidence for this. Dioxins/furans in water at the base of the vault indicates transport from the landfills and incinerated waste. The high concentrations suggest a sizeable source. Given that the site will be abandoned after the reactor decommissioning, will the exceedances in soil and groundwater be taken into account even if they are not associated with the NPD assessment?

Issue 12 - Section 5.2.4.1 Selection of candidate VCs – No mention is made of aboriginal engagement in the selection of possible candidate species. Was any effort made to incorporate species important to the traditional users of the land around NPD? It appears that Aboriginal input was solicited once the VCs were decided (Pg 5-15).

Issue 13 - Table 5.2-3 Selection of VCs. The selection of fish species is problematic, and it is not clear if species important to aboriginal groups were considered. White-tailed deer is harvested by First Nations and is considered under Socio-economics and not under Traditional Land Use or Terrestrial Environment (Moose is usually a preferred species for VC selection because of the presence of aquatic plants in its diet). The activities of hunting, fishing and trapping are considered to be VCs, but not the non-human species that are involved. There are no recreational or commercial fish used as VCs, e.g., northern pike, walleye or lake trout.

Issue 14 - Table 8.3-1 In this table and many others it is not shown what “NA” indicates? Not analysed? Not available? Cesium-137 was reported until 2004 (8.2×10^4 Bq) but not after that. If Cs-137, Co-60, etc. are not detected, it should be indicated.

Issue 15 - Pg 8-60 “It is noted that while some baseline characteristics of the aquatic environment have been compiled, detailed mapping (e.g., of substrate, fish habitat, and temperature) has not been carried out specifically for the NPD closure project, because no fish habitat impacts are anticipated from the project.” This is a very weak argument for not determining baseline conditions of the chemical composition of the water in the receiving environment and the aquatic habitat that could potentially be affected by chemicals and dissolved solids (during the grouting process). Figure 3.1-4 indicates that the NPD is about 300 m from the shoreline which suggests that changes to the shoreline could occur during the construction of the grout plant, transport and moving materials on the site. An aquatic survey of physical, chemical, and biological conditions in the receiving water is warranted.

Issue 16 - 10.4 Archeology Site/Local Study Area – “Historical research detailed in the Archeology TSD clearly shows there were generations of settlers on the NPD property, raising families and constructing buildings and docks.” Algonquins p used the area prior to European contact and there may be areas of significance to the AOO.

Issue 17 - “For scenario 12 (accidental stack collapse), the resulting releases would be localized, with exposure pathways limited to on-site biota only, namely, the Chimney swifts roosting in the stack. However, Chimney swifts reside in the stack only during the night and a heavy equipment accident leading to the accidental collapse of the stack could only occur during the day when heavy equipment is in operation. Therefore, it is unlikely that Chimney swifts would be present and exposed to the potential airborne and liquid releases of contaminants during a stack collapse accident.” – This is an odd argument for an assessment that should be evaluating all impacts (physical, chemical, and biological) of all stages given that the stack collapse could destroy the nests of the swift population. A stack collapse, depending on the time of year, would wipe out the colony, regardless of the time of day.

Issue 18 - Ecological Risk report Pg 2-17 “If the radionuclide concentration was greater than the NEC value and a dose coefficient was available, then the radionuclide was “screened in” or included for assessment in the EcoRA; if a dose coefficient was not available, then the radionuclide was “screened out”.” It should be possible to calculate dose coefficients based on basic principles or using analogues. Not having a dose coefficient is not a valid reason for “screening out” radionuclides. The text indicates later that this did not happen during this screening process.

Issue 19 - Ecological Risk Report Table 2.16 – Very few details of the assessment are reported. Only H-3, Co-60 and Cs-137 are reported in the table, although a large number of nuclides are present in the vault and associated structures (see Post Closure report). Also, the doses to non-human species are not reported. It appears that most nuclides have been screened out before the actual screening process of doses has occurred.

Issue 20 - Ecological Risk Report Table 2.18 – Dioxins/furans are “screened out” but the units are in mg/kg and not in Toxic Equivalence (TEQ) based on the congeners of the dioxins/furans present. This congener information is needed before dioxins/furans are “screened out”. See Table 9.11-5 of the EIS for TEFs for individual congeners. [Note: The USEPA uses slightly different TEFs 1,2,3,7,8-PeCDD = 1.0 and OCDD and OCDF are 0.0001].

Issue 21 -The text of the EcoRisk Report discusses a “second iteration” of risk assessment, which is presented in Appendix D of the report. This second iteration contains new scenarios and a re-analysis of data. Lead, which was a major concern from the first iteration, has become a minor component. It isn’t clear why lead is less important (an Ontario-wide value for background lead in soil was used in the first iteration but was considered incorrect because of the high risk values from the assessment. Site-specific data should have been available). In all, there is enough confusion regarding the methods and the reasons why a second assessment process was required (and placed in an Appendix and not in the main text) that the document should be redone to clarify the methods and conclusions.

Issue 22 - Post Closure Assessment Report – This is a well written report and provides some good background information for the human health and ecological risk assessment, but the assessment is centered around *in-situ* decommissioning. Alternatives were only considered as an exercise to fulfill CNSC guidelines for the EIS and were not seriously considered. There are no cost estimates or safety cases and risk assessments presented for each alternative. It appears that the minimum long-term liability for the NPD is the removal of radioactive materials and full decommissioning of the rest of the site. The site can then return to natural conditions or other land uses without restrictions. This is inadequate for the protection of future AOO land-users. The CNL must hold long-term liability beyond the removal of radioactive materials and full decommissioning of the site. The CNL should be liable for monitoring and remediation of the site to a state that is acceptable for safely engaging in unrestricted land use.

Issue 23 - Post Closure Assessment Report Pg 2-9 Dealing with Uncertainties – The issue of uncertainty and conservatism is often subjective, particularly in future scenarios when there are

so many unknowns. Conservative relative to what? Conditions that appear to be conservative now may be closer to a realistic scenario in the future. Conservatism is often used to support an argument but there is very little support for it in the models, especially those using empirical data for transfer factors or dose coefficients.

Issue 24 -Post Closure Assessment Report - Normal Evolution Scenario. There are no time lines associated with any of the major events described in this section. It is accepted that groundwater will infiltrate the vault and associated structures and that nuclides will be transported to the river. The timing of these events is not given, although those values are given later in Section A9 (Timeframe of Interest). It is important to note that this scenario is entirely based on the natural environment as it exists in the far future and does not include socio-political changes over the centuries that might impact land use. The selection of FEPS to include in the scenarios is not transparent and could be used by the proponent to justify the selection of *in-situ* decommissioning.

Issue 25 - Post Closure Assessment Report Figure 5-7 – This is a significant observation from the assessment. The maximum rate of release of nuclides to the river occurs at about 40 years after grouting, which is during Institutional Control. It is suggested in other parts of the EIS that the maximum release occurs far in the future. Similarly, in Figure 5-12 the maximum concentration in the river sediment occurs 40 years after grouting. The maximum of nuclides in sediment reaches 100 Bg/kg after 100 years, but is 10x higher in Fig 5-12 at 40 years. The *in-situ* decommissioning releases nuclides to the environment soon after the grouting is complete and continues to do so for several thousand years. The total amount of radioactivity released is low and the doses received by the critical group and hunter/gatherers is low.

5.7 Socioeconomics and Community Well-Being

5.7.1 Summary of EIS Content

In regards to socio-economics and community well-being the following documents were reviewed through the lens of AOO rights and interests:

- Sec 8.10 Description of the Existing Environment: Socio-Economic Environment of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Sec 9.10 Assessment and Mitigation of Environmental Effects: Socio-Economic Environment of the Draft EIS for the CNL Nuclear Power Demonstration Closure Project
- Socio-Economic Assessment Technical Supporting Document for the NPD Closure Project

CNL used the following sources to develop an understanding of the socio-economic environment and conditions around the NPD project:

- planning and land use documents (e.g., Official Plans, municipal zoning documents, forest management plans, provincial agency reports and ZEC profiles);
- government databases (e.g., census profiles; MNRF Crown Land Use Policy Atlas);

- interactive maps (e.g., ZEC and Ministry of Natural Resources and Forestry (MNR) maps);
- acts and regulations (e.g., regulations overseeing ZEC); and,
- municipal and local websites (e.g. tourism association websites, campground and recreational websites).

These sources of information were applied to give an understanding of the socio-economic conditions within the following identified study areas:

- The Site Study Area (SSA) extends 50 m from the NPD site into the Kitchissippi to capture releases from the NPD site (for example, sub-surface Drain 1 discharges onto the shore of the Kitchissippi, and the wells area sump(WAS) discharges roughly 20 m from the shoreline into the Kitchissippi and falls within Renfrew County;
- The Local Study Area (LSA) has been defined as the Site Study Area plus a 1-km radius beyond that area which encompasses portions of the Town of Laurentian Hills;
- The Regional Study Area (RSA) has been defined as the Site Study Area plus a 5-km radius beyond that area which encompasses portions of the Town of Laurentian Hills and the United Townships of Head, Clara, and Maria and extends into Quebec to include includes the eastern portion of the island of Rapides-des-Joachims and two ZECs (controlled harvesting zones or zones d’exploitation controlee) across the Kitchissippi, as well as the municipality of Sheenboro.

The EIS provides a profile for each municipality within the SSA, LSA, and RSA that includes population size, land base, and major source of employment. Similar profiles are provided for Indigenous communities in the Aboriginal Engagement Report (AER) Technical Support Document, however sources of employment are missing from the Indigenous community profiles.

The EIS also provides an asset of the following assets in each of the Study Areas:

- Hunting, Trapping, and Fishing
- Recreation and Tourism
- Natural Resources such as aggregate, forestry, and mining claims
- Residential Dwellings
- Community Infrastructure such as hydro dams and landfills

Land use within the socio-economic environment section of the EIS focuses strictly on municipal and provincial land-use and planning designations. For example, according to the EIS,

“The majority of the Regional Study Area intersects an area of provincial land-use designation known as “Multiple Natural Resource Use” (Figure 8.10-1). According to the Ministry of Natural Resources and Forestry (MNR 1983) Pembroke District Land Use Guidelines for this designation, the Land Use Intent of this area is:

“Within this area, resource management will be directed to multiple use management. Standard management practices combined with the concept of sequential use will enable MNR to take full advantage of the potential of the natural resource. Management of this area is also governed by the general policies contained in the

Pembroke District Land Use Guidelines (1983)."

The socio-economic section of the EIS does also mention of archaeological potential and built heritage resources in and around the Kitchissippi but does not make any mention of AOO cultural heritage within the section. However, the EIS does state there are areas of "high historical archaeological potential" as demonstrated in Figure 6:

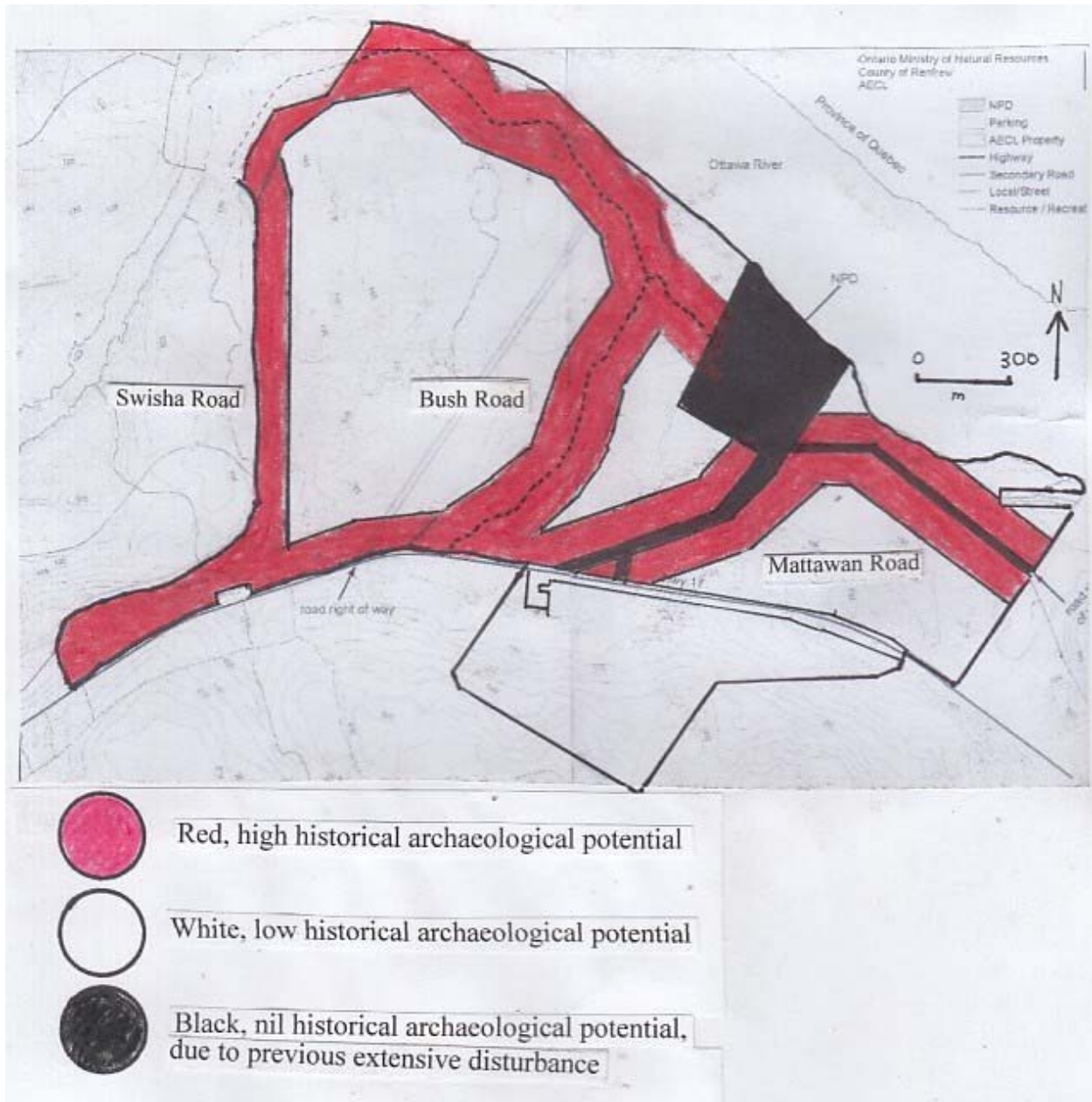


Figure 6. Archeological potential of the NPD site

Further to that the EIS states:

“Given that pre-contact archaeological potential is predicted primarily by proximity to water, and given that every elevation of the NPD property was once an active river shoreline, the whole property

between 200 m and the modern waterline is one big relic shoreline and therefore, it all has archaeological potential. Nevertheless, there were times of shoreline stasis—sometimes for millennia, sometimes a few centuries or generations—where human activity would have been concentrated and artifacts more likely to be deposited.

The pre-contact archaeological predictive model for the NPD property takes these longer-lived shorelines into account and maps them in distinctive colours. Furthermore, in the NPD model, the full 150 m width is considered to have high archaeological potential and the areas in between have been given moderate archaeological potential, instead of low potential as the standards allow. In these respects, the NPD model of pre-contact archaeological potential is more rigorous than the Ministry of Culture standards and guidelines require.”

To protect the socio-economic environment the following mitigation measures were identified by CNL in the EIS:

- dust suppression measures;
- post speed limits on-site
- the greatest effect of traffic and transportation associated with the project will occur during the Decommissioning Execution phase. Within the Local and Regional Study Areas, the transportation/haul route is limited to Highway 17 and the NPD site access road from the highway;
- review of a company's safety records which includes any traffic accidents or driver's records, as per CNL's contracting and hiring practices;
- construction activities will generally occur between 7 am and 7 pm wherever possible, with the overall objective of minimizing nuisance effects (i.e. noise and traffic) on residents in the Local and Regional Study Areas. This should be subject to further discussion with the local municipality. It is noted that special or emergency circumstances may require deviation from this restriction;
- when a significant amount of off-site transportation is required (e.g., during raw material delivery), the timing of equipment and material shipping to the site should be staggered to minimize the contribution of the project to peak traffic volumes;
- during the Decommissioning Execution and Institutional Controls phases, restrict access to the licensed area via a fence with a locked gate to deter trespassing; and,
- periodic communication updates on project construction activities to local residents are recommended, including: construction schedule, activities, dedicated contact person for inquiries and emergencies etc.

No mitigation measures have been identified for land use in the study area, as formal changes in land use designation are not expected to occur during the Decommissioning Execution. Land use re-designation will only be applied as appropriate during the Institutional Controls phase. During the Institutional Controls phase, land in the Local Study Area surrounding the licensed area may be released for other uses.

No mitigation measures have been identified with respect to aggregate depletion, as the effect is expected to be minor, and accompanied by positive economic benefits.

Following the mitigation measures proposed in the EIS CNL anticipates the following socio-economic effects to remain during the decommissioning execution phase:

- traffic and transportation effects including delays and risk of incidents;
- nuisance effects (noise, dust, traffic) experienced by tourists and residents in the LSA and RSA;
- minor depletion of aggregate in the LSA if aggregate for the project is procured locally which would have a net economic benefit;
- impacts to the landscape along the Kitchissippi (Ottawa) River from general activities and project footprint activities;
- nuisance effects experienced by land users in the RSA;

Following the mitigation measures proposed in the EIS CNL anticipates the following socio-economic effects to remain during the institutional controls phase and post-institutional controls phase:

- renaturalization that may increase vegetation and habitat for wildlife providing benefit to hunters and trappers in the site and LSA;
- renaturalization may also result in minor economic benefits due to a marginal increase in tourism;
- renaturalization could also increase the availability of forestry resources in the region;
- during the Institutional Controls and Post-Institutional Controls phases, it is assumed that the licensed area will be abandoned, making the land available for other uses

According to the EIS, no adverse residual effects on the socio-economic environment have been predicted.

No specific environmental monitoring has been identified for the socio-economic environment. Monitoring in other environmental components will confirm the EIS predictions (i.e., that no effects are expected in the socio-economic environment). Ongoing public and stakeholder engagement activities will take place throughout the Decommissioning Execution and Institutional Controls phases to identify any changing concerns or perceptions related to the project.

5.7.2 Evaluation and Accommodations

The following issues and accommodations are put forth in regard to the socio-economic environment and community well-being of AOO.

Issue 1- There is no mention of the socio-economic conditions of Indigenous communities that are interacting with the NPD Project site, including AOO.

Accommodation 1 – Provide an assessment of the socio-economic conditions and effects the project will have on AOO citizens interacting with the project.

Issue 2 – There are still a number of residual nuisance effects that could impact AOO citizens through impacts to land use access for both traditional practices and economic livelihood opportunities.

Accommodation 2 – Work with the AOO on identifying and implement adequate mitigation measures to eliminate nuisance effects to the greatest extent possible.

Issue 3: There are missing valued components that would be relevant to the socio-economic aspects of the NPD Closure Project.

Accommodation 3: Include and assess additional relevant value components such as community safety, health and wellbeing, emergency response services, and AOO-specific employment and economic development Also consider AOO-specific measures such as AOO procurement, employment, and tenants within the AOO’s Agreement-in-Principle.

Issue 4: CNL’s EIS for the NPD project does not fully consider project-human interactions such as human resources/workforce; employment & income from the decommissioning execution phase, institution control phase, and post-institutional control phase, impacts an influx of workers (if applicable) may have on community safety, well-being, and services. As a result of these gaps, some socio-economic value components and their potential effects, have not been considered.

Accommodation 4: Evaluate the implications of the interactions described above for their impact potential - whether that includes adverse or positive potential socio-economic and well-being effects in general, and specifically, to AOO citizens.

Issue 5: Primary socio-economic and community wellbeing components and indicators are not considered in the effects assessment (i.e., health, education, infrastructure and services; economic development etc.). These are not described nor assessed as part of the NPD EIS.

Accommodation 5: Provide a more complete assessment and consideration of the effects on the socio-economic indicators identified in the issue above.

Issue 6: Opportunities for Indigenous employment or procurement, including opportunities for AOO have not been assessed or identified in the NPD EIS.

Accommodation 6: Include information regarding the ways CNL intends to engage the AOO in developing employment and procurement opportunities for the project.

Issue 7: There is no socio-economic effects monitoring planned for the project. Failing to monitor these effects could lead to negative impacts being amplified and positive effects not being fully realized.

Accommodation 7: Work with the AOO on developing a socio-economic program/plan for monitoring and managing the socio-economic effects of the project on AOO citizens.

Issue 8: One of the effects that was not able to be fully mitigated according to the EIS was impacts to the Kitchissippi (Ottawa) River shoreline landscape. Information on how shoreline impacts would be impacted were also not clearly identified.

Accommodation 8: Given the cultural significance of the Kitchissippi to AOO people, the rich history, cultural resource potential, and use of the river for fishing to this day the impacts to the shoreline must be mitigated to the greatest extent possible. Where mitigation is not possible, CNL should work with AOO on identifying appropriate accommodation and compensation to ensure impacts are fully addressed.

Issue 9: The CNL has not indicated how it will engage with the AOO regarding the protection of AOO land use interests in the local study area.

Accommodation 9: There should be cooperation between CNL and AOO to protect future land use interests of the AOO in local study area including potential acquisition of adjacent buffer lands.

5.8 Environmental Monitoring

As stewards of the land and resources within our Traditional Territory, the AOO recognize the fundamental importance of protecting the flora, fauna, as well as the ecosystems in which they reside, for generations to come. Our values which have been passed down from our ancestral ways of life embody an inherent respect for the environment and an intrinsic commitment to the sustainable management of resources.

As land users, the members of AOO often bear inequitably the potential dangers to health and well-being of large industrial projects. Accordingly, AOO requires a high standard of assessment, mitigation, and monitoring for any project with the unceded AOO Settlement Area. The NPDWF poses a serious environmental risk to land, waters, wildlife and people within the unceded AOO Settlement Area.

In addition, AOO has a vested interest in ensuring that the NPD property and adjacent lands are monitored effectively and that all environmental liabilities (on and off-site) are identified and remediated to the highest standard achievable. Since AOO will likely own lands adjacent to the NPDWF site it is important that any potential off-site environmental risks are monitored and managed effectively. Furthermore, given AOO's interest in obtaining the remaining 364 hectares (900 acres) of the NPD property (after CNL decommissioning and rehabilitation work) it is important that all environmental liabilities on the site are identified, monitored and remediated appropriately.

It is paramount that the AOO be meaningfully involved and informed regarding all environmental monitoring and remediation activities related to the NPD. AOO wishes to play an active role in the monitoring of the NPD property (and beyond) over the course of the institutional control and post institutional control phase of the project. AOO must be adequately informed regarding results of environmental monitoring and facility integrity testing. AOO wishes to be actively engaged in the monitoring of the NPDWF and Kitchissippi. The following comments and accommodations outline AOO's vision for a collaborative environmental monitoring program for the NPD property.

Issue 1- Currently, there is no mechanism for AOO to participate in the environmental management of the NPD property (and beyond) during decommissioning, the institutional control phase and post institutional control phase. This includes opportunities for reviewing reports, providing input, on-site construction monitoring, participating in site remediation and being involved in decision making or information sharing agreements. Likewise, during decommissioning activities the NPDWF site will have

environmental emissions (e.g. wastewater, dust, noise, greenhouse gases, etc.), AOO representatives are not able to participate effectively based on the contents of the EIS.

Accommodation 1 – To ensure transparency and confidence in monitoring activities, there must be direct AOO involvement in CNL’s Environmental Protection Program as well as the CSNC Integrated Environmental Monitoring Program (IEMP). This could be achieved by providing funding for full-time AOO monitors. This must include reasonable capacity funding for training. The monitor would be responsible for participating in design, implementation and reporting all site related monitoring and remediation initiatives. The monitors would also be able to liaise with AOO members, leadership and CNL to share information.

Issue 2- Monitoring of environmental receptors is crucial to ensure that potential effects from NPDWF are being managed effectively. This includes, but is not limited to, monitoring of groundwater, surface water, sediment, fish communities, fish tissues, and wildlife. Monitoring must be conducted in a manner that is transparent and inclusive of AOO. This will help AOO members to have confidence that components of the environment that they value are being monitored appropriately.

Accommodation 2 - To promote the effective participation of AOO within the environmental management and monitoring programs of NPDWF we strongly suggest the creation of a Nuclear Environmental Review Board (NERB). This board should be composed of representatives from AOO, CNSC and CNL. The NERB would be responsible for overseeing all nuclear activities in the AOO Settlement Area. The NERB would also be responsible for reviewing annual reports, applications, licence renewals and other activities associated with the NPDWF. Resources must be provided to allow the NERB to dedicate the time required to complete these tasks. Secondly, the NERB should have access to funding for obtaining guidance from technical experts where appropriate. The NERB would allow for effective coordination between AOO, CNL and the CNSC. Moreover, having representatives from AOO would help ensure that the rights and interests of AOO members are upheld.

Issue 3 – It is noted within the EIS that AOO is a member of the CNL’s Environmental Stewardship Council. However, this is inaccurate as currently only the Algonquins of Pikwàkanagàn have a seat on CNL’s Environmental Stewardship Council.

Accommodation 3 AOO recognizes the value of the Environmental Stewardship Council and wishes to participate, however AOO believes a more fulsome environmental advisory authority should be created to oversee the various CNL facilities with the unceded Algonquin Settlement. AOO believes the role of the Environmental Stewardship Council should be expanded to provide the council with increased oversight and decision-making powers over CNL’s environmental management program where appropriate. This would increase transparency related to the environmental monitoring of all CNL facilities. The NERB model proposed in Accommodation 2 should replace the Environmental Stewardship Council to create a more robust environmental oversight authority for the NPD property.

Issue 4- CRL must ensure that effective contingency plans are in place for extreme weather and natural hazard scenarios that may impact or damage CRL infrastructure. These incidents are expected to increase in frequency and intensity as a result of climate change, so proper contingency planning is crucial. In the event of a natural hazard (e.g. flood, ice storm, hurricane, tornado, earthquake) there is

potential for contaminants (radiological and non-radiological) from the NPDWF to be released to the environment, in particular the Kitchissippi.

Accommodation 4 - CNL should provide AOO with more detailed information regarding extreme weather and natural hazard contingency planning. Since the potential for extreme weather and natural hazards (e.g. tornadoes, earthquakes, flooding) is high at the NPDWF. CNL should provide more detailed discussion regarding the potential impacts of flooding at the NPDWF, and the types of releases that would occur if the NPDWF facility was inundated.

Issue 5- The following non-radiological hazardous substances have been identified on the NPDWF site; lead, asbestos, mercury and polychlorinated biphenyl. These designated substances have the potential to be released to the environment through atmospheric emissions or groundwater.

Accommodation 5 – CNL must remove all hazardous substances from the NPDWF and ensure that proper monitoring and disposal procedures are followed. AOO must be provided with all monitoring results during the active decommissioning phase to ensure regulatory compliance with the release of designated substances. Leaving hazardous substances such as PCB's on the NPDWF does not represent best practice for the disposal of hazardous waste in Canada. Designated substances should be removed from the site and taken to appropriate waste storage facilities.

Issue 6- Lead, asbestos, mercury and polychlorinated biphenyl are not adequately assessed or modelled in the atmospheric environment assessment. The release of lead, asbestos, mercury and polychlorinated biphenyl during the demolition phase of the project must be monitored and managed carefully to minimize exposure to local AOO members.

Accommodation 6 – Lead, asbestos, mercury and polychlorinated biphenyl should be included in the atmospheric assessment and air dispersion modelling due to their presence on the NPDWF site. CNL must provide details on how designated substances on the NPDWF site will be managed and monitored during the project.

Issue 7 – AOO has a vested interest in ensuring that the NPD property and adjacent lands are monitored effectively and that all environmental liabilities and human health risks (on and off-site) are identified and remediated to the highest standard achievable, including, but not limited to, the Site Condition Standards for Residential/Parkland/Institutional Property Use under Ontario Reg 153/04 that would enable a Qualified Person to submit a Record of Site Condition that the Ontario Ministry of the Environment and Climate Change will accept for filing to the Environmental Site Registry.

Accommodation 7 - It is paramount that AOO be meaningfully involved and informed regarding all environmental monitoring and remediation activities related to the NPD, on and off site. AOO wishes to have adjacent lands monitored to ensure that no environmental liabilities exist off the NPDWF. Given the unique position of AOO as landowners, the AOO must to play an active role in the monitoring of the NPD property (and beyond) over the course of the project. CNL must identify all environmental liabilities related to NPD on and off the project site, including adjacent lands and Kitchissippi.

6.0 Towards a Long-Term Relationship Agreement

Part of the reconciliation process in Canada is acknowledging past wrongdoings by governments or corporations to Indigenous peoples or communities. As part of the Truth and Reconciliation Commission's (TRC) 94 Calls to Action, the TRC has outlined a call to action that is applicable to CNL/AECL:

"We call upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources. This would include, but not be limited to, the following:

- I. Commit to meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous peoples before proceeding with economic development projects.
- II. Ensure that Aboriginal peoples have equitable access to jobs, training, and education opportunities in the corporate sector, and that Aboriginal communities gain long-term sustainable benefits from economic development projects.
- III. Provide education for management and staff on the history of Aboriginal peoples, including the history and legacy of residential schools, the UNDRIP, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism." (TRC, 2015)

As a way to advance reconciliation, many corporate entities (including Crown corporations) have begun to develop formalized relationships and partnerships with local Indigenous communities. One such arrangement is called a Long-Term Relationship Agreement (LTRA), which lays out the framework for a relationship between the corporate entity and Indigenous communities to specify how Indigenous people will be involved and share in the benefits of a project/facility equitably.

In an effort to establish a formal arrangement for consultation and accommodation related to the NPD site, AOO proposes the establishment of a LTRA between CNL/AECL and the AOO. The LTRA would create a process for negotiating accommodation measures for impacts (past, present and future) as a result of the NPD Project. The LTRA would be a binding legal document that both parties would jointly negotiate and develop a plan for implementation.

The LTRA would outline the impacts of the NPD project as well as the commitment and responsibilities of both parties. The LTRA would set out terms for how CNL/AECL would share the benefits of the operation with AOO. The following potential accommodation measures could be laid out in the LTRA:

- Land transfer arrangements for portions of the NPD property
- Employment related to decommissioning and environmental monitoring
- Formal roles in the oversight of all environmental monitoring at the NPD site

- Training and apprenticeship programs
- Business opportunities related to NPD site (e.g. construction contracting opportunities, monitoring and security opportunities, etc.)
- Environmental and cultural heritage monitoring programs
- Rehabilitation and remediation programs
- Full-time liaison position

The LTRA would be used as a tool to formally acknowledge the use of Algonquin lands for the NPD site by CNL/AECL. Accommodation measures for impacts from the permanent loss of access as a result of NPD would assist AOO in playing a more active role in the monitoring site conditions during the decommissioning and monitoring phases of the project.

As part of a LTRA, there is a great need and opportunity for a long-term program of archaeological research, education, and conservation that will ensure that when NPD site is decommissioned the AOO will already have documented its archaeological potential.

Land Transfer Considerations

As stated previously, the NPD property is located within the Algonquin Settlement Area, in close proximity to seven of AOO's Proposed Land Selections. AOO's is also interested in obtaining the remaining 364 hectares (900 acres) of the NPD property (after CNL decommissioning and rehabilitation work is complete) due to its close proximity to Kitchissippi. For the AOO, it is important that all environmental liabilities on and off the site are identified, monitored and remediated to the highest standards prior to any land transfer, including, but not limited to, under Ontario Reg 153/04 that would enable a Qualified Person to submit a Record of Site Condition that the Ontario Ministry of the Environment and Climate Change will accept for filing to the Environmental Site Registry. The AOO wish to formally discuss land transfer agreements with CNL and AECL as part of the LTRA process.

The AOO will need assurances that the NPD property is free of environmental issues for the purpose of obtaining a Record of Site Condition under Ontario Reg. 153/04. Obtaining a Record of Site Condition will be the responsibility of CNL and AECL. Indigenous and Northern Affairs Canada (INAC) may be engaged in the land transfer process to ensure that environmental liabilities on the site are identified and managed to ensure effective land transfer. CNL and AECL must ensure that sufficient environmental monitoring data is in place to provide the data necessary to satisfy Ontario Reg. 153/04 Residential/Parkland/Institutional Property Use Site Condition Standards, the AOO and INAC.

Issue 1 - Currently there is no formal accommodation agreement in place between AECL/CNL and the AOO regarding the past, present and future activities at the NPD site and the associated impacts and risks.

Accommodation 1 - AECL/CNL should enter into negotiations with AOO to establish a Long-Term Relationship Agreement with the AOO to determine a formal approach to consultation and accommodation for NPD site moving forward. Since the NPD site lies within the unceded AOO Settlement Area, a formal accommodation arrangement between AECL/CNL and the AOO is necessary.

Issue 2 – CNL does not adequately discuss the future use and ownership of the NPD property (excluding the NPDWF). There is no discussion of potential transfer arrangements for portions of the NPD property. As noted previously, the AOO is interested in obtaining the remaining 364 hectares (900 acres) of the NPD property after CNL decommissioning and rehabilitation work is completed.

Accommodation 2 – CNL and AECL must enter into formal discussions with AOO regarding potential land transfer arrangements for portions of the NPD property. CNL and AECL must also commit to obtaining a Record of Site Condition (RSC) under Ontario Reg. 153/04 for Residential/Parkland/Institutional Property Use Site Condition Standards in order to initiate the land transfer process.

7.0 Conclusion

The NPD site is located within unceded Algonquin Traditional Territory. The AOO have asserted existing Aboriginal rights and title throughout the Settlement Area, including the NPD site. At the time of the Crown decisions to establish and operate the NPD reactor in the unceded AOO Settlement Area, the Crown did not consult with the AOO, or provide accommodations for impacts to AOO rights and interests. It is time for CNL and the CNSC to formally acknowledge the use of the unceded Algonquin Settlement Area for the development of nuclear reactor technology. The NPD has significantly impacted the AOO through the displacement of our people, the loss of access for traditional purposes, the destruction of our cultural heritage resources and the release of radioactive and other hazardous materials into the environment.

The NPD property represents a substantial loss of land for AOO members, this is further exacerbated by environmental degradation caused by the operations of the facility. CNL/AECL and CNSC must develop a plan to accommodate AOO for grievances related to the NPD property, including the lack of consultation or consent in siting the facility and environmental caused by the NPD reactor. It is also important to note that the AOO have a significant interest in the NPD Closure Project and the NPD property given its location within the Algonquin Land Claim Settlement Area, and proximity to seven proposed AOO land selections.

AOO has a vested interest in ensuring that the NPD property and adjacent lands are monitored effectively and that all environmental liabilities (on and off-site) are identified and remediated to the highest standard achievable. Since AOO will likely own lands adjacent to the NPDWF site it important that any potential off-site environmental risks are monitored and managed effectively. Furthermore, given AOO's interest in obtaining the remaining 364 hectares (900 acres) of the NPD property (after CNL decommissioning and rehabilitation work) it is important that all environmental liabilities on the site are identified, monitored and remediated appropriately.

It is paramount that AOO be meaningfully involved and informed regarding all environmental monitoring and remediation activities related to the NPD. AOO wishes to play an active role in the monitoring of the NPD property (and beyond) over the course of the decommissioning, institutional control and post institutional control phases of the project. The AOO will need assurances that the NPD property is free of environmental issues for the purpose of obtaining a Record of Site Condition (RSC) under Ontario Reg. 153/04.

As noted throughout this review, the baseline characterization of the environment is not acceptable for a Project with this level of risk. This lack of information extends to the missing input (including TRLU and TEK) from the AOO. The AOO requires that additional information must be collected and incorporated into the EIS before the Environmental Assessment process can continue. AOO should be engaged in the collection of this information.

While In-Situ Decommissioning is not the ideal alternative for minimizing risks to the environment and human health, the AOO recognizes the limitations of long-term nuclear waste disposal in Canada. Therefore, it is of critical importance to the AOO to ensure that best practices for decommission and rigorous long-term monitoring programs are in place to evaluate on-going risks associated with contamination. To this end, the AOO must be included in the environmental monitoring and decision making for the NPD site during active decommissioning, institutional control and post-institutional control. This should include Consultation with AOO regarding the potential uses for the site during post-institutional control and how the renaturalization process should occur.

In light of the Consultation Process Interim Measures Agreement, it is critical that the AOO be included in all future engagement activities executed not only by the CNSC, but by CNL as well. We expect that moving forward, the consultation and accommodation process will be comprehensive, recognize the AOO's unique interests and provide meaningful opportunities for input and involvement in the NPD Closure Project.

At the current time, no formal accommodation agreement exists between AOO and CNL. The results of our review provide a series of comments and accommodations that CNSC and CNL must consider prior to approval of the NPD Closure Project. The following list presents a high-level overview of the key accommodation measures identified by AOO:

- CNL must develop formal accommodation agreements with the AOO for past, present and future impacts through the development of a Long-Term Relationship Agreement, including land transfer arrangements for the NPD property.
- The CNL must provide formal responses to the issues and comments provided in this review. These should include detailed descriptions of the actions to be taken to provide additional information, collect missing data, and remedy shortcomings of the EIS.
- As noted in this review, additional data collection is required to adequately characterize the baseline environment. This includes data collection on groundwater quality, surface water quality (radiological and non-radiological), fish tissues, benthic invertebrates, and wetlands.
- CNL must provide detailed descriptions of follow up monitoring programs for a range of environmental parameters including groundwater, surface water, aquatic biota (i.e. fish tissue monitoring and benthic invertebrate monitoring), wetlands and the atmospheric environment. The CNL must engage in meaningful involvement of the AOO in the ongoing environmental, cultural heritage, and human health monitoring in and around NPD site.

- CNL must provide accessible information for Algonquin citizens, including communications protocols for informing communities about monitoring results, participation opportunities, and incidents such as spills, accidents or malfunctions.
- CNL should provide a framework for addressing the cumulative effects of CNSC-regulated projects (e.g. NRU reactor, Chalk River Laboratories, NSDF, etc.) and other activities in the region that affect AOO rights and interests across the unceded AOO Settlement Area
- CNL must engage in collaborative decision-making with AOO, based on a nation-to-nation relationship and the obligation to secure free, prior and informed consent for all projects. This decision-making must recognize and strengthen the jurisdiction that the AOO have with respect to this Project, the environment and culture.
- The CNL must create protocols to encourage transparency, accountability and credibility. Decisions should be based on rigorous science and Indigenous Knowledge. Where appropriate this must include the completion of comprehensive Indigenous knowledge and land use studies.
- To promote the effective participation of AOO within the environmental management, monitoring, and remediation of the NPD site, we strongly suggest the creation of a Nuclear Environmental Review Board (NERB). This board should be composed of representatives from AOO, CNSC and CNL. The NERB would be responsible for providing guidance to the operation monitoring programs. The NERB would also be responsible for reviewing annual reports, applications, licence renewals and other activities associated with the NPD. Resources must be provided to allow the NERB to dedicate the time required to complete these tasks. The NERB should have access to funding for obtaining guidance from technical experts, where appropriate.

8.0 References

Canadian Nuclear Laboratories (2017). *Environmental Impact Statement – NPD Closure Project*. Prepared by Arcadis Canada Inc. September 2017

Canadian Nuclear Safety Commission. 2009. Tritium in drinking water. Accessed from: <http://nuclearsafety.gc.ca/eng/resources/health/tritium/tritium-in-drinking-water.cfm>

Candesco. 2014. International Benchmarking of Decommissioning Strategies. A Report Submitted to the Canadian Nuclear Safety Commission (CNSC) File: K-421183-00006 R0. Accessed From: <http://www.nuclearsafety.gc.ca/eng/pdfs/about/researchsupport/reportabstracts/RSP-0303-Final-Report-eng.pdf>

Canadian Standards Association (CSA). 2016. CSA Standard N288.5-11. Effluent Monitoring Programs at Class I Nuclear Facilities and Uranium Mines and Mills.

Health Canada. 2017. *Guidelines for Canadian Drinking Water Quality*. Prepared by the Federal-Provincial-Territorial Committee on Drinking Water of the Federal-Provincial-Territorial Committee on Health and the Environment.

Health Canada, 2007. *Guidelines for Canadian Drinking Water Quality*. Health Canada, Ottawa, Canada. www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/doc_sup-appui/sum_guide-res_recom/index_e.html

Swayze, K. (2016). Stage 1 Archaeological Assessment of the Nuclear Power Demonstration (NPD) Property Part of Lots 41-45, 48 & Town Plot, Range A & B Rolph Twp. (Geo), Township of Laurentian Hills, Renfrew County. Prepared for Canadian Nuclear Laboratories.

Appendix A – Comment Tracking Table

Table 2. Comment and Response Tracking Table

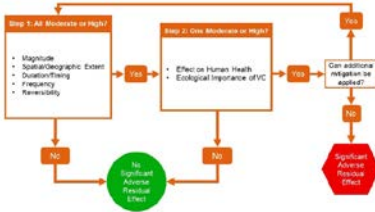
Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
SURFACE WATER AND GROUNDWATER		
5.1.2.1	<p>The greatest concern for the hydrogeology of the area is that groundwater quality will be compromised by the leachate emerging from the NPD site that has come in contact with radioactive materials. The integrity of the existing underground structures, grouting, capping and collection system of this in-situ decommissioning option has not been adequately assessed to provide a level of comfort to the AOO. The modeling has many assumptions, has varying levels of uncertainty, and has inadequate mitigation measures for the possible level of contamination that will remain in on site and potentially leach into local groundwater systems and ultimately into the Ottawa River.</p>	<p>a – CNL should provide additional monitoring and mitigation measures, and assurances to AOO, that in-situ decommissioning as planned in this EIS involves internationally recognized best management practices. In-situ decommissioning is not the preferred strategy for decommissioning nuclear facilities, based on research on international standards (Candesco, 2014). The Proponent should seek the advice and recommendations of Canadian and international standards (i.e. International Atomic Energy Agency, IAEA) and employ informative (non-mandatory) clauses to provide additional assurances that the site is adequately decommissioned.</p> <p>b – A monitoring well and collection system should be installed that that allows for the sampling of the groundwater downgradient of the Facility and possible capture, treatment and appropriate management of contaminated groundwater with radionuclides or other non-radioactive contaminants.</p>
5.1.2.2	<p>The assessment of the release of tritium from the Facility is expected to peak at 1M Bq/Year (1,000,000 Bq/year, or 10^6 Bq/year), or about 1000 Bq/L of groundwater, as stated in the Post Closure Safety Assessment Report. This amount of contaminant will enter the Ottawa River, which is already experiencing elevated levels of radionuclides due to past nuclear facilities and activities in the area (CNSC, 2009). Several drinking water intakes occur</p>	<p>The Proponent should provide additional mitigation measures to limit the introduction of tritium and radionuclides from the NDP into the Ottawa River, through capture and management of the leachate and groundwater flow, or other appropriate measures.</p>

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>downstream of the NPD site on the Ottawa River, as well as being in the traditional territory of the AOO that rely on the land and water for their livelihoods as well as being spiritually and culturally important.</p>	
5.1.2.3	<p>Water quality of the groundwater and surface water from the Project site was sampled for radiological and non-radiological parameters. Non-radiological sampling of contaminants were compared to the CCME Environmental Quality Guidelines (EQG) for metals, other inorganic and organic compounds. Several of the parameters sampled from the Wells Area Sump (WAS) were an order of magnitude higher than the EQG, including iron, mercury, total dioxins/furans and Bis(2-ethylhexyl)phthalate.</p> <p>Additionally, several parameters were several orders of magnitude above the EQG, including cadmium, copper, lead, zinc and total PCBs. As the water table is closely connected to the surface water system, these contaminants have high potential to affect the aquatic environment downgradient of the Facility.</p> <p>Many of these contaminants have serious physiological implications for aquatic species, especially at these concentrations. If not properly managed or mitigated, contaminants can cause lethal and sub-lethal toxicological effects on fish, other aquatic species, and can reduce the productivity of the affected ecosystems.</p>	<p>a - The Proponent did not provide mitigation measures for the poor water quality of the Project Site. The Proponent needs to provide additional mitigation measures to address water quality issues, regularly monitor the WAS, and provide reporting to the AOO on the exceedances.</p> <p>b - The Proponent needs to provide a monitoring plan including frequency, parameters and locations of surface water and groundwater sampling for review by the AOO during the decommissioning phase, the Institutional Controls Phase and the Post-Institutional Controls Phase.</p>
5.1.2.4	<p>While surface water and groundwater were considered pathways for Valued Components (VCs) and not VCs themselves, these components of the ecosystem are culturally, spiritually and traditionally very important to the AOO. Water is a sacred entity for these First Nation communities. The Project has the</p>	<p>a - The Proponent needs to provide a more detailed and specific monitoring plan, and reporting to the AOO, for surface water and groundwater resources. Additional locations for sampling should include the water within the tile drains and the water quality at the outlet of these tile drains, as well as the</p>

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>potential to negatively affect the hydrological and hydrogeological systems in the Regional Study Area, yet there are very few details on how these systems will be monitored throughout the various phases from decommissioning through to Post-Institutional Controls. The Proponent has only offered only periodic inspections, incident-specific water quality monitoring, event-based (i.e. due to a spill or accident), periodic surface water quality monitoring on a quarterly basis. These descriptions are too vague to determine whether the sampling and protection of surface water and groundwater will be adequate.</p>	<p>groundwater downgradient of the Facility for both radiological and non-radiological parameters of concern. The AOO should be provided an opportunity to review the monitoring plans and provide input into the need for additional frequency, location and/or parameters for the monitoring program.</p> <p>b – The Proponent should employ AOO citizens as Environmental Monitors during any and all phases of the Project as they have familiarity of the area from generations of traditional land use. The Proponent should provide training for these positions.</p>
5.1.2.5	<p>The batch mixing plant will require the construction of wash pits that will act as settling ponds. The Project description does not include detail regarding a liner underneath these ponds to prevent the water from contaminating local groundwater and surface water, however, in Section 9.3.3.1 there is mention of a watertight material lining.</p>	<p>The Proponent needs to provide additional clarification on the construction and details of the wash out pits as well as how their design and materials will prevent contamination of the local groundwater and surface water from the decommissioning activities.</p>
AQUATIC ENVIRONMENT		
5.2.2.1	<p>During the Decommissioning Execution phase, there are significant environmental risks associated with a range of activities. For example, the grout used for entombing the below-ground facilities has a low viscosity and is highly mobile; poorly managed grouting or equipment washout could result in grout entering the Ottawa River. Improper mesh over water intake could result in fish impingement during pumping from the Ottawa River. Spills or leaks from heavy equipment or refuelling activities could contaminate surface water.</p>	<p>As stewards of the lands and waters, Algonquins must have a role in the environmental monitoring of the Project. An environmental monitor from the AOO must be on-site to monitor the environmental risks during the Decommissioning Execution phase. Training and capacity funding must be provided to allow this monitor to be effective in their role.</p>
5.2.2.2	<p>Section 5.2.4.2 Identified emerald shiner, lake whitefish and lake sturgeon as VCs for the</p>	<p>All species are of importance to the AOO, therefore limiting the effects assessment to</p>

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	<p>aquatic environment. It is unclear why these species were singled out, rather than choosing all fishes as the VC. If these species were chosen as representative of the fish community then there is a clear gap in that no piscivorous fishes (e.g. northern pike, walleye, sauger, smallmouth bass, muskellunge) were not chosen as a VC. These predators play a critical role in complex riverine communities and are likely to experience different exposure pathways to contaminants and different effects from the Project than fish from other guilds. In addition, it is these piscivorous fishes that are most often targeted by AOO citizens fishing on the Ottawa River.</p>	<p>these VCs is problematic. Moreover, the lack of a piscivorous fish (fish that eat other fish that are important in the aquatic ecosystem, and important to the AOO) chosen as a VC represents a critical gap for the effects assessment of the Project. The rationale for the species chosen as aquatic VCs must be provided, and the AOO should be consulted on choosing VCs. The effects assessment for the Project must be updated with additional fish, including piscivorous fishes, as VCs.</p>
5.2.2.3	<p>There has not been any targeted data collection of benthic invertebrate abundance/diversity or of nearfield water quality downstream of the NPDWF. This baseline information is critical to characterize the current state of the environment and to evaluate the potential effects of historic activities on aquatic fauna (e.g. fishes and invertebrates). This data can then be used to evaluate any changes associated with the Project.</p> <p>For example, the nearest downstream monitoring station for radioactive contamination of surface water releases is located near the town of Deep River, several kilometers downstream. Such monitoring is unable to exclude the possibility for contamination of upstream aquatic environments and is unacceptably low level of detail for a project with this level of risk. Moreover, many non-radiological contaminants found in the WAS, including mercury, lead, dioxins/furans and PCBs were not tested for in surface water.</p>	<p>a – CNL must complete baseline monitoring in the <u>LSA</u> for:</p> <ul style="list-style-type: none"> • water quality (radiological and non-radiological); and • benthic invertebrates. <p>This data will provide CNL and the AOO with information on the effects of historic contamination that has occurred through operation and during closure. This data will be used to evaluate the current state of these aquatic receptors.</p> <p>b - To monitor the risks associated with future releases of contaminants and groundwater leaching, the Proponent should engage in monitoring of water quality and benthic invertebrates during the period of institutional control. Details on the locations and schedule of monitoring should be described in detail and provided to the AOO.</p> <p>c – As stewards of the lands and waters, AOO citizens should be given the opportunity and training necessary to be included in follow-up environmental monitoring of the site.</p>

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5.2.2.4	<p>The NPDGS began operation in 1962. Effluent from the well sump area and other activities on site have been discharged to the Kitchissippi since this time. After decommissioning, dissolved contamination will continue to reach the Kitchissippi through groundwater as the NPDWF degrades. These contaminants (radiological and non-radiological) are likely to enter the food chain and contaminate game fish that are consumed by AOO citizens. Despite this risk, no studies of fish tissues have been completed. As a result, it is unclear what the current level of contamination in fish tissues is or how that may change because of the Project. Moreover, CNL has not described any follow up monitoring of contaminants in fish tissues, therefore any spike in contaminants will not be detected.</p> <p>AOO community members regularly harvest fish in the Kitchissippi for baitfish and consumption (e.g. smallmouth bass, walleye, sauger, northern pike, whitefish and suckers). The risk of health effects from eating contaminated fish must be taken seriously.</p>	<p>a – In order to evaluate the risk associated with contamination of fish tissues the proponent must complete baseline fish tissue analysis on the Kitchissippi. Fish should be collected – with AOO environmental monitors - at locations within the vicinity and downstream of the effluent discharge and from a reference site upstream, above the falls. A minimum of two sentinel species should be used for this tissue monitoring. Species selected should include a gamefish species (e.g. walleye, smallmouth, northern pike) and a small bodied baitfish species.</p> <p>b – To monitor the risks associated with consumption of contaminated fish, the Proponent should engage in follow-up monitoring of fish tissues during the period of institutional control. Sampling methodology can be maintained from the initial fish tissue analysis described above. A description of proposed monitoring activities must be shared with AOO for review.</p>
5.2.2.5	<p>The determination for significance of the adverse residual effects is not reasonable. According to the Proponent’s methodology (CNL EIS, 2017, Section 2.7), a significant adverse residual effect can only occur if a moderate or high rating is applied to all effects criteria, including:</p> <ul style="list-style-type: none"> • magnitude; • spatial (geographic) extent; • duration/timing; • frequency/probability; and • reversibility. <p>Then if that is the case, the effects assessment is carried through to evaluation of effect on human health and ecological</p>	<p>A lower threshold for determination of significant adverse residual effects must be employed. Effects must also be carried forward for assessment of significance where there is a high rating is applied to any effects criteria</p>

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	<p>importance of VC. If additional mitigation is not possible the effect will be considered a significant adverse residual effect. According to this definition, an activity with high level of effect for magnitude; spatial (geographic) extent; duration/timing; and reversibility but low frequency/probability would not be carried forward for assessment of significance. An event that would fit this description includes a massive failure of containment resulting in contaminant release to the Kitchissippi (summarized below).</p> 	
5.2.2.6	<p>The level of radioactive releases for all contaminants measured in the Well Sump Area are several orders of magnitude higher than the Maximum Allowable Concentration (MAC) of the Health Canada Drinking Water Guidelines (CNL EIS, 2017, Table 8.3-1). For example, levels of tritium measured in the sump in 2015 were 66,100,000,000 Bq, more than 900,000 times the MAC guidelines of 7,000 Bq (Health Canada, 2007). While, the total volume of effluent released is small and mixing will occur once this water is pumped to the river, the Proponent has not completed any modeling of mixing zones to show the area where contamination would exceed these guidelines. As a result, it is unclear what downstream concentrations can be expected from these releases throughout the different phases of the Project. Secondly, the contamination from groundwater to the</p>	<p>CNL must complete dispersion modelling to assess the predicted mixing zone for all radioactive contaminants using the drinking water MAC (Health Canada, 2007) as the threshold. This should be completed for periodic discharges from the well sump area and for groundwater seepage at different periods of closure and post-closure.</p>

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	Kitchissippi has not been modelled. It is therefore unclear how the seepage plume from the facility may affect aquatic organisms as the grouted NPDWF facility degrades.	
5.2.2.7	The Derived Release Limits for the NPDWF have not been described in the EIS. These are important to share so that AOO can evaluate whether the project complies with CSA Standards N288.1-14 (CSA, 2016).	Provide the Derived Release Limits for the NPDWF.
5.2.2.8	<p>The Proponent has utilized an effects assessment protocol so that radionuclides were “screened out” of the Ecological Risk Assessment if no “dose coefficient” was available. They have stated:</p> <p><i>“In the EcoRA screening process for radiological contaminants, if the radionuclide concentration was below the no effects concentration (NEC) value, then that radionuclide was “screened out” or excluded from the assessment for the particular scenario being screened. If the radionuclide concentration was greater than the NEC value and a dose coefficient was available, then the radionuclide was “screened in” or included for assessment in the EcoRA; if a dose coefficient was not available, then the radionuclide was “screened out”.” [...] “It is noted that excluding a radionuclide from assessment because a dose coefficient is not available would result in an underestimation of the total dose and perhaps any potential effects; however, the radiation dose cannot be estimated without a dose coefficient.” (CNL EIS, 2017, pp 9-8)</i></p> <p>It is unclear from the EIS how excluding these radiological contaminants will influence the</p>	<p>The Proponent must provide additional justification for this methodological decision. The Proponent must also provide a list of all radiological contaminants that have been screened out of the risk assessment. This information is necessary for the AOO to complete its evaluation of the adequacy of the EIS.</p>

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	evaluation of risk and potential impacts of the Project.	
WILDLIFE, VEGETATION AND WETLANDS		
5.3.2.1	In Table 9.6-2, the proponent states that Ventilation Stack Isolation (e.g. modification of ventilation stack for roosting requirement) will improve conditions for chimney swifts. However, Table 4.3-1 states that these activities, which will last for 16 days, are projected to start in April 2019. According to Environment and Climate Change's guidance on general nesting period of migratory birds, open field and forest dwelling birds (including chimney swifts) in region C3 arrive at their nesting sites as early as mid-April. (EIS Table 9.6-2 and Table 4.3-1)	To conservatively avoid disturbance to chimney swifts during migratory and nesting periods, the proponent should commit to completing the Ventilation Stack Isolation work before April 1 st .
5.3.2.2	As part of the mitigation measures outlined in EIS Section 9.6.3.2 (p. 9-75), the proponent has committed to avoiding tree clearing activities during the breeding bird season (April 15-August 20) wherever possible, as per the Migratory Birds Convention Act. They have also committed to conducting (tree and ground) nest surveys within 2 days of unavoidable disruptive activities that may need to occur during this time-period. (EIS 9.6.3.2)	In addition to avoiding disruptive activities (e.g. tree clearing) during the breeding bird season (April 15-August 20) and conducting nest surveys, the proponent should commit to implementing setback distances associated with medium-disturbance levels in the event that any of the avian SAR listed as present or potentially present on-site (EIS Table 8.6-3) are discovered nesting in the Site Study Area. Setback distances for the following avian SAR should be implemented: Canada warbler (300m), bobolink (250m), common nighthawk (200m), eastern wood peewee (150m), loggerhead shrike (250m), peregrine falcon (500m), eastern whip-poor-will (200m), grasshopper sparrow (250m), red-headed woodpecker (100m) (MCDCC, 2014).
5.3.2.3	In EIS Section 9.6.5, the proponent outlines their plan for Terrestrial Environment monitoring and follow-up activities but does not commit to involving AOO environmental monitors in this plan. (EIS 9.6.5)	Commit to providing capacity funding to train and hire AOO environmental monitors to complete all terrestrial environment monitoring and follow-up activities (e.g. routine checks for barn swallows, monarch butterflies, bats and eastern milksnakes; chimney swift roost counts, inclement

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		weather behavioural monitoring; work area SAR sweeps, etc.).
5.3.2.4	The installation of exclusion fencing for eastern milksnakes and other reptilian SAR present or potentially present in the SSA (e.g. snapping turtle, eastern ribbonsnake, eastern musk turtle, etc.) will only be undertaken if required. It is unclear what circumstances will trigger the installation of exclusion fencing. Further, there are few details on the proponent's planned design and installation techniques for reptilian exclusion fencing. (EIS 9.6.3.2 & Table 9.6-3)	The Proponent should provide AOO with a description of the circumstances (e.g. quantifiable targets and thresholds) under which the installation of exclusion fencing for SAR reptiles will be triggered. Otherwise, the Proponent should take a conservative approach and commit to installing exclusion fencing around the SSA in accordance with the Ontario Ministry of Natural Resource and Forestry's Reptile and Amphibian Exclusion Fencing Best Practices (OMNR, 2013). Installation of exclusion fencing should be completed prior to species emergence from hibernation.
5.3.2.5	The demolition of above-grade structures will result in the production of dust. Given the historical use of lead bricks for shielding and of lead paint on the existing structures, the dust generated will contain lead particulates. Researchers have shown that lead fallout resulting from settling atmospheric particles can occur at distances of up to 8.6 km from the source (Munksgaard and Parry, 1998). The dust produced from demolition activities will also contain radionuclides such as tritium. Most wetlands on site are less than 2 km away from the NPDWF and are therefore at risk to being exposed to contaminated dust fallout from the demolition activities. (EIS9.6.3.1/p.9-72)	<p>a – The Draft EIS states that dust suppression will occur during demolition and material sizing activities but does not describe the methods or extent of this mitigation measure. The parameters of the proposed dust suppression methods need to be identified in order to adequately assess their potential effectiveness.</p> <p>b – Baseline studies have determined that the prevailing winds on site are northwesterly and southeasterly, and that the wetlands present are to the west/northwest of the NPDWF footprint. To further minimize dust fallout in the wetland areas, demolition activities should not occur during high wind events or when the winds are originating from the southeast.</p> <p>c – To ensure that wetlands are not being affected by atmospheric transport of contaminated dust, a sampling location within the wetland closest to the NPDWF should be added to the ongoing routine monitoring program. The chemical analyses of these samples should include quantitative</p>

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		measurements of radionuclide and lead concentrations.
5.3.2.6	Monitoring and follow-up activities will be conducted during the Institutional Controls phase to confirm effects to the terrestrial environment. There are no details provided in the Draft EIS about the scope, extent, frequency, or temporal duration of this monitoring. The Draft EIS also mentions that if any parameters are above applicable guidelines or notable changes are observed, that CNL biologist(s) will be consulted. Based on the information provided it is currently unclear if future monitoring will adequately capture any potential effects to the site's wetlands. (EIS 9.6.5/p.9-90)	In close consultation with the AOO, develop and confirm details on the environmental components to be monitored, proposed monitoring locations, frequency of monitoring, threshold and trigger values, and temporal duration. The proposed program should also include monitoring locations within the wetland of closest proximity to the project site.
5.3.2.7	The Proponent has stated that the disturbed areas (e.g. non-essential roadways, NPD site) final will be restored with native vegetation once the final cap system has been completed and temporary facilities are removed (EIS Sect. 4.3.1.9). However, there are too few details on how the proponent intends to restore these disturbed areas as well as monitor them (including measures of success, monitoring intervals and scheduling) and report on progress (Sect. 9.6.3.2). Because of this, it is not possible to adequately review the proponent's restoration program. (EIS 4.3.1.9 & 9.6.3.2)	Development of the detailed site restoration plan (including specific monitoring protocols) should be completed in close consultation with AOO. Since the NPD Project Closure site falls within the unceded Algonquin Settlement Area, revegetation efforts have the potential to affect future AOO land use activities. The Proponent should also consider providing capacity funding to train and hire AOO members to complete revegetation activities and long-term environmental monitoring. Specific activities of importance to the AOO include seeding to support pollinator species, tree planting to support ungulate browsing habitat, and monitoring of flora and fauna abundance and distribution through follow-up activities.
5.3.2.8	The proponent's rationale for establishing the Terrestrial Environment RSA boundary is not clearly described in the EIS. It is also unclear what methodologies were used to characterize the wildlife distribution and abundance in the Existing Terrestrial environment and to document the SAR	<p>a –Provide the AOO with a rationale for establishing the Terrestrial Environment RSA boundary so they may complete an informed and fulsome review of the EIS.</p> <p>b – Provide the AOO with a description of the methodologies used to characterize the existing Terrestrial Environment, particularly</p>

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	occurrences (e.g. juvenile eastern milksnake, eastern small-footed bat, little brown myotis, and northern myotis) within the SSA and LSA that are described in EIS Sections 8.6.2 through 8.6.4. The Proponent has based the description of the existing environment entirely on background information rather than targeted field surveys (aside from an Ecological Land Classification (ELC) that was undertaken in 2016). The baseline description of the terrestrial environment is critical for understanding the current state of environmental VCs and for evaluating the Project-related effects during follow-up monitoring. (EIS 8.6.2 – 8.6.4)	the methods used to document SAR occurrence in the SSA and LSA, so they may complete an informed and fulsome review of the EIS. If targeted field surveys were not undertaken to document baseline data (e.g. on wildlife occurrence, distribution, and habitat use), provide the AOO with a rationale as to why they were not necessary.
5.3.2.9	The Draft EIS states that the locations of the batch mixing plant, staging areas, and on-site trucking routes have not yet been finalized for this project. The proposed project activities also include the production of wastewater from runoff and wash out pit discharges. (EIS 9.6.3.4/p.9-81)	The exact locations of project activities (batch mixing plant, staging areas, etc.) need to be specified to adequately determine their potential effects on the site's terrestrial vegetation and wetland areas.
TRADITIONAL LAND USE AND CULTURAL RESOURCES		
5.4.2.1	The AOO were not directly consulted regarding the NPD Project until an express request was made to be included in the consultation record for this project despite the project being located directly within the Proposed AOO Land Claim Settlement Area.	Continue to engage the AOO and ensure said engagement is conducted using best practices on engaging Indigenous peoples. This includes but is not limited to the provision of adequate capacity funding for participation, establishing or following a communications protocol as set out by the AOO, and providing information in an accessible and timely manner.
5.4.2.2	AOO was not initially provided with adequate notice to participate in the Stage 1 archaeological assessment field visit as outlined in communications between CNL and AOO on November 9, 2016 despite express requests for such engagement.	Provide adequate notice and capacity resources for AOO to participate in archaeological site visits/ field assessments from this point forward with the NPD project. This includes directly engaging with Archaeological Liaisons identified by and serving as representatives of the AOO.
5.4.2.3	No AOO specific Aboriginal Engagement Plan has been developed on how CNL will	Work with AOO Consultation Staff on developing an AOO-specific Aboriginal

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	continue to conduct its engagement with the AOO, including how CNL intends to incorporate AOO-specific TLRU values or how AOO will be involved in environmental monitoring or emergency response.	Engagement Plan that includes establishing a clear communications protocol between CNL and the AOO, provides a schedule for engagement opportunities between CNL and the AOO, and identifies what opportunities will be provided for further input on the project.
5.4.2.4	CNL has acknowledged that the NPD project is within the unceded AOO Land Claim Settlement Area and recognizes that there is potential AOO traditional land and resource use happening within the RSA and in some cases the LSA. However, there are no specific harvesting, cultural, and/ or ecological values that have been identified nor is it evident how CNL plans to incorporate AOO TLRU in a meaningful way beyond acknowledging the potential that it is occurring. This lack of consultation and engagement for the collection of TLRU and Algonquin Ecological Knowledge (AEK) is unacceptable.	Incorporate AOO-specific harvesting, cultural, and/ or ecological values into project planning, monitoring, and emergency response either through engaging the AOO in conducting a TLRU study or other methodology (i.e. community cultural values mapping; oral history study etc.) decided upon by the AOO for sharing TLRU information related to the NPD project. This information is best collected at early phases of the Project. Despite having failed to collect this information early, the CNL must collaborate with AOO for the collection of TLRU before the EA process continues. In summary, CNL must provide adequate capacity funding for AOO to conduct an Algonquin Knowledge and Land Use Study in order to better understand Algonquin land use patterns.
5.4.2.5	The current proposed mitigation measures around TLRU values are very generic, limited in scope, and lack details on how AOO-specific values and cultural resources will be mitigated for in the SSA, LSA, and RSA.	Engage and consult with the AOO regarding the development of AOO-specific mitigation measures that ensure cultural resources, harvesting locations, and areas of traditional ecological knowledge significance are properly protected and mitigated.
5.4.2.6	The mitigation measure around construction scheduling is vague, simply stating, “construction activities scheduling that will generally occur between 7 am and 7 pm with the overall objective of minimizing nuisance effects.” The EIS also goes on to state that this mitigation measure will ensure construction activities will not interfere with	Engage and consult the AOO on developing specific measures to minimize nuisance effects of construction on TLRU including traditionally important species and their habitat.

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	TLRU activities or cause disturbance to species and wildlife.	
5.4.2.7	At this point no environmental effects monitoring for TLRU impacts is planned despite the EIS stating there is potential TLRU within the RSA as well as harvesting occurring within MNRF Wildlife Management Area #48 which intersects with the SSA.	Work with the AOO on developing an AOO-specific environmental effects monitoring plan and program for protecting and mitigating areas of AOO traditional land use and areas of cultural significance to the AOO.
5.4.2.8	In the trapping section of the TLRU section, CNL identifies that there are 2 registered trapline holders within the RSA. However, it is not clear if the traplines are held by AOO citizens or if mitigation or compensation measures have been developed for those trapline holders if necessary.	Ensure the trapline holders within the RSA are adequately accommodated and compensated for any impacts experienced as a result of the project.
ARCHEOLOGICAL RESOURCES		
5.5.2.1	The AOO have reviewed the Stage 1 Archaeological Report and wish to develop a deeper understanding of the archaeological potential on the NPD property. We understand no activities are planned outside of the NPDWF, however due to the significant disturbance of cultural heritage resources during NPD construction, it is important for AOO to understand and preserve the remaining Algonquin cultural heritage resources on the NPD site. Based on the findings of the Stage 1 Archaeological Report, the potential for archaeological resources on the NPD property is high, and the site has value from an archaeological research perspective.	CNL, in collaboration with AOO should undertake additional field research at the NPD property for areas that have demonstrated high archaeological potential (e.g. relic shorelines) in the Stage 1 Archaeological Report and modelling. The AOO recommends that the NPD property be further investigated by the CNL Archaeological Field School in order to better understand the site and build capacity within AOO members for cultural heritage research.
5.5.2.2	The Algonquins have lost a significant part of their history through development of the NPD property.	CNL should negotiate a long-term archaeological agreement with the AOO, which will provide educational, training, and research related to remaining AOO cultural heritage resources on the site.
5.5.2.3	In regard to archaeological resources within the NPDWF site, the AOO wish to play a	The AOO requires that CNL provide an archaeological monitor chosen by the AOO to

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	<p>direct role in the monitoring of the site during construction and decommissioning activities. Although there has been extensive disturbance at the NPDWF, there is potential for archaeological resources to be present within the decommissioning footprint. Past disturbance and use of a site does not discharge CNL from its obligation to protect any artifacts that may still be existing.</p>	<p>oversee construction activities at NPDWF to ensure that Algonquin archaeological resources are properly identified and protected during construction.</p>
ECOLOGICAL AND HUMAN HEALTH RISK ASSESSMENT		
5.6.2.1	<p>Insufficient discussion of alternatives to In-situ Decommissioning</p>	<p>Provide detailed assessments of the alternatives in the EIS, and provide the AOO with a workshop on alternatives, so that AOO can evaluate the options and their strengths and weaknesses. The topics should include cost, liability, the magnitude and timing of risks to human health and non-human species.</p>
5.6.2.2	<p>Inadequate characterisation of the NPD Environment</p>	<p>The proponent should conduct a detailed environmental survey of the physical, chemical, and biological conditions of the NPD, in close collaboration with the AOO. Much of the physical environment is mapped, but the chemical composition of groundwater, surface water, sediment, and the receiving environment are missing. The results will help reviewers to interpret the conditions of the receiving environment and the importance of water quality factors in transport in groundwater, through sediment and in the water column. Biological surveys conducted with the AOO will establish the species present, their numbers, distribution and timing on the NPD site, and importance of those species, habitats and activities to the AOO.</p>
5.6.2.3	<p>The Ecological Risk Report does not include the second iteration of the models (as described above).</p>	<p>The ecoRisk report needs to be amended to incorporate the second iteration of models and the re-interpretation of results. A full suite of radionuclides should be included in the estimation of dose in VCs and the VCs</p>

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		reconsidered to include fish important to the AOO, sport fish and potentially commercial fish. The doses to such fish might be lower than those species associated with the sediment but will provide information to those actively using the resource.
5.6.2.4	Algonquin Scenarios of Land Use and Interpretation of Results.	A greater effort must be made to engage AOO in the development of critical group scenarios and resource use. Models of AOO citizen exposure and dose should be discussed with AOO to determine if they are accurate and feedback encouraged. The maximum dose from the NPD is expected to be in the hunter and that information should be communicated to the AOO.
5.6.2.5	<p>Several terms used throughout the EIS are unclear as to their meaning and need to be better defined for a full evaluation. For example:</p> <p>Disposal: the term is used throughout the EIS but the proposed decommissioning does not “dispose” radioactivity and places it into long-term storage to allow it to seep into the surface environment. The term “disposal” suggests the removal of the radioactivity from the biosphere (such as placing it deep in the Canadian Shield or in the deep ocean) but the <i>in-situ</i> decommissioning just delays its release to the receiving environment.</p> <p>Normal Evolution: the term is used in all model simulations for human health and ecological risk assessment. The term implies that the physical, chemical,</p>	CNL must provide additional description for the terms used. CNL must provide responses to the issues noted above.

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	<p>biological, and socio-economic environment hundreds and thousands of years in the future are predictable and largely the same as it is today. There is no way to test this, making the estimation of effects to humans and non-human species difficult to validate.</p> <p>Cumulative effects: The EIS does not conduct an assessment of cumulative effects because no impacts are predicted from the releases of radioactivity and non-radioactive contaminants from the facility. An analysis should be conducted on the release from NPD with those from the Chalk River Laboratories and other industries and cities on the Ottawa River. Also, an assessment of the overall NPD site, including all sources of contamination (landfills, wetlands, stored materials, etc.) should be conducted.</p> <p>Institutional Control and Post Closure: What is involved with Institutional Control? Security and monitoring of the site, verification and validation of modelling scenarios, in particular the release of tritium after 40 years? Will monitoring be continued in the Post Closure period and, if so, for how long?</p>	

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	<p>Commitments on programs need to be scoped out before decommissioning is considered, although programs can be altered or suspended at any time.</p>	
5.6.2.6	<p>As described above, the description of the chemical and biological environment at the NPD is very weak and the most basic environmental quality data have not been collected or reported in the EIS. Data from the Chalk River Lab is used in the place of site specific data but appears to be inappropriate. For example, the chemistry and level of contamination of groundwater at CRL is probably different from NPD. Other examples include:</p> <p>EIS, pp 8-16- "Climate normals on bright sunshine and cloud cover are not available at or near the CRL or NPD sites."</p> <p>EIS, pp 8-18- "Climate normals on atmospheric pressure data are not available at or near the CRL or NPD sites."</p> <p>EIS, pp 8-29- "Measurements of noise along Highway 17 in the Regional Study Area are not available; however, outdoor noise at receptors close to the highway is likely to range from 50-70 dBA, depending on traffic volume (CHC 2016)."</p> <p>EIS, pp 8-45- "Chemical levels in surface water in the part of the Ottawa River located in the Site and Local Study Areas are not available."</p> <p>EIS, pp 8-51- "Chemical levels in surface water in the part of the Ottawa River located in the Regional Study Area are not available."</p>	<p>The baseline characterization of the environment is not acceptable for a Project with this level of risk. Additional information must be provided before the Environmental Assessment process can continue. Moreover, the CNL must provide responses to the issues noted above.</p>

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>EIS, pp 8-51 Sediment Quality – Table 8.3-8 and 8.3-9 report data on radionuclides in sediments near the outfall but does not report data from sites P-28 (included in Table 8.3-9), P-32, P-31, P-33 or P-34 that are closest to the outfall.” Why are data from these sites not included with the others?</p> <p>EIS, pp 8-81 – Table 8.5-8 The “BH” sites (with water) located between the NPD and the shoreline have not been analyzed for a number of parameters (anions & DOC, TKN, alkalinity, major cations, trace metals, volatiles and PCBs). Why is the analysis so selective? Aren’t the data on groundwater chemistry required for modelling the transport of radionuclides and other contaminants?</p> <p>EIS, pp 8-86 8.6.3 Vegetation Species and 8.6.4 Wildlife Species. Several general species lists are provided but there have been no actual surveys of species that are present on the NPD site. Are these resident species or migrating species (for birds)? Have they been identified and recorded on the NPD site? What is their distribution and numbers relative to the landscape at NPD? Chimney swifts seem to be the only species confirmed on the site.</p> <p>“As the NPD site is not currently used for traditional purposes (hunting, fishing, trapping etc) the project is not expected to affect the health of aboriginal peoples. Consultation of aboriginal peoples during the project</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>was discussed in Section 2.3.” This lack of use is not surprising considering it is a controlled federal facility, however, the use of the site may change over the length of time that the radioactivity remains on the site. Land use can change significantly over time, particularly given the ongoing Algonquin Land Claim Agreement and negotiations. Traditional land use activities such as hunting, trapping, fishing, or even construction of businesses and residences by the AOO on the NPD site could be expected to occur in the future.</p>	
5.6.2.7	<p>Executive Summary Pg 12 “For example, the use of grout to fill the structure is expected to slow down the release of contaminants to groundwater and subsequently to the Kitchissippi, and allow more time for radioactive decay.” The maximum release of some nuclides, and a peak dose, will occur 40 years after decommissioning according to the Post Closure Assessment report. Other nuclides will be released much later but the peak at 40 years probably would not occur if the facility is left in its current state for several more years</p>	
5.6.2.8	<p>Executive summary - Pg 27 “The cement being considered for radioactive disposal systems is similar to early cements used by the Romans in the 3rd century or those used in Tiryns and Mycenae approximately 1,000 years earlier. These cements demonstrate little degradation over approximately 2,000 years.” This statement is misleading. Roman cement is a mix of volcanic ash and seawater which form metallic crystals. The proposed grout is based on Portland cement, which is</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	not as durable. The expected lifetime of the grout is not discussed in detail but is probably much less than 2,000 years.	
5.6.2.9	Pg 2-12 – How long will the drainage system that is currently in place function? The current design relies on the drainage system now in place to transport groundwater to the river. Presumably there is a lifespan for the system. What is expected to happen to groundwater flows when the system degrades?	
5.6.2.10	Section 5.2.2 Project-Environment Interactions –“Project-environment interactions were developed by screening potential effects of project-related activities within each relevant component of the environment. At this stage of the EA process, the identification of the potential project-environment interactions was based on the experience and professional judgement of technical specialists involved with the assessment.” Is this selection process based entirely on professional judgement of CNL and its consultants? There is no way to track or understand the reasoning behind many of the decisions taken by the technical staff. Some of these pathways are considered in the FEPs analysis of the Post Closure Assessment report. However, there is a need for the process of peer review to ensure that technical decisions have support of evidence and appropriate interpretation. That process does not appear to be followed here.	
5.6.2.11	Table 5.2-2 – Chemical COPC screening – “Baseline screening. For example, under “Soil” “The presence of these contaminants is associated with <i>natural background or past NPD operations</i> , not with NPD closure project activities [emphasis added].” The assessment needs to look at all contaminants from all	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>activities if they exceed guidelines. Similarly, high manganese in groundwater is dismissed as it is “not associated with NPD closure project activities” although there is no supporting evidence for this. Dioxins/furans in water at the base of the vault indicates transport from the landfills and incinerated waste. The high concentrations suggest a sizeable source. Given that the site will be abandoned after the reactor decommissioning, will the exceedances in soil and groundwater be taken into account even if they are not associated with the NPD assessment?</p>	
5.6.2.12	<p>Section 5.2.4.1 Selection of candidate VCs – No mention is made of aboriginal engagement in the selection of possible candidate species. Was any effort made to incorporate species important to the traditional users of the land around NPD? It appears that Aboriginal input was solicited once the VCs were decided (Pg 5-15).</p>	
5.6.2.13	<p>Table 5.2-3 Selection of VCs. The selection of fish species is problematic, and it is not clear if species important to aboriginal groups were considered. White-tailed deer is harvested by First Nations and is considered under Socio-economics and not under Traditional Land Use or Terrestrial Environment (Moose is usually a preferred species for VC selection because of the presence of aquatic plants in its diet). The activities of hunting, fishing and trapping are considered to be VCs, but not the non-human species that are involved. There are no recreational or commercial fish used as VCs, e.g., northern pike, walleye or lake trout.</p>	
5.6.2.14	<p>Table 8.3-1 In this table and many others it is not shown what “NA” indicates? Not analysed? Not available? Cesium-137 was</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	reported until 2004 (8.2×10^4 Bq) but not after that. If Cs-137, Co-60, etc. are not detected, it should be indicated.	
5.6.2.15	Pg 8-60 "It is noted that while some baseline characteristics of the aquatic environment have been compiled, detailed mapping (e.g., of substrate, fish habitat, and temperature) has not been carried out specifically for the NPD closure project, because no fish habitat impacts are anticipated from the project." This is a very weak argument for not determining baseline conditions of the chemical composition of the water in the receiving environment and the aquatic habitat that could potentially be affected by chemicals and dissolved solids (during the grouting process). Figure 3.1-4 indicates that the NPD is about 300 m from the shoreline which suggests that changes to the shoreline could occur during the construction of the grout plant, transport and moving materials on the site. An aquatic survey of physical, chemical, and biological conditions in the receiving water is warranted.	
5.6.2.16	10.4 Archeology Site/Local Study Area – "Historical research detailed in the Archeology TSD clearly shows there were generations of settlers on the NPD property, raising families and constructing buildings and docks." Algonquins p used the area prior to European contact and there may be areas of significance to the AOO.	
5.6.2.17	"For scenario 12 (accidental stack collapse), the resulting releases would be localized, with exposure pathways limited to on-site biota only, namely, the Chimney swifts roosting in the stack. However, Chimney swifts reside in the stack only during the night and a heavy equipment accident leading to the accidental collapse of the stack could only	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>occur during the day when heavy equipment is in operation. Therefore, it is unlikely that Chimney swifts would be present and exposed to the potential airborne and liquid releases of contaminants during a stack collapse accident.” – This is an odd argument for an assessment that should be evaluating all impacts (physical, chemical, and biological) of all stages given that the stack collapse could destroy the nests of the swift population. A stack collapse, depending on the time of year, would wipe out the colony, regardless of the time of day.</p>	
5.6.2.18	<p>Ecological Risk report Pg 2-17 “If the radionuclide concentration was greater than the NEC value and a dose coefficient was available, then the radionuclide was “screened in” or included for assessment in the EcoRA; if a dose coefficient was not available, then the radionuclide was “screened out”.” It should be possible to calculate dose coefficients based on basic principles or using analogues. Not having a dose coefficient is not a valid reason for “screening out” radionuclides. The text indicates later that this did not happen during this screening process.</p>	
5.6.2.19	<p>Ecological Risk Report Table 2.16 – Very few details of the assessment are reported. Only H-3, Co-60 and Cs-137 are reported in the table, although a large number of nuclides are present in the vault and associated structures (see Post Closure report). Also, the doses to non-human species are not reported. It appears that most nuclides have been screened out before the actual screening process of doses has occurred.</p>	
5.6.2.20	<p>Ecological Risk Report Table 2.18 – Dioxins/furans are “screened out” but the units are in mg/kg and not in Toxic</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>Equivalence (TEQ) based on the congeners of the dioxins/furans present. This congener information is needed before dioxins/furans are “screened out”. See Table 9.11-5 of the EIS for TEFs for individual congeners. [Note: The USEPA uses slightly different TEFs 1,2,3,7,8-PeCDD = 1.0 and OCDD and OCDF are 0.0001].</p>	
5.6.2.21	<p>The text of the EcoRisk Report discusses a “second iteration” of risk assessment, which is presented in Appendix D of the report. This second iteration contains new scenarios and a re-analysis of data. Lead, which was a major concern from the first iteration, has become a minor component. It isn’t clear why lead is less important (an Ontario-wide value for background lead in soil was used in the first iteration but was considered incorrect because of the high risk values from the assessment. Site-specific data should have been available). In all, there is enough confusion regarding the methods and the reasons why a second assessment process was required (and placed in an Appendix and not in the main text) that the document should be redone to clarify the methods and conclusions.</p>	
5.6.2.22	<p>Post Closure Assessment Report – This is a well written report and provides some good background information for the human health and ecological risk assessment, but the assessment is centered around <i>in-situ</i> decommissioning. Alternatives were only considered as an exercise to fulfill CNSC guidelines for the EIS and were not seriously considered. There are no cost estimates or safety cases and risk assessments presented for each alternative. It appears that the minimum long-term liability for the NPD is the removal of radioactive materials and full</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	<p>decommissioning of the rest of the site. The site can then return to natural conditions or other land uses without restrictions. This is inadequate for the protection of future AOO land-users. The CNL must hold long-term liability beyond the removal of radioactive materials and full decommissioning of the site. The CNL should be liable for monitoring and remediation of the site to a state that is acceptable for safely engaging in unrestricted land use.</p>	
5.6.2.23	<p>Post Closure Assessment Report Pg 2-9 Dealing with Uncertainties – The issue of uncertainty and conservatism is often subjective, particularly in future scenarios when there are so many unknowns. Conservative relative to what? Conditions that appear to be conservative now may be closer to a realistic scenario in the future. Conservatism is often used to support an argument but there is very little support for it in the models, especially those using empirical data for transfer factors or dose coefficients.</p>	
5.6.2.24	<p>Post Closure Assessment Report - Normal Evolution Scenario. There are no time lines associated with any of the major events described in this section. It is accepted that groundwater will infiltrate the vault and associated structures and that nuclides will be transported to the river. The timing of these events is not given, although those values are given later in Section A9 (Timeframe of Interest). It is important to note that this scenario is entirely based on the natural environment as it exists in the far future and does not include socio-political changes over the centuries that might impact land use. The selection of FEPS to include in</p>	

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	the scenarios is not transparent and could be used by the proponent to justify the selection of <i>in-situ</i> decommissioning.	
5.6.2.25	Post Closure Assessment Report Figure 5-7 – This is a significant observation from the assessment. The maximum rate of release of nuclides to the river occurs at about 40 years after grouting, which is during Institutional Control. It is suggested in other parts of the EIS that the maximum release occurs far in the future. Similarly, in Figure 5-12 the maximum concentration in the river sediment occurs 40 years after grouting. The maximum of nuclides in sediment reaches 100 Bg/kg after 100 years, but is 10x higher in Fig 5-12 at 40 years. The <i>in-situ</i> decommissioning releases nuclides to the environment soon after the grouting is complete and continues to do so for several thousand years. The total amount of radioactivity released is low and the doses received by the critical group and hunter/gatherers is low.	
SOCIOECONOMICS AND COMMUNITY WELL-BEING		
5.7.2.1	There is no mention of the socio-economic conditions of Indigenous communities that are interacting with the NPD Project site, including AOO.	Provide an assessment of the socio-economic conditions and effects the project will have on AOO citizens interacting with the project.
5.7.2.2	There are still a number of residual nuisance effects that could impact AOO citizens through impacts to land use access for both traditional practices and economic livelihood opportunities.	Work with the AOO on identifying and implement adequate mitigation measures to eliminate nuisance effects to the greatest extent possible.
5.7.2.3	There are missing valued components that would be relevant to the socio-economic aspects of the NPD Closure Project.	Include and assess additional relevant value components such as community safety, health and wellbeing, emergency response services, and AOO-specific employment and economic development Also consider AOO-specific measures such as AOO procurement, employment, and tenants within the AOO's Agreement-in-Principle.

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
5.7.2.4	CNL's EIS for the NPD project does not fully consider project-human interactions such as human resources/workforce; employment & income from the decommissioning execution phase, institution control phase, and post-institutional control phase, impacts an influx of workers (if applicable) may have on community safety, well-being, and services. As a result of these gaps, some socio-economic value components and their potential effects, have not been considered.	Evaluate the implications of the interactions described above for their impact potential - whether that includes adverse or positive potential socio-economic and well-being effects in general, and specifically, to AOO citizens.
5.7.2.5	Primary socio-economic and community wellbeing components and indicators are not considered in the effects assessment (i.e., health, education, infrastructure and services; economic development etc.). These are not described nor assessed as part of the NPD EIS.	Provide a more complete assessment and consideration of the effects on the socio-economic indicators identified in the issue above.
5.7.2.6	Opportunities for Indigenous employment or procurement, including opportunities for AOO have not been assessed or identified in the NPD EIS.	Include information regarding the ways CNL intends to engage the AOO in developing employment and procurement opportunities for the project.
5.7.2.7	There is no socio-economic effects monitoring planned for the project. Failing to monitor these effects could lead to negative impacts being amplified and positive effects not being fully realized.	Work with the AOO on developing a socio-economic program/plan for monitoring and managing the socio-economic effects of the project on AOO citizens.
5.7.2.8	One of the effects that was not able to be fully mitigated according to the EIS was impacts to the Kitchissippi (Ottawa) River shoreline landscape. Information on how shoreline impacts would be impacted were also not clearly identified.	Given the cultural significance of the Kitchissippi to AOO people, the rich history, cultural resource potential, and use of the river for fishing to this day the impacts to the shoreline must be mitigated to the greatest extent possible. Where mitigation is not possible, CNL should work with AOO on identifying appropriate accommodation and compensation to ensure impacts are fully addressed.
5.7.2.9	The CNL has not indicated how it will engage with the AOO regarding the protection of	There should be cooperation between CNL and AOO to protect future land use interests

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	AOO land use interests in the local study area.	of the AOO in local study area including potential acquisition of adjacent buffer lands.
ENVIRONMENTAL MONITORING		
5.8.2.1	Currently, there is no mechanism for AOO to participate in the environmental management of the NPD property (and beyond) during decommissioning, the institutional control phase and post institutional control phase. This includes opportunities for reviewing reports, providing input, on-site construction monitoring, participating in site remediation and being involved in decision making or information sharing agreements. Likewise, during decommissioning activities the NPDWF site will have environmental emissions (e.g. wastewater, dust, noise, greenhouse gases, etc.), AOO representatives are not able to participate effectively based on the contents of the EIS.	To ensure transparency and confidence in monitoring activities, there must be direct AOO involvement in CNL's Environmental Protection Program as well as the CSNC Integrated Environmental Monitoring Program (IEMP). This could be achieved by providing funding for full-time AOO monitors. This must include reasonable capacity funding for training. The monitor would be responsible for participating in design, implementation and reporting all site related monitoring and remediation initiatives. The monitors would also be able to liaise with AOO members, leadership and CNL to share information.
5.8.2.2	Monitoring of environmental receptors is crucial to ensure that potential effects from NPDWF are being managed effectively. This includes, but is not limited to, monitoring of groundwater, surface water, sediment, fish communities, fish tissues, and wildlife. Monitoring must be conducted in a manner that is transparent and inclusive of AOO. This will help AOO members to have confidence that components of the environment that they value are being monitored appropriately.	To promote the effective participation of AOO within the environmental management and monitoring programs of NPDWF we strongly suggest the creation of a Nuclear Environmental Review Board (NERB). This board should be composed of representatives from AOO, CNSC and CNL. The NERB would be responsible for overseeing all nuclear activities in the AOO Settlement Area. The NERB would also be responsible for reviewing annual reports, applications, licence renewals and other activities associated with the NPDWF. Resources must be provided to allow the NERB to dedicate the time required to complete these tasks. Secondly, the NERB should have access to funding for obtaining guidance from technical experts where appropriate. The NERB would allow for effective coordination between AOO, CNL and the CNSC. Moreover, having representatives

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
		from AOO would help ensure that the rights and interests of AOO members are upheld.
5.8.2.3	It is noted within the EIS that AOO is a member of the CNL's Environmental Stewardship Council. However, this is inaccurate as currently only the Algonquins of Pikwàkanagàn have a seat on CNL's Environmental Stewardship Council.	AOO recognizes the value of the Environmental Stewardship Council and wishes to participate, however AOO believes a more fulsome environmental advisory authority should be created to oversee the various CNL facilities with the unceded Algonquin Settlement. AOO believes the role of the Environmental Stewardship Council should be expanded to provide the council with increased oversight and decision-making powers over CNL's environmental management program where appropriate. This would increase transparency related to the environmental monitoring of all CNL facilities. The NERB model proposed in Accommodation 2 should replace the Environmental Stewardship Council to create a more robust environmental oversight authority for the NPD property.
5.8.2.4	CRL must ensure that effective contingency plans are in place for extreme weather and natural hazard scenarios that may impact or damage CRL infrastructure. These incidents are expected to increase in frequency and intensity as a result of climate change, so proper contingency planning is crucial. In the event of a natural hazard (e.g. flood, ice storm, hurricane, tornado, earthquake) there is potential for contaminants (radiological and non-radiological) from the NPDWF to be released to the environment, in particular the Kitchissippi.	CNL should provide AOO with more detailed information regarding extreme weather and natural hazard contingency planning. Since the potential for extreme weather and natural hazards (e.g. tornadoes, earthquakes, flooding) is high at the NPDWF. CNL should provide more detailed discussion regarding the potential impacts of flooding at the NPDWF, and the types of releases that would occur if the NPDWF facility was inundated.
5.8.2.5	The following non-radiological hazardous substances have been identified on the NPDWF site; lead, asbestos, mercury and polychlorinated biphenyl. These designated substances have the potential to	CNL must remove all hazardous substances from the NPDWF and ensure that proper monitoring and disposal procedures are followed. AOO must be provided with all monitoring results during the active decommissioning phase to ensure regulatory

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
	be released to the environment through atmospheric emissions or groundwater.	compliance with the release of designated substances. Leaving hazardous substances such as PCB's on the NPDWF does not represent best practice for the disposal of hazardous waste in Canada. Designated substances should be removed from the site and taken to appropriate waste storage facilities.
5.8.2.6	Lead, asbestos, mercury and polychlorinated biphenyl are not adequately assessed or modelled in the atmospheric environment assessment. The release of lead, asbestos, mercury and polychlorinated biphenyl during the demolition phase of the project must be monitored and managed carefully to minimize exposure to local AOO members.	Lead, asbestos, mercury and polychlorinated biphenyl should be included in the atmospheric assessment and air dispersion modelling due to their presence on the NPDWF site. CNL must provide details on how designated substances on the NPDWF site will be managed and monitored during the project.
5.8.2.7	AOO has a vested interest in ensuring that the NPD property and adjacent lands are monitored effectively and that all environmental liabilities and human health risks (on and off-site) are identified and remediated to the highest standard achievable, including, but not limited to, the Site Condition Standards for Residential/Parkland/Institutional Property Use under Ontario Reg 153/04 that would enable a Qualified Person to submit a Record of Site Condition that the Ontario Ministry of the Environment and Climate Change will accept for filing to the Environmental Site Registry.	It is paramount that AOO be meaningfully involved and informed regarding all environmental monitoring and remediation activities related to the NPD, on and off site. AOO wishes to have adjacent lands monitored to ensure that no environmental liabilities exist off the NPDWF. Given the unique position of AOO as landowners, the AOO must to play an active role in the monitoring of the NPD property (and beyond) over the course of the project. CNL must identify all environmental liabilities related to NPD on and off the project site, including adjacent lands and Kitchissippi.
TOWARDS A LONG-TERM RELATIONSHIP AGREEMENT		
6.1	Currently there is no formal accommodation agreement in place between AECL/CNL and the AOO regarding the past, present and future activities at the NPD site and the associated impacts and risks.	AECL/CNL should enter into negotiations with AOO to establish a Long-Term Relationship Agreement with the AOO to determine a formal approach to consultation and accommodation for NPD site moving forward. Since the NPD site lies within the unceded AOO Settlement Area, a formal

Comment #	Issue/ Information Gap	Accommodation/ Information Requirement
		accommodation arrangement between AECL/CNL and the AOO is necessary.
6.2	CNL does not adequately discuss the future use and ownership of the NPD property (excluding the NPDWF). There is no discussion of potential transfer arrangements for portions of the NPD property. As noted previously, the AOO is interested in obtaining the remaining 364 hectares (900 acres) of the NPD property after CNL decommissioning and rehabilitation work is completed.	CNL and AECL must enter into formal discussions with AOO regarding potential land transfer arrangements for portions of the NPD property. CNL and AECL must also commit to obtaining a Record of Site Condition (RSC) under Ontario Reg. 153/04 for Residential/Parkland/Institutional Property Use Site Condition Standards in order to initiate the land transfer process.



Review of the
*Discussion Paper on the Proposed Project List &
Discussion Paper on Information Requirements
and Time Management Regulatory Proposal*



Submission to the Canadian Environmental
Assessment Agency

May 31, 2019

Algonquins of Ontario

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1. Introduction

Algonquins have lived in present-day Ontario for thousands of years before Europeans arrived. Today, the Algonquins of Ontario (AOO) are comprised of ten Algonquin communities. These include:

- Algonquins of Pikwakanagan First Nation
- Antoine
- Bonnechere
- Greater Golden Lake
- Kijicho Manito Madaouskarini (Bancroft)
- Mattawa/North Bay
- Ottawa
- Shabot Obaadjiwan (Sharbot Lake)
- Snimikobi (Ardoch)
- Whitney and Area

The ten communities are represented by sixteen Algonquin Negotiation Representatives (ANRs) who are elected by Algonquin Voters for three-year terms. The ANRs include the Chief and Council of the Algonquins of Pikwakanagan First Nation and one representative from each of the nine other Algonquin communities.

We have actively participated in Canada's environmental and regulatory reviews at many stages of the process by providing written submissions on the proposed new impact assessment system, the new Canadian Energy Regulator, changes to the Fisheries Act and changes to navigation protection legislation. Most recently, reviews of the Discussion Paper on the Proposed Project List and Discussion Paper on Information Requirements and Time Management Regulatory Proposal was conducted with a clear focus on the rights, values and interests of our citizens.

This written submission provides an overview of the recommendations provided in our previous submissions pertaining to Bill C-69 and the proposed new Impact Assessment Act, as well as a series of related issues and recommendations pertaining to the proposed Regulations Designating Physical Activities (the Project List) and the Information Requirements and Time Management Regulations. We also outline several Algonquin practices and teachings that are key to understanding the review comments that will follow. We want to know that you understand who we are. You may not agree with all our comments, but we need to know that you understand who we are as a people. This understanding is essential to any meaningful engagement on this matter.

The Algonquins of Ontario are utilizing the opportunity provided to put forth perspectives regarding the proposed new Impact Assessment Act and its regulations, and speaking to how processes can be more inclusive of First Nations voices. Apart from the following comments, the AOO is supportive of the legislative changes put forth in Bill C-69.



1.1 AOO History and Identity

The Algonquins of Ontario are on a journey of survival, rebuilding and self-sufficiency – a journey of reconciliation. This journey began nearly 250 years ago when the first Algonquin Petition was submitted to the Crown in 1772.

The AOO have been in negotiations with the governments of Canada and Ontario in relation to their assertion of unextinguished Aboriginal rights and title for well over 20 years.

The traditional territory of the AOO has never been surrendered and the AOO assert unextinguished Aboriginal rights and title to it.

Algonquins of Ontario Settlement Area Boundary



The AOO treaty negotiations have proceeded to the point that an Agreement-in-Principle ("AIP") has been signed, enabling the parties to move to the next phase of negotiations towards a modern-day Algonquin Treaty.

The nation's capital sits on unceded Algonquin land. This means that the House of Commons, the Senate, the Supreme Court of Canada, the residence of the Governor General, the embassies of scores of foreign nations, and many other official institutions are situated on land on which there is an assertion of unextinguished Algonquin title.

Based on a Protocol signed in 2004, these communities are working together to provide a unified approach to reach a settlement of the Algonquin land claim.



The Algonquins of Ontario claim includes an area of 9 million acres within the watersheds of the Kichi-Sibi¹ (Ottawa River) and the Mattawa River in Ontario, an unceded territory that covers most of eastern Ontario. More than 1.2 million people live and work within the Settlement Area. There are 84 municipal jurisdictions fully and partially located within the Settlement Area, including 75 lower and single tier municipalities and 9 upper tier counties.

1.2 Algonquins in Ontario Values and Teachings

Today's Algonquins in Ontario share a history of common interests, traditions and needs arising from our common heritage. In the following section, we outline several Algonquin practices and teachings that are key to understanding the review comments that will follow. We want to know that you understand who we are. You may not agree with all our comments, but we need to know that you understand who we are as a people. This understanding is essential to any meaningful engagement on this matter.

In developing these comments, we have been guided by the spirit and intent of the Teachings of the Seven Grandfathers. These teachings have been passed down from generation to generation and continue to be practiced today:

- Honesty (Gwayakwaadiziwin): Honesty in facing a situation is to be brave;
- Humility (Dabaadendiziwin): Humility is to know yourself as a sacred part of Creation;
- Respect (Minaadendamowin): To honour all Creation is to have Respect;
- Bravery (Aakode'ewin): Bravery is to face the foe with integrity;
- Wisdom (Nibwaakaawin): To cherish knowledge is to know Wisdom;
- Love (Zaagi'idiwin): To know Love is to know peace; and
- Truth (Debwewin): Truth is to know all of these things

Our survival on this land for thousands of years required us to apply our teachings to ensure the protection of the lands and waters that we rely on. These teachings serve as the original instructions or "natural laws" that were built into our way of life. "Sustainability" is a modern term, but sustainability was long in practice by our people and our ancestors. There were consequences that occurred when we strayed from our natural teachings, instructions, laws. We were constantly monitoring the environment and if changes occurred, we would adapt. It was (and is) a matter of survival. We had, and continue to have, deep connections to the land.

Protection and interaction with the lands and waters of our territory has been central to our existence for thousands of years. We have maintained this connection to the land despite the arrival of Europeans to our territory. Nonetheless this arrival has dramatically impacted our way of life. We are confined to harvesting in specific locations, because of this, resources have and can becoming depleted. We are in great competition with so many others on this land now for the resources that are here.

¹ The Ottawa River, otherwise known as the Big River or Kichi-Sibi, has also been referred to in the Algonquin language as "Kichisipi", "Kichissippi", "Kitchissippi" and "Kichisippi".



Industrial developments such as mines, hydroelectric dams and nuclear power developments have significantly impacted the lands and waters that we rely upon. Kichi-Sibi Pimisi (American eel) is considered sacred to the Algonquin people and has been a central part of our culture for thousands of years. Recently the number of eels in the St Lawrence basin has declined by approximately 99% from populations in the 1980s (Algonquins of Ontario, 2014). Hydroelectric dams have caused a catastrophic decline of this culturally significant species in our traditional watershed of the Ottawa River. It is now Endangered. The Lake sturgeon too is a species culturally significant to the Algonquin and was once abundant throughout the watershed. This species also suffered major decline from dams and other human impacts in our territory. Fluctuating water levels and unnatural water flows have significantly impacted fish spawning. Water control structures such as dams, and Parks Canada lift locks on significant waterways have impacts on fish and their habitats too.

Algonquins did not need laws and government to understand environmental health. The introduction of industrial activities, urban growth, chemicals and pollution brought the need for outside laws and monitoring. As we progress into an era of reconciliation through the signing of a modern treaty, it is essential that the AOO has a high level of involvement, oversight and decision-making power regarding impact assessment on the unceded Algonquins of Ontario Settlement Area.

A Nation-to-Nation approach based on collaboration is essential for AOO in asserting sovereignty and jurisdiction over our lands and restoring the trust in the Government of Canada's ability to assess major projects. Integrating the Algonquin perspective into environmental decision making will only strengthen Canada's impact assessment regime and ultimately lead to better projects for both nations.

2. Past AOO Submissions on the Impact Assessment Act in Relation to New Recommendations

2.1 Background on Previous AOO Comments on the Impact Assessment Act

The AOO has previously submitted the recommendations regarding the *Impact Assessment Act* within Bill C-69. Building on the comments in these past submissions, we have now completed reviews of the following documents:

- Discussion Paper on the Proposed Project List: A Proposed Impact Assessment System, which outlines the types of projects that may be subject to impact assessment under the new Act; and
- Discussion Paper on Information Requirements and Time Management Regulatory Proposal: A Proposed Impact Assessment System, which outlines information requirements for the planning phases of projects and sets clear criteria under which legislated timelines should be suspended

Our previous comments on the proposed new Impact Assessment Act and Bill C-69 are numbered below. Additional and more detailed issues and recommendations pertaining to the



Regulations Designating Physical Activities (the Project List) can be found in Appendix A, and those pertaining to the Information Requirements and Time Management Regulations can be found in Appendix B.

2.2 Previous AOO Comments on the Impact Assessment Act

1. Amend Sections 92 – 95 regarding Regional and Strategic Assessments to better incorporate Indigenous Knowledge and input from impacted Indigenous communities. This includes not only incorporating Indigenous perspectives once an assessment has commenced, but also seeking Indigenous input at the earliest phase when determining if an assessment ought to be completed. More detailed recommendations regarding the timing of, and information provided, as part of the early planning process stemming from our review of the Discussion Paper on Information Requirements and Time Management Regulatory Proposal can be found in Appendix B.
2. Amend Section 18 of Bill C-69 such that the 180-day timeline clock does not start unless and until impacted Indigenous groups are confirmed to have capacity funding. Funding should be guaranteed and awarded as early in the process as possible. We request this amendment to ensure that the AOO and other Indigenous groups are provided capacity to participate in the early planning process to better ensure meaningful engagement. More detailed recommendations regarding the timing of, and information provided, as part of the early planning process stemming from our review of the Discussion Paper on Information Requirements and Time Management Regulatory Proposal can be found in Appendix B.
3. Impact Assessment (IA) follow-up needs to set the basis for ensuring an ongoing consultation process and forum with Indigenous people following the IA process. IA follow-up should commence with the regulatory permitting process, and continue through the construction, operations, and decommissioning/closure of a project. The AOO recommends the Act be amended to provide the following guidance on IA follow-up programs:
 - a. For each project, establish a forum where affected Indigenous rights-holders, the Crown and the proponent meet and consult the communities on a regular basis with respect to the items listed below, and where the affected communities are empowered to have an influence in decision making with respect to follow-up
 - b. An accounting of progress and status of meeting the proponent's follow-up program objectives, with the Crown's participation as required, including follow-up commitments to Indigenous rights-holders specified in the proponent's Impact Statement and/or the Crown's IA report to the Minister.
 - c. Monitoring programs that are led by Indigenous rights-holders where there is a livelihood (traditional use, health, socioeconomic, cultural heritage) interest, including capacity funding and support to conduct such programs and have the results of such programs considered in follow-up program reporting.



- d. A basis and requirement for incorporating Indigenous community input into adaptive management requirements and decisions as they relate to IA conditions of approval and/or deviations from the assumptions on which the IA decision was based.

As a result, the Agency should develop detailed technical guidance, for proponents and any party who may administer follow-up programs, that includes measures to ensure the above outcomes. More detailed recommendations regarding the timing of, and information provided, as part of the early planning process stemming from our review of the Discussion Paper on Information Requirements and Time Management Regulatory Proposal: A Proposed Impact Assessment System can be found in Appendix B.

4. Amend the Act to include adaptive management measures that are inclusive of a seven-generation perspective to address the uncertainty and governance requirements for dealing with unanticipated consequences of project decisions. Adaptive management with a seven-generation perspective should be built into adaptable project design and should inform decisions on IA follow-up programs.
5. Amend the Act to properly and meaningfully include a Contribution to Regional Sustainability test to determine if a project is in the public interest. This includes amending the EIS requirements to include a clear indication of the project's impact to sustainability through the lens of seven-generation stewardship of the lands and waters, and the benefits and costs of the project for local communities, with a strong focus on Indigenous rights-holders.

More detailed recommendations regarding the types of projects that may be subject to a federal impact stemming from our review of the Discussion Paper on the Proposed Project List: A Proposed Impact Assessment System can be found in Appendix A.

2.3 The proposed new Impact Assessment Act and the Duty to Consult

In matters where the Crown is making decisions that may impact Aboriginal or Treaty rights, including the rights of the AOO, the Duty to Consult must be fulfilled. Matters outlined in the proposed new Impact Assessment Act, including the have the potential to generate severe impacts, and therefore the fulfillment of the Duty to Consult must be included within the legislation. This Duty is based in protected rights as laid out in section 35 of the Constitution Act.

Further to that point, the AOO recognizes the Crown is legally responsible for ensuring the Duty to Consult is fulfilled and this responsibility is not able to be delegated to non-Crown entities such as proponents. However, the Crown can provide proponents with clear written direction, through agreements that detail proponent requirements for procedural aspects of consultation that are delegated to them.

In addition, the Duty to Consult ought to be fulfilled in a way that meets the changing needs of communities. "Collaborative consent", is a process that ought to be carried forward in the



proposed new Impact Assessment Act, including its regulations, to ensure the Duty to Consult is met in a meaningful way, rooted in reconciliation and true Nation-to-Nation relationships,

In the AOO's experience, collaborative consent works through establishing fair, transparent, and mutually agreed upon agreements between Indigenous Nations and the Crown. To ensure these agreements work in an equitable manner proper resource allocation for Indigenous capacity building and dialogue is essential along with mutually agreed upon terms regarding the sharing of Indigenous knowledge and perspectives in review processes. These criteria are viewed as the bare minimum essentials of collaborative consent and ought to be viewed as meeting minimal requirements of effective consultation and accommodation.

3. Conclusion

The AOO appreciates the opportunity to bring forward recommendations regarding the future of Canada's impact assessment regime, including the new Regulations Designating Physical Activities (the Project List) and Information Requirements and Time Management Regulations, and looks forward to moving forward collaboratively with Canada and all of the relevant ministries to ensure that the new legislation protects and promotes the AOO's rights and interests.

Further to that point, the AOO would be grateful for the opportunity to present our comments and perspectives on the proposed new Project List and Information Requirements and Time Management Regulations to the Canadian Environmental Assessment Agency to ensure the legislation adequately reflects and represents Algonquin values and teachings.

Except for the above recommendations, the AOO supports the proposed legislative changes which appear to align with relevant case law and puts holds Indigenous rights as a key consideration in the legislation.

Moving forward the AOO wishes to keep working towards a Nation-to-Nation relationship with the Crown that is rooted in reconciliation, upholds UNDRIP and works towards collaborative consent.



Appendix A: Review of the Discussion Paper on the Proposed Project List

As the IAA goes through the Parliamentary process as part of Bill C-69, the Federal Government has also been consulting on proposed regulations to implement the IAA, including what types of projects may be subject to IA. These projects are referred to as “designated projects” as described in the *Regulations Designating Physical Activities* under CEAA 2012, referred to as the “Project List.” The proceeding sections summarize the consultation process on the Project List to date and provide an overview of the Discussion Paper.

Prior to addressing the specific material within the Discussion Paper, AOO believes it is important to highlight the fact that the Government of Canada is currently reviewing and revising the Project List under CEAA 2012. The regulations were passed by the previous government without public consultation or Indigenous engagement. As such, AOO believes the current Project List that is the comparative basis of this consultation lacks credibility and legitimacy.

The following subsections draw on previous AOO comments on the Impact Assessment Act, and identify key issues of importance for AOO with regard to the proposed Project List. Comments and recommendations are provided for the Agency’s consideration.

1. Review Issues and Recommendations

1.1 Approach to Creating the New Project List

Preamble

The Government of Canada (2019) states:

“The objective of the Project List is to capture those major projects with the greatest potential for adverse effects on areas of federal jurisdiction related to the environment, including:

- *Fish and fish habitat;*
- *Aquatic Species at Risk;*
- *Migratory birds;*
- *Changes to the environment on federal lands, including First Nation reserve lands;*
- *Changes to the environment in a province other than the one where the project is taking place or outside of Canada (e.g. greenhouse gas emissions); and*
- *Environmental effects arising from federally regulated project types such as nuclear, rail, ports, airports, interprovincial pipelines and offshore energy activities” (pg. 5).*

Issue 1: The stated objective of the Project List is to capture those major projects with the greatest potential for adverse effects on areas of federal jurisdiction related to the environment. If a project does not appear on the Project List, it does not require the preparation of a Project Description. It is only at the Project Description stage that Indigenous peoples are engaged, and the proponent is required to provide information on potential impacts to Aboriginal and Treaty



rights. The narrow focus on the biophysical environment excludes consideration of the potential effects on Aboriginal and Treaty rights, and federal Crown obligations with respect to Aboriginal and Treaty Rights from this initial stage of the IA process.

Recommendation 1a: The stated objective of the Project List must be expanded to expressly include adverse effects to asserted Aboriginal rights and title beyond changes to the environment on First Nation reserve lands. This maintains the broader scope of assessment mandated in the IAA beyond just environmental effects.

Recommendation 1b: The Project List must be inclusive of potential adverse effects on the federal Crown's obligations with respect to Aboriginal Rights and asserted title, and as such, the approach to triggering IAA must provide mechanisms whereby all projects that have the potential for adverse effects on asserted Aboriginal rights and title are captured in the initial stage of the IA process.

Recommendation 1c: "Federal jurisdiction" must be also be inclusive of potential adverse effects on terrestrial/avian Species-at-Risk in jurisdictions that do not have regulatory equivalency (at a minimum) to the federal *Species-At-Risk Act* for federally listed species.

1.1.1 Characterizing the Effects of Project Types

Preamble

The Government of Canada (2019) states:

"For consideration for the Project List, a project type must have the greatest potential for adverse and complex effects in areas of federal jurisdiction related to the environment. For each identified project type, potential effects in each area of federal jurisdiction related to the environment were analyzed based on past environmental assessments, scientific literature and consultations with expert government departments to determine the potential level of effects and the complexity. The assessment of complexity was based on the assumption that project types with more, and different, types of effects would be more complex to manage and mitigate" (pg. 7).

Issue 2: While the concept of an adverse effect is carried forward from CEAA 2012 and is defined in the IAA, the concept of a "complex effect" is new and is not defined in the IAA. Without a thorough explanation of a "complexity" in this context, one cannot acquire a fulsome understanding of how the effects of project types were characterized.

Recommendation 2: The concept of complexity must be explained in the proposed regulations and defined in the IAA, or eliminated as a trigger for consideration of a Project for the Project List (see below).

Issue 3: The analysis appears to be based on three key sources of information: past environmental assessments, scientific literature, and consultations with expert government departments. Without a more detailed methodology, one cannot acquire a fulsome understanding of how the effects of the project types were characterized.



Recommendation 3: AOO recommends that the Government of Canada disclose all information, empirical data, records, studies, reports and other evidence relied upon to complete the analysis.

Issue 4: Projects do not need to be “complex” to have great “*potential for adverse and complex effects in areas of federal jurisdiction related to the environment.*” For example, a project that may have the single impact of degrading an important ungulate calving area, or degrading spawning habitat for fish, can have adverse and complex effects to the health and wellbeing of Indigenous peoples, and other adverse and complex effects to areas of federal jurisdiction related to the environment connected with the *Fisheries Act* or the *Species at Risk Act*.

Recommendation 4: AOO recommends that the Government of Canada focus on a Project having the potential for a “direct or incidental adverse effect,” or effects, as opposed to “complexity” for consideration of a project for the Project List, as well as consideration of factors that relate to the public interest as referred to in section 63 of the IAA, namely, contributions to sustainability, impacts on Indigenous groups and their section 35 rights, and hinderances to Canada meeting its environmental obligations and climate change commitments.

1.1.2 Determination for the Project List

Preamble

The Government of Canada (2019) states:

“For project types that meet the criteria set out above, the following considerations were applied to determine whether an entry should be added to the Project List:

- *Effects in one or more areas of federal jurisdiction*
- *Lifecycle regulator (CER/CNSC/Offshore Boards)*
- *Federal and provincial/territorial legislative regimes” (pg. 7).*

Issue 5: Not all regulatory regimes in Canada are equal, particularly when it comes to how each regulatory regime may consider of Aboriginal and Treaty rights. It is therefore inappropriate to assume that potential project effects can be effectively assessed and managed in other jurisdictions and/or by different regulators.

Recommendation 5: Determination for the Project List should consider the application of federal Crown obligations with respect to Aboriginal rights and asserted title on a project-by-project basis.

Issue 6: The above considerations do not include federal Crown obligations with respect to Aboriginal and Treaty rights.

Recommendation 6: Determination for the Project List should consider federal Crown obligations with respect to Aboriginal rights and asserted title, and other Government-to-Government obligations on the federal Crown following from current, pending, or anticipated agreements with Indigenous governments.



1.1.3 Designated Projects

Preamble

The Government of Canada (2019) states:

“Any individual project that matches the description of a project type and meets or exceeds the established threshold set out in the Project List would be a “designated project” and would be subject to the Impact Assessment Act” (pg. 7).

Issue 7: The established thresholds set out in the Project List are largely arbitrary and are mostly based on project size or production capacity that proponents can choose to increase or decrease based on IA triggers and thresholds. This approach allows proponents to potentially “game” the Project List regulation and “split” or “piece-meal” projects, which would result in some projects not being assessed.

Recommendation 7: AOO recommends the proposed regulations include a reporting requirement for projects under the threshold, whereby proponents must disclose all project pre-feasibility, feasibility, and/or economic assessment information to the Agency and to the public as part of a Project Description submission, and the Agency provides such information on a publicly available federal registry. This would allow the Agency and any interested parties to track projects in the same geographic area in order to retroactively require designation under the IAA after a time period of perhaps five-years, ensure cumulative effects are considered, and identify the need for a regional assessment.

1.1.4 Designation of Projects that are not on the Project List

Preamble

The Government of Canada (2019) states:

“A designation request to the Minister may come from a number of sources, including the public, an Indigenous group, a non-governmental organization, a federal authority, the Agency, another jurisdiction, the project proponent or the Minister may decide to designate a project on her own” (pg. 8).

Issue 8: The process by which an Indigenous group can make a designation request to the Minister is unclear. While the IAA states that the Agency can require the person or group making the request to provide information, it does not specify the type of information required.

Recommendation 8: The proposed regulations should include guidance on information requirements for a designation request by an Indigenous group, and on how to submit the request to the Minister. The regulations should also include specific information on how the Minister will assess the designation request relative to criteria that relate Aboriginal rights and asserted title and the potential for other direct or incidental adverse effects on that group.



1.1.5 Designation Considerations

Preamble

The Government of Canada (2019) states:

“Under the proposed Impact Assessment Act, before making the decision to designate, the Minister must take into account the potential impacts of the proposed project on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the Constitution Act (1982) as well as any relevant regional or strategic assessments, as described in section 9 of the Act” (pg. 9).

Issue 9: If a project does not appear on the Project List, it does not require the preparation of a Project Description. It is only at the Project Description stage that Indigenous peoples are engaged, and the proponent is required to provide information on potential impacts to Aboriginal and Treaty rights. It is therefore unclear as to how the Minister can take into account the potential impacts of the proposed project on the rights of Indigenous peoples.

Recommendation 9: All project applications that require federal authorizations should be regularly and publicly posted on a federal registry that is available for Indigenous peoples and governments to review with regard to their rights and interests, with minimum 30-day windows for Indigenous peoples and governments to make designation requests to the Minister. Postings should include information on the intent of the application, the potential impacts of the application, the federal authorities involved, and the authorizations required. Postings can be organized by the type of authorization involved.



1.2 Results of the Approach

Preamble

The Government of Canada (2019) summarizes the new Project List in sections 4.1 to 4.9 of the Discussion Paper and provides a detailed list in Annex 2. Issues and recommendations on the proposed Project List are provided in the following table.

CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Renewable Energy			
Hydroelectric generating facility with a production capacity of 200 MW or more.		Status Quo	<p>Issue 10: Hydroelectric generating facilities of all sizes may have direct or incidental adverse effects. The AOO Settlement Area has been significantly impacted by small, medium and large hydroelectric projects, and those impacts continue today, and will continue into the distant future.</p> <p>Recommendation 10: Decrease threshold to a production capacity of 50 MW or more.</p>
Expansion of an existing hydroelectric generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or more.		Status Quo	<p>Issue 11: Expansions of hydroelectric generating facilities of all sizes may have direct or incidental adverse effects. The AOO Settlement Area has been significantly impacted by small, medium and large hydroelectric projects, and those impacts continue today, and will continue into the distant future.</p> <p>Issue 12</p> <p>Recommendation 12: Decrease threshold to an increase in production capacity of 50% or more and a total production capacity of 50 MW or more.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
N/A	Wind power generating facility located in marine or freshwater with 10 or more wind turbines, except when it is proposed in an area for which a regional assessment has been carried out and it is in conformity with the conditions for exemption approved by the Minister for that regional assessment.	New	Issue 13: While not a new technology, offshore wind turbines would be new to Canada and unique environmental, socio-economic and cultural impacts are unknown. The major environmental effects of offshore wind turbines are increased noise levels, risk of collisions and impacts on navigation, changes to benthic and pelagic habitats, alterations to food webs, and pollution from increased vessel traffic or release of contaminants from sediments. ²
N/A	Expansion of an existing wind power generating facility located in marine or freshwater that would result in an increase in the number of turbines of 50% or more and a total of 10 or more wind turbines, except when it is proposed in an area for which a regional assessment has been carried out and it is in conformity with the conditions for exemption approved by the Minister for that regional assessment.	New	Recommendation 13: Subject all new offshore wind developments and expansions of existing developments to IA, regardless of number of turbines or status of regional assessment.
Onshore Oil and Gas			
Facility for the liquefaction, storage or regasification of liquefied natural gas, with a liquefied natural gas processing capacity of 3,000 t/day or more or a liquefied natural gas storage capacity of 55,000 t or more.	Facility for the liquefaction, storage or regasification of liquefied natural gas with a liquefied natural gas processing capacity of 3,000 t/day or more or a liquefied natural gas storage capacity of 136,000 m ³ or more.	Technical amendment	Issue 14: The impacts of LNG facilities are related to both choices of technologies and locations. For example, the use of heat exchangers in marine environments can increase water temperatures and/or impact sediments, and/or create intake impingement and entrainment issues for aquatic species, resulting in direct or incidental adverse effects to fish and fish habitat. Furthermore, as most LNG liquefaction and regasification facilities are located in marine areas to take advantage of navigable waters, the facilities may impact navigation, and may

² Bailey et al. 2014. Assessing environmental impacts of offshore wind farms: lessons learned and recommendations for the future. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4172316/>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
			<p>include in-water works that may impact fish and fish habitat or navigation features. Given the relatively new advent of significant numbers of proposed new LNG facilities in Canada, a lower threshold is warranted until effects are better understood.</p> <p>Recommendation 14: Lower threshold to 1,000 t/day for liquefaction or regasification of liquefied natural gas.</p>
<p>Expansion of an existing facility for the liquefaction, storage or regasification of liquefied natural gas that would result in an increase in the liquefied natural gas processing or storage capacity of 50% or more and a total liquefied natural gas processing capacity of 3,000 t/day or more or a total liquefied natural gas storage capacity of 55,000 t or more.</p>	<p>Expansion of an existing facility for the liquefaction, storage or regasification of liquefied natural gas that would result in an increase in the liquefied natural gas processing or storage capacity of 50% or more and a total liquefied natural gas processing capacity of 3,000 t/day or more or a total liquefied natural gas storage capacity of 136,000 m³ or more.</p>	<p>Technical amendment</p>	<p>Issue 15: The impacts of LNG facilities are related to both, choices of technologies and locations. For example, the use of heat exchangers in marine environments can increase water temperatures and/or impact sediments, and/or create intake impingement and entrainment issues for aquatic species, resulting in direct or incidental adverse effects to fish and fish habitat. Furthermore, as most LNG liquefaction and regasification facilities are located in marine areas to take advantage of navigable waters, the facilities may impact navigation, and may include in-water works that may impact fish and fish habitat or navigation features. Given the relatively new advent of significant numbers of proposed new LNG facilities in Canada, a lower threshold is warranted until effects are better understood.</p> <p>Recommendation 15: Lower threshold to 1,000 t/day for liquefaction or regasification of liquefied natural gas.</p>
<p>Oil refinery, including a heavy oil upgrader, with an input capacity of 10, 000 m³/day or more.</p>		<p>Status Quo</p>	<p>Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.</p>
<p>Expansion of an existing oil refinery, including a heavy oil upgrader, that would result in an increase in input capacity of 50% or more and a total input capacity of 10,000 m³/day or more.</p>		<p>Status Quo</p>	<p>Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.</p>
<p>Facility for the production of liquid petroleum products from coal with a production capacity of 2,000 m³/day or more.</p>		<p>Status Quo</p>	<p>Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Facility for the production of liquid petroleum products from coal with a production capacity of 2,000 m ³ /day or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing facility for the production of liquid petroleum products from coal that would result in an increase in production capacity of 50% or more and a total production capacity of 2,000 m ³ /day or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Sour gas processing facility with a sulphur inlet capacity of 2,000 t/day or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing sour gas processing facility that would result in an increase in sulphur inlet capacity of 50% or more and a total sulphur inlet capacity of 2,000 t/day or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Petroleum storage facility with a storage capacity of 500,000 m ³ or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing petroleum storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 500,000 m ³ or more.		Status Quo	Acceptable, provided this is inclusive of on Aboriginal rights and asserted title.
Liquefied petroleum gas storage facility with a storage capacity of 100,000 m ³ or more.	Natural gas liquids storage facility with a storage capacity of 100,000 m ³ or more.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing liquefied petroleum gas storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 100,000 m ³ or more.	Expansion of an existing natural gas liquids storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 100,000 m ³ or more.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more.	Fossil fuel-fired power generating facility with a production capacity of 200 MW or 268 000 hp or more.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing fossil fuel-fired electrical generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or more.	Expansion of an existing fossil fuel-fired power generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or 268 000 hp or more.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Pipelines and Power Lines			
New pipeline, other than an offshore pipeline, with a length of 40 km or more.	International or interprovincial oil or gas pipeline, other than an offshore pipeline, with a length of 75 km or more in new right of way.	Threshold increase	Issue 16: Pipelines may also carry a variety of other fossil fuel products, including refined products and fuels, and natural gas liquids. The AOO Settlement Area is impacted



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
			<p>by numerous oil, natural gas and pipelines carrying refined petroleum products.</p> <p>Recommendation 16: All pipelines transporting fossil fuel products and refined products must be captured.</p> <p>Issue 17: There is evidence that proponents are able to project-split and piece-meal fossil fuel pipeline projects (e.g., Enbridge Line 11, and Enbridge Line 9 through the AOO Settlement Area) to avoid triggering IA, which supports the argument to decrease pipeline length as a trigger.</p> <p>Recommendation 17: Either maintain the current threshold, or reduce the threshold to 10 km or more to seek to eliminate project splitting and piece-mealing.</p>
Decommissioning and abandonment of an existing pipeline, other than an offshore pipeline, if at least 40 km of pipe is removed from the ground	N/A	Removed	<p>Issue 18: Decommissioning or abandoning an existing pipeline may have direct or incidental adverse effects on Aboriginal rights and asserted title.</p> <p>Recommendation 18: Maintain this threshold and trigger.</p>
Electrical transmission line with a voltage of 345 kV or more that requires a total of 75 km or more of new right of way.	<p>International or offshore electrical transmission line with a voltage of 345 kV or more that requires a total of 75 km or more of new right of way.</p> <p>Interprovincial electrical transmission line that Governor in Council, by order, has designated under section 261 of the <i>Canadian Energy Regulator Act</i>.</p>	Amendment to maintain consistency with Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Transportation			



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
All-season public highway that requires a total of 50 km or more of new right of way.	All-season public highway that requires a total of 75 km or more of new right of way.	Threshold increase	<p>Issue 19: This is an arbitrary length and is not predictive of direct or incidental adverse effects.</p> <p>Recommendation 19: This is acceptable, provided it is inclusive of impacts on Aboriginal rights and asserted title.</p>
Railway line that requires a total of 32 km or more of new right of way.	Freight or inter-city passenger railway line that requires a total of 50 km or more of new right of way.	Threshold increase	<p>Issue 20: This is an arbitrary length and is not predictive of direct or incidental adverse effects.</p> <p>Recommendation 20: This is acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.</p>
Railway yard with seven or more yard tracks or a total track length of 20 km or more.	Rail facility with a total area that is greater than 50 ha.	Threshold increase	<p>Issue 21: This is an arbitrary spatial dimension and is not predictive of direct or incidental adverse effects. Due to historic tendencies to locate industrial railway lines and industrial facilities requiring railway lines near or adjacent to Indigenous communities vs. settler communities, Indigenous communities frequently experience long-term cumulative impacts from railway yards and railway lines.</p> <p>Recommendation 21: Maintain or reduce the existing threshold</p>
N/A	Expansion of an existing rail facility that would result in an increase in the total area of the rail facility by 50% or more and with a total area that is greater than 50 ha.	New	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Railway line designed for trains that have an average speed of 200 km/h or more.	N/A	Removed	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Aerodrome located within the built-up area of a city or town; or Airport, as defined in subsection 3(1) of the	Aerodrome with a runway length of 1,000 m or more; or	Amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
<i>Aeronautics Act</i> ; or All-season runway with a length of 1 500 m or More; or, the extension of an existing all-season runway by 1 500 m or more.	Aerodrome involving the operation of aircraft under Aircraft Group Number IIIA ³ or higher; or Runway with a length of 1 000 m or more at an existing aerodrome; or Any upward change in Aircraft Group Number designation to IIIA or higher		
International or interprovincial bridge or tunnel; or bridge over the St. Lawrence Seaway.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Marine and Freshwater			
Dam or dyke that would result in the creation of a reservoir with a surface area that would exceed the annual mean surface area of a natural water body by 1,500 ha or more.	Dam or dyke on a natural water body that would result in the creation of a reservoir with a surface area that would exceed the annual mean surface area of that natural water body by 1,500 ha or more.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing dam or dyke that would result in an increase in the surface area of the existing reservoir of 50% or more and an increase of 1 500 ha or more in the annual mean surface area of the existing reservoir.	Expansion of an existing dam or dyke on a natural water body that would result in an increase in the surface area of the existing reservoir of 50% or more and an increase of 1,500 ha or more in the annual mean surface area of the existing reservoir	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Canal or a lock or associated structure to control water levels in the canal.	Canal or a lock and its associated structure to control water levels in the canal.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Lock or associated structure to control water levels in existing navigable waterways.	Lock or associated structure to control water levels in navigable water.	Technical amendment	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
N/A	Permanent causeway that is 400 m in length or more in a natural water body.	New	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
N/A	Expansion of an existing permanent causeway that would result in 50% increase in length and a total length that is 400 m or more in a natural water body.	New	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Structure for the diversion of 10 000 000 m ³ /year or more of water from a natural water body into another natural water body.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Expansion of an existing structure for the diversion of water from a natural water body into another natural water body that would result in an increase in diversion capacity of 50% or more and a total diversion capacity of 10,000 000 m ³ /year or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Mining			
Metal mine, other than a rare earth element mine or gold mine, with an ore production capacity of 3,000 t/day or more	Metal mine, other than a rare earth element mine or placer mine, with an ore production capacity of 5,000 t/day or more.	Threshold increase	<p>Issue 22: This is an arbitrary threshold. Metal mines are known to have direct or incidental adverse effects. Metal mines with tailings facilities and potentially acid generating (PAG) waste rock stockpiles have significant long-term risks to the environment and to Aboriginal rights and asserted title.</p> <p>Recommendation 22: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders</p>
Expansion of an existing metal mine, other than a rare earth element mine or gold mine, that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3,000 t/day or more.	Expansion of an existing metal mine, other than a rare earth element mine or placer mine, that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 5,000 t/day or more.	Threshold increase	<p>Issue 23: This is an arbitrary threshold. Metal mines are known to have direct or incidental adverse effects. Metal mines with tailings facilities and PAG waste rock stockpiles have significant long-term risks to the environment and to Aboriginal and Treaty Rights.</p> <p>Recommendation 23: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title, inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Metal mill with an ore input capacity of 4,000 t/day or more.	Metal mill with an ore input capacity of 5,000 t/day or more.	Threshold increase	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of a metal mill that would result in an increase in the area of mine operations of 50% or more and a total ore input capacity of 4,000 t/day or more.	Expansion of an existing metal mill that would result in an increase in the area of mine operations of 50% or more and a total ore input capacity of 5,000 t/day or more.	Threshold increase	<p>Issue 24: This is an arbitrary threshold. Metal mills are known to have direct or incidental adverse effects. Metal mills are increasingly becoming centralized in mining areas with multiple mines shipping ore for processing at a single facility and as a result, the longer-term risks, impacts and cumulative impacts may be spread between the mill and several mines.</p> <p>Recommendation 24: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.</p>
Rare earth element mine or gold mine, other than a placer mine with an ore production capacity of 600 t/day or more.	Rare earth element mine with an ore production capacity of 2,500 t/day or more.	Threshold increase	<p>Issue 25: This is an arbitrary threshold. Rare earth and gold mines are known to have direct or incidental adverse effects. Rare earth and gold mines with tailings facilities and PAG waste rock piles have significant long-term risks to the environment and to Aboriginal and Treaty Rights.</p> <p>Recommendation 25: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Expansion of rare earth element mine or gold mine, other than a placer mine, that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 600 t/day or more.	Expansion of an existing rare earth element mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 2,500 t/day or more.	Threshold increase	<p>Issue 26: This is an arbitrary threshold. Rare earth and gold mines are known to have direct or incidental adverse effects. Rare earth and gold mines with tailings facilities and PAG waste rock piles have significant long-term risks to the environment and to Aboriginal and Treaty Rights.</p> <p>Recommendation 26: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.</p>
Coal mine with a coal production capacity of 3,000 t/day or more.	Coal mine with a coal production capacity of 5,000 t/day or more.	Threshold increase	<p>Issue 27: This is an arbitrary threshold. Coal mines are known to have direct or incidental adverse effects. The environmental impact of the coal industry includes issues such as the following:</p> <ul style="list-style-type: none"> • land use and landscape impacts • waste management, including disposal of fly ash, which can contaminate soil, surface water and groundwater, and cause other forms of water pollution • air pollution, including <ul style="list-style-type: none"> ○ particulate discharge that impacts human and animal respiratory systems, and ○ other pollutants known to have health impacts, including heart problems, cancer, neurological disorders, and premature death. • solid waste production, including fly ash, bottom ash, and flue-gas desulfurization sludge, which



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
			<p>contain mercury, uranium, thorium, arsenic, and other heavy metals</p> <p>Coal is also the largest contributor to the human-made increase of CO2 in the atmosphere.</p> <p>Recommendation 27: All coal mines and all expansions of coal mines and coal-fired generating facilities should be subject to the IAA.</p>
<p>Expansion of an existing coal mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3,000 t/day or more.</p>	<p>Expansion of an existing coal mine that would result in an increase in the area of mine operations of 50% or more and a total coal production capacity of 5,000 t/day or more.</p>	<p>Threshold increase</p>	<p>Issue 28: This is an arbitrary threshold. Coal mines are known to have direct or incidental adverse effects. The environmental impact of the coal industry includes issues such as the following:</p> <ul style="list-style-type: none"> • land use and landscape impacts • waste management, including disposal of fly ash, which can contaminate soil, surface water and groundwater, and cause other forms of water pollution • air pollution, including <ul style="list-style-type: none"> ○ particulate discharge that impacts human and animal respiratory systems, and ○ other pollutants known to have health impacts, including heart problems, cancer, neurological disorders, and premature death. • solid waste production, including fly ash, bottom ash, and flue-gas desulfurization sludge, which contain mercury, uranium, thorium, arsenic, and other heavy metals <p>Coal is also the largest contributor to the human-made increase of CO2 in the atmosphere.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
			Recommendation 28: All coal mines and all expansions of coal mines and coal-fired generating facilities should be subject to the IAA.
Diamond mine with an ore production capacity of 3,000 t/day or more.	Diamond mine with an ore production capacity of 5,000 t/day or more.	Threshold increase	Issue 29: This is an arbitrary threshold. Diamond mines are known to have direct or incidental adverse effects. Recommendation 29: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.
Expansion of an existing diamond mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3,000 t/day or more.	Expansion of an existing diamond mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 5,000 t/day or more.	Threshold increase	Issue 30: This is an arbitrary threshold. Diamond mines are known to have direct or incidental adverse effects. Recommendation 30: Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders.
Apatite mine with an ore production capacity of 3,000 t/day or more.	N/A	Removed	Issue 31: Apatite mining, along with industrial mineral mining (e.g., potash, mineral phosphate, graphite mining) activities have implications for many areas under federal



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
			<p>jurisdiction and could potentially have adverse impacts on Aboriginal and Treaty Rights.</p> <p>Recommendation 31: Do not remove. Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal rights and asserted title through direct consultation with Indigenous communities themselves. This should also be inclusive of consultation and accommodation with potentially impacted Aboriginal rights holders. Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal and Treaty Rights, inclusive of consultation and accommodation with potentially impacted Aboriginal and Treaty rights holders.</p>
<p>Expansion of an existing apatite mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3,000 t/day or more.</p>	<p>N/A</p>	<p>Removed</p>	<p>Issue 32: Apatite mining, along with industrial mineral mining (e.g., potash, mineral phosphate, graphite mining) activities have implications for many areas under federal jurisdiction and could potentially have adverse impacts on Aboriginal and Treaty Rights.</p> <p>Recommendation 32: Do not remove. Maintain or reduce the CEAA 2012 threshold and make this dependent on an initial assessment of Aboriginal and Treaty Rights, inclusive of consultation and accommodation with potentially impacted Aboriginal and Treaty rights holders.</p>
<p>Stone quarry or sand or gravel pit, with a production capacity of 3,500,000 t/year or more.</p>		<p>Status Quo</p>	<p>Acceptable, provided this is inclusive of impacts on Aboriginal and Treaty Rights.</p>
<p>Expansion of an existing stone quarry or sand or gravel pit that would result in an increase in the area of mine operations of 50% or more and a total production capacity of 3,500,000 t/year or more.</p>		<p>Status Quo</p>	<p>Acceptable, provided this is inclusive of impacts on Aboriginal and Treaty Rights.</p>
<p>Nuclear</p>			



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Facility for the processing, reprocessing or separation of an isotope of uranium, thorium, or plutonium, with a production capacity of 100 t/year or more		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Facility for the manufacture of a product derived from uranium, thorium or plutonium, with a production capacity of 100 t/year or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Facility for the processing or use, in a quantity greater than 1015 Bq per calendar year, of nuclear substance with a half-life greater than one year, other than uranium, thorium or plutonium		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Facility for the storage of irradiated fuel or nuclear waste, on a site that is not within the licensed perimeter of an existing nuclear facility.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Facility for the long-term management or disposal of irradiated fuel or nuclear waste.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing facility for the long-term management or disposal of irradiated fuel or nuclear waste that would result in an increase in the area, at ground level, of the facility of 50% or more.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
New nuclear fission or fusion reactor.	Nuclear fission or fusion reactor, or reactors, with a cumulative thermal capacity of more than 900 MW thermal on a site that is within the boundaries of an existing licensed Class IA nuclear facility. Nuclear fission or fusion reactor, or reactors, with a cumulative thermal capacity of more than 200 MW thermal on a site that is not within the boundaries of an existing licensed Class IA nuclear facility.	Threshold increase	<p>Issue 33: With the advent of relatively new Small Modular Reactor (SMR) technologies, with several being proposed in the AOO Settlement area, with many unknown and possibly significant adverse risks, Canada is entering into a new phase of nuclear developments with many complexities and risks.</p> <p>Recommendation 33: All new nuclear fission or fusion reactors should be subject to the IAA.</p>
<p>The expansion of an existing facility for the processing, reprocessing or separation of an isotope of uranium, thorium or plutonium that would result in an increase in production capacity of 50% or more and a total production capacity of 100 t/year or more;</p> <p>The expansion of an existing facility for the manufacture of a product derived from uranium, thorium or plutonium that would result in an</p>	N/A	Removed	<p>Issue 34: Processing, reprocessing or separating isotopes of uranium, thorium or plutonium, and manufacturing products derived from these substances, are complex processes that can present significant adverse risks. Given the tendency for such facilities to be sited in proximity to other nuclear facilities, such as those in the AOO Settlement Area, the potential for cumulative impacts is high. As well, expanding an existing nuclear fission or fusion reactor that would result in an increase in power</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
<p>increase in production capacity of 50% or more and a total production capacity of 100 t/year or more; or</p> <p>The expansion of an existing facility for the processing or use, in a quantity greater than 1015 Bq per calendar year, of nuclear substances with a half-life greater than one year, other than uranium, thorium or plutonium, that would result in an increase in processing capacity of 50% or more.</p> <p>The expansion of an existing nuclear fission or fusion reactor that would result in an increase in power output of 50% or more</p>			<p>output of 50% or more is also a complex undertaking that may create direct or incidental adverse effects.</p> <p>Recommendation 34: These triggers not be removed.</p>
<p>Uranium mine or uranium mill on a site that is not within the licensed boundaries of an existing uranium mine or uranium mill.</p>	<p>Uranium mine with an ore production capacity of 2,500 t/day or more on a site that is not within the licensed boundaries of an existing uranium mine.</p>	<p>Threshold increase</p>	<p>Issue 35: This is an arbitrary threshold. Uranium mines are known to have direct or incidental adverse effects.</p> <p>Recommendation 35: Maintain the original trigger.</p>
<p>Expansion of an existing uranium mine that would result in an increase in the area of mine operations of 50% or more.</p>	<p>Expansion of an existing uranium mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 2,500 t/day or more.</p>	<p>Threshold increase</p>	<p>Issue 36: This is an arbitrary threshold. Uranium mines are known to have direct or incidental adverse effects.</p> <p>Recommendation 36: Maintain the original trigger.</p>
<p>Uranium mine or uranium mill on a site that is not within the licensed boundaries of an existing uranium mine or uranium mill.</p>	<p>Uranium mill with an ore input capacity of 2,500 t/day or more on a site that is not within the licensed boundaries of an existing uranium mill.</p>	<p>Threshold increase</p>	<p>Issue 37: This is an arbitrary threshold. Uranium mines are known to have direct or incidental adverse effects.</p> <p>Recommendation 37: Maintain the original trigger.</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
Expansion of an existing uranium mill that would result in an increase in the area of mine operations of 50% or more.	Expansion of an existing uranium mill that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 2,500 t/day or more.	Threshold increase	Issue 38: This is an arbitrary threshold. Uranium mills are known to have direct or incidental adverse effects. Recommendation 38: Maintain the original trigger.
Hazardous Waste			
Facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste.	Facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste proposed within 500 m of a natural waterbody.	Technical amendment	Issue 39: All hazardous waste facilities, regardless of size or location, have the potential for direct or incidental adverse effects. This criterion also ignores the potential for groundwater contamination, as groundwater is present regardless of the proximity to a natural water body. Recommendation 39: No change.
Expansion of an existing facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste that would result in an increase in hazardous waste input capacity of 50% or more.	The expansion of an existing facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste proposed within 500 m of a natural waterbody that would result in an increase in hazardous waste input capacity of 50% or more.	Technical amendment	Issue 40: All hazardous waste facilities, regardless of size or location, have the potential for direct or incidental adverse effects. This criterion also ignores the potential for groundwater contamination, as groundwater is present regardless of the proximity to a natural water body. Recommendation 40: No change.
Federal Lands and Protected Areas			
In a wildlife area or migratory bird sanctuary, of a new: a) electrical generating facility or electrical transmission line; b) structure for the diversion of water, including a dam, dyke or reservoir; c) oil or gas facility or oil and gas pipeline;	In the terrestrial or marine environment of a National Wildlife Area, a Migratory Bird Sanctuary or a protected marine area established under the <i>Canada Wildlife Act</i> of a new: a) aerodrome or runway; b) aquaculture facility; c) canal or lock;	Amendment	Issue 41: This criterion is missing nuclear facilities, including SMRs. Recommendation 41: Add nuclear facilities and nuclear processing facilities of all types.



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
d) mine or mill; e) industrial facility; f) canal or lock; g) marine terminal; h) railway line or public highway; i) aerodrome or runway; or j) waste management facility.	d) electrical generating facility or electrical transmission line (including wind or tidal power); e) industrial facility; f) marine terminal; g) mine or mill; h) oil and gas pipeline; i) oil or gas facility j) railway line or public highway; k) structure for the diversion of water, including a dam, dyke or reservoir; or l) waste management facility.		
N/A	New physical work (e.g. facilities and structures) on land administered or managed by the Parks Canada Agency that is: a) contrary to its management plan as amended from time to time; b) not consistent with a long-range development plan approved by the Minister responsible for the Parks Canada Agency; c) not consistent with ski area site guidelines approved by the Chief Executive Officer of the Parks Canada Agency; d) consistent with a long-range development plan approved before 1999, but that involves development of currently undeveloped, unskied or unserved terrain.	New	<p>Issue 42: Indigenous governments continue to explore interest in, or be in the process of, advancing co-management and joint-management regimes with Parks Canada and bodies such as the National Capital Commission; these potential and emerging governance arrangements should be reflected in the criterion.</p> <p>Recommendation 42: This criterion must reflect the Crown-Indigenous co-management and joint-management decision-making bodies that exist today and will exist in the future such that Indigenous governments are part of the decision-making process for what is contrary to a management plan, or not consistent with a management plan/guidelines that have been developed with our community for our asserted lands.</p>
N/A	The following in a National Park: <ul style="list-style-type: none"> • New a) dams, b) diversions, or c) other infrastructure for the management of surface 	New	<p>Issue 43: Indigenous governments continue to explore interest in, or be in the process of, advancing co-</p>



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
	<p>water levels or natural flow regimes: for water supply purposes outside the park or for recreational or power generation purposes;</p> <ul style="list-style-type: none"> • New water supply agreements under s. 10(2)(b) of the <i>Canada National Parks Act</i> or expansions by >20% of existing water supply agreements established under par 10(2)(b); • New or expanded commercial development, except registered charities, that requires disposal or occupation of land not previously disposed or occupied for the same or similar purpose in Banff, Jasper, Yoho, or Kootenay National Parks outside the town sites and ski hill areas that has not been subject to strategic environmental assessment and public review as part of a park management plan; • New railway line or new public highway. 		<p>management and joint-management regimes with Parks Canada and bodies such as the National Capital Commission; these potential and emerging governance arrangements should be reflected in the criterion.</p> <p>Furthermore, new dams, diversions or other structures to manage surface water levels or natural flow regimes, and new water supplies may have direct or incidental adverse effects beyond Park boundaries. As well, new commercial developments and new railways may have adverse impacts on Aboriginal rights and interests.</p> <p>Recommendation 43: This criterion must reflect the Crown-Indigenous co-management and joint-management decision-making bodies that exist today and will exist in the future such that Indigenous governments are part of the decision-making process for what is contrary to a management plan, or not consistent with a management plan/guidelines that have been developed with our community for our asserted lands.</p> <p>Furthermore, these criteria must take into account Aboriginal rights and asserted title both within a Park and outside a Park.</p>
Military base or military station that is to be established for more than 12 consecutive months.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Expansion of an existing military base or military stations that would result in an increase in the area of the military base or military station of 50% or more		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Decommissioning and abandonment of an existing military base or military station.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Construction, operation, decommissioning and abandonment outside an existing military base of a new military training area, range or test establishment for training or weapons testing that is to be established for more than 12 consecutive months		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.



CEAA 2012	Proposed IAA	Result	Issues and Recommendations
The testing of military weapons for more than five days in a calendar year in an area other than the training areas, ranges and test establishments established before October 7, 1994, by or under the authority of the Minister of National Defence for the testing of weapons.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.
Low-level flying of military fixed-wing jet aircraft for more than 150 days in a calendar year as part of a training program at an altitude below 330 m above ground level on a route or in an area that was not established before October 7, 1994, by or under the authority of the Minister of National Defence or the Chief of the Defence Staff as a route or area set aside for low-level flying training.		Status Quo	Acceptable, provided this is inclusive of impacts on Aboriginal rights and asserted title.



1.3 Periodic Reviews of the Project List

Preamble

The Government of Canada (2019) states:

“In order to support the impact assessment process, the Project List would be required to undergo periodic reviews. The timeframe for these periodic reviews would be prescribed in regulations. The Government is proposing a timeframe for prescribed reviews of 5 years. This will provide opportunities to consider new project types that may have adverse effects in areas of federal jurisdiction related to the environment, and should be added to the Project List. It will also allow for review of the existing Project List entries based on the Agency’s experience on implementing the Act and whether any revisions are needed to:

- *better focus on major projects with the greatest potential for adverse effects; or,*
- *improve clarity and certainty as to which projects are subject to the Act” (pg. 16).*

Issue 44: While there is a commitment to review the Project List periodically, it is not specified how or by whom the review will be conducted. It is also unclear if ongoing policy improvements resulting from the ongoing review would first be brought forward for Indigenous consultation. Additionally, AOO submits that reviewing the proposed regulations every five years is too long.

Recommendation 44a: Since many aspects of the forthcoming IA system are new, the ongoing review of the Project List and the periodic review of the regulations should be open, participatory and accountable, including timely public notices and appropriate comment opportunities (including webinars, workshops, and public meetings across Canada). Additionally, the initial regulatory review should proceed two years after the regulation first comes into force (instead of five). Following the first regulatory review, the interval can be extended (e.g., every three or four years). Additionally, the new IAA regulation should enable any person or group to formally apply to the Minister and Cabinet with proposed additions or revisions to the Project List.

Recommendation 44b: Reviews of the Project List must be inclusive of impacts on Aboriginal rights and asserted title, must be evidenced-based, and must include meaningful consultation with Indigenous groups.



Appendix B: Review of the Discussion Paper on Information Requirements and Time Management Regulatory Proposal

As the IAA goes through the Parliamentary process as part of Bill C-69, the Federal Government has also been consulting on proposed regulations to implement the IAA, including the *Information Requirements and Time Management Regulations* (“the regulations”). These regulations set out

- Criteria under which legislated time limits could be suspended;
- Information required from the proponent in the Project Description, which would be provided at the outset of, and updated during, the early planning phase;
- Requirements to support accessibility of information provided by proponents;
- Products the Agency would deliver at the end of early planning;
- A requirement for the Agency to make participant funding programs available for all designated projects; and
- The time limit for the Minister to respond to a request that a regional or strategic assessment be conducted.

The proceeding sections summarize the consultation process on the regulations to date and provide an overview of the Discussion Paper.

The AOO has retained Shared Value Solutions (SVS) to review the Discussion Paper with a focus on the rights, values and interests of AOO. This report summarizes the results of that review. This submission to the Canadian Environmental Assessment Agency (“the Agency”) provides a series of comments and recommendations as to how AOO’s rights and interests should be considered and accommodated as the Government of Canada develops the pursuant to the proposed IAA.

We have also reviewed this Discussion Paper through the lens of two important, overarching promises the Government of Canada has made to Canadians regarding the nature of the changes to our environmental assessment system in Canada:

- Expanding the scope of environmental assessment to better include health, social and economic effects of projects; moving from the terminology of environmental assessment to impact assessment to reflect this scope, and
- Shifting the focus of the decision-making process of environmental assessment away from a focus on significant residual adverse effects to adverse effects in the federal jurisdiction that are not in the public interest.

While this is reflected in the opening paragraphs of the Discussion Paper (see below), we have evaluated how this carries through to the proposed Project List itself.

“The new impact assessment process will be led by the Impact Assessment Agency of Canada (the Agency) and will serve as a planning tool that takes into consideration the whole range of environmental, health, social and economic effects of projects. This new impact assessment regime will shift away from decisions based solely on the



significance of effects and focus instead on whether the adverse effects in areas of federal jurisdiction identified for a project are in the public interest, as defined in the Impact Assessment Act.”

Prior to addressing the specific material within the Discussion Paper, AOO believes it is important to highlight the fact that the Government of Canada is currently reviewing and revising the regulations under CEAA 2012. The regulations were passed by the previous government without public consultation or Indigenous engagement. As such, AOO believes the current regulations that are the comparative basis of this consultation lack credibility and legitimacy.

The following subsections identify key issues of importance to AOO with regard to the proposed regulations. Comments and recommendations have been provided for the Agency's consideration.

1. Review Issues and Recommendations

1.1 Phases and Timelines

1.1.1 Early Planning Phase

Preamble

The Government of Canada (2019) states:

“Time Limit: max. 180 days

The new planning phase would provide a time-bound process in which to determine whether or not an impact assessment of a designated project is required, and if so, to support early engagement and assessment planning. The 180-day timeline for the planning phase commences once the proponent provides the Agency with an initial Project Description, containing the information required in the proposed regulations (see Annex 1), and it is posted on the Agency's online public Registry. At this time, the proponent may also provide any additional relevant information. Authorities to suspend timelines, in accordance with criteria set out in the proposed regulations, would be available for proponent-driven reasons” (pg. 6).

AOO generally supports the new early planning phase. In theory, this approach will improve project design through early identification of issues and concerns, and will build trust between communities and the proponent. If done well, we believe this required early planning phase will ultimately create a more efficient process and give proponents greater certainty.

However, AOO notes the following issues regarding the early planning phase and provides recommendations to resolve these concerns:

Issue 45: The early planning phase has a maximum time limit of 180 days. While the Government of Canada feels that “many proponents are already doing early planning and stakeholder engagement (pg. 6),” AOO believes there are other proponents who need to greatly improve their engagement programs and need to rebuild relationships with Indigenous communities.



AOO also acknowledges that there may be new proponents who require time to build relationships with Indigenous communities. For those proponents who need to rebuild or establish relationships with Indigenous peoples, a 180-day early planning phase may not be adequate time to facilitate meaningful engagement with Indigenous communities, particularly when one considers the five deliverables that must be produced by the conclusion of the early planning phase (i.e., Impact Assessment Cooperation Plan, Indigenous Engagement and Partnership Plan, Public Participation Plan, Tailored Impact Statement Guidelines, and Permitting Plan).

Recommendation 45: AOO would prefer the Agency, in consultation with the proponent and other stakeholders, establish fair and reasonable timelines for the conduct and completion of the early planning phase on a project-by-project basis, considering the context, the proponent's history with potentially impacted Indigenous groups, the magnitude of the project and its potential effects, and the experience and capacity of Indigenous groups for managing complex and labour intensive IA processes. The early planning phase maximum time limit of 180 days is best seen as a guideline, and not as a regulatory requirement.

Issue 46: It is unclear when participant funding will be made available to potentially impacted Indigenous communities that are engaged by the proponent during the early planning phase. Provision of adequate participant funding with executed funding agreements, BEFORE the start of the early planning phase period, is required to facilitate meaningful engagement.

Recommendation 46: The proposed regulations must expressly include provisions specifying when participant funding will be made available to Indigenous communities for this early planning phase, and should clarify that the early planning phase clock will not begin until a capacity funding agreement is in place with the potentially impacted communities.

Issue 47: The timeline can only be suspended for "proponent-driven" reasons.

Recommendation 47: The proposed regulations must include a mechanism by which the timeline can be suspended for reasons identified by potentially impacted First Nations, Métis and Inuit communities during the early planning phase, and/or for an Indigenous jurisdiction to establish agreements with Canada for leading impact assessments singularly or jointly with other jurisdictions, as part of substitution agreements.

1.1.2 Summary of Issues

Preamble

The Government of Canada (2019) states:

"Following engagement on the initial Project Description, the Agency would prepare a summary of the issues that it considers relevant to the assessment, informed by the issues raised by Indigenous peoples, stakeholders, other jurisdictions and the public during early engagement on the project and the expertise of federal departments. For integrated assessments with lifecycle regulators, the summary of issues would be prepared collaboratively with the relevant lifecycle regulator" (pg. 6).

Issue 48: It is unclear if potentially impacted Indigenous communities will have the opportunity to review and provide comment on the Summary of Issues prior to finalization.



Recommendation 48: The proposed regulations must expressly include a provision that Indigenous communities will have the opportunity to review and provide comment on a draft Summary of Issues prior to the Agency issuing the final Summary of Issues to the proponent.

1.1.3 Proponent Response to Issues and Updated Project Description

Preamble

The Government of Canada (2019) states:

“The proponent would provide a response to the Agency’s Summary of Issues, indicating how the issues might be addressed, and would also provide an updated Project Description, including updated information for each of the items required in the initial Project Description, and indicating where changes were made in response to issues raised (see Annex 1). This would inform the Agency’s decision about whether an impact assessment is required, and further support assessment planning, including helping the Agency to determine the appropriate scope of the factors to be assessed. The proponent would indicate to the Agency the time needed to respond to the issues and to update the Project Description, and may request that the time limit be suspended in order to do so” (pg. 6).

Issue 49: It is unclear if potentially impacted Indigenous communities will have the opportunity to review and provide comment on the proponent’s responses to the Summary of Issues and the updated Project Description.

Recommendation 49: The proposed regulations must expressly include a provision that potentially impacted Indigenous communities will have the opportunity to review and provide comment on the proponent’s responses to Summary of Issues and the updated Project Description before the Agency considers this information in determining the need for and scope of an impact assessment.

Issue 50: The time limit can be suspended at the request of the proponent.

Recommendation 50: The proposed regulations must include a mechanism by which the time limit can be suspended by the Agency for reasons identified by potentially impacted First Nations, Métis and Inuit communities during the early planning phase.

1.1.4 Determination on Whether an Impact Assessment is Required

The Government of Canada (2019) states:

“During this period, the Agency, with input from federal expert departments, would review the information provided by proponents. The Agency would invite public comments and input from stakeholders and must offer to consult with other jurisdictions. For designated projects that are subject to lifecycle regulation, the relevant lifecycle regulator would also be consulted on whether an impact assessment should be required.



The Agency would also offer to consult with potentially affected Indigenous groups, and would initiate discussions to identify how they would like to be engaged in the impact assessment process” (pg. 7).

Issue 51: It is unclear if “the information provided by proponents” on which the Agency would invite comments includes the proponent’s responses to the Summary of Issues and the updated Project Description.

Recommendation 51: The proposed regulations must expressly include a provision that potentially affected Indigenous communities will have the opportunity to review and provide comment on all the information provided by the proponent, including the proponent’s responses to Summary of Issues and the updated Project Description before the Agency considers this information in determining the need for and scope of an impact assessment.

1.1.5 Guidelines and Plans

Preamble

The Government of Canada (2019) states:

“The Agency would dedicate most of the time during the planning phase to impact assessment planning and the development of the following documents to guide the assessment: Tailored Impact Statement Guidelines; Cooperation Plan; Indigenous Engagement and Partnership Plan; Public Participation Plan; and Permitting Plan. These would be developed collaboratively for each project, with input from federal expert departments, provincial governments, potentially impacted Indigenous groups and public comments received, with the objective of providing transparency and certainty by making all requirements clear from the start. A description of each of these products is outlined in part 5.4” (pg. 17).

Issue 52: The four plans listed above are central to the early planning phase, and the Cooperation Plan and Indigenous Engagement and Partnership Plan will be particularly important in ensuring Indigenous jurisdiction, rights and interests are respected throughout the impact assessment process. However, section 5.4 of the Discussion Paper provides only a brief description of each plan.

Recommendation 52: The lack of detail on the four plans makes it difficult to meaningfully comment. Since the draft regulation will not be released for public comment prior to Royal Assent of the IAA, the Government of Canada has failed to give AOO an opportunity to provide input on a critical element of the proposed regulations. We recommend that additional detail be provided for AOO to comment on in advance of Royal Assent, and/or the opportunity to comment further on this and any other regulations to follow.

1.1.6 Possible Substitution

Preamble

The Government of Canada (2019) states:



“Before the end of early planning, the Minister of Environment and Climate Change, if requested, may approve the substitution of the process of another jurisdiction for the impact assessment. Substitution would be carried out in accordance with a project-specific substitution agreement, which would include terms and conditions for the substituted process” (pg. 8).

Issue 53: Indigenous governments, including the AOO, should be consulted, and where appropriate, accommodated with respect to all Crown decisions for project-specific substitution agreements. Indigenous governments such as the AOO may wish to be party to such agreements with other jurisdictions, may wish to enter into various additional agreements with other jurisdictions, may see value in the federal Crown not engaging in a substitution agreement, or may wish to be the jurisdiction that leads or is the sole counterparty for a project-specific substitution agreement. Regardless, this is a significant Crown decision that may have many implications for Aboriginal and Treaty Rights.

Recommendation 53: Canada must provide early and meaningful consultation with Indigenous governments, including the AOO, on all project-specific substitution agreements and provide accommodations

1.1.7 Possible Referral to Review Panel

Preamble

The Government of Canada (2019) states:

“The Minister would make a determination on whether to refer the assessment to a Review Panel by no later than 45 days after the end of early planning. The Minister would establish Terms of Reference for the review panel, taking into account the outcomes of early planning, including the Tailored Impact Statement Guidelines and early planning products, and would appoint review panel members. This would happen any time following the decision to refer the assessment to a review panel, and no later than 45 days after the Impact Statement is accepted by the Agency” (pg. 8).

Issue 54: It is not clear whether a draft version of the Panel terms of reference would be available for comment by AOO during the early engagement phase or subsequent to their finalization.

Recommendation 54: Indigenous groups must have the opportunity to comment on a draft of the terms of reference for the Panel. We recommend a 60-day comment period be established for this purpose.

1.1.8 Possible Minister’s Notice

AOO has no issues or recommendations.



1.1.9 Impact Statement Phase

Preamble

The Government of Canada (2019) states:

“Time determined by proponent (up to 3 years unless extension requested)

The proponent takes the time it needs to prepare the documentation required for the impact assessment. If more than 3 years elapses from the end of the early planning phase, the proponent may make a request to the Agency for additional time to prepare its Impact Statement report. This ensures the assessment is based on up-to-date information, but also provides flexibility to address project-specific situations where proponents may need additional time.

Service standards would be put in place to review the Impact Statement and make any information requests or requests for clarification

If the Agency determines that certain issues have been addressed or are not applicable to the project, it may scope the information and studies that are required in relation to the factors set out in section 22 of the IAA” (pg. 8).

Issue 55: Timelines can only be extended for “proponent-driven” reasons. While the proponent gets the “time it needs” to prepare the documentation, potentially impacted Indigenous communities will not have the ability to request timeline extensions to help facilitate their meaningful engagement.

Recommendation 55: The proposed regulations must include a mechanism by which the Minister can extend the timeline for reasons identified by potentially impacted Indigenous groups communities.

Issue 56: It is not clear if the Agency will consult with potentially affected Indigenous communities before determining if certain issues have been addressed or are not applicable to the project.

Recommendation 56: The proposed regulations must expressly include a provision that the Agency will consult with potentially affected Indigenous communities in their determination if issues raised by those communities have been addressed or are not applicable to the project. Ideally, this would take place through the process of establishing guidelines for the proponent’s IA report and there would be a draft of the guidelines released, similar to the process for consultation on EIS guidelines under the current Act. A key element which must be in place supporting this consultation mechanism is the provision of participant funding prior to this consultation milestone.

1.1.10 Impact Assessment Phase



1.1.11 Timelines for Agency & Review Panel Assessments

Preamble

The Government of Canada (2019) states:

“The timeline for the impact assessment phase would be reduced to a maximum of 300 days for assessments led by the Agency (down from 365 days under CEAA 2012), and a maximum of 600 days for assessments led by a review panel (down from 720 days under CEAA 2012). The proposed legislation provides flexibility for the Minister to set shorter or longer timelines, depending on the scope and scale of the project. The impact assessment phase timeline for an Agency-led assessment or a Panel assessment will be set at the end of the planning phase, to reflect the scope and scale of the project. The proposed Impact Assessment Act will enable coordinated assessments with other jurisdictions, including the ability to adjust timelines to facilitate cooperation with another jurisdiction. Authority to suspend timelines would be available for proponent-driven reasons, in accordance with criteria set out in regulation (see part 4.1). Authority to extend timelines would be used for government activities, such as ensuring continued alignment of timelines with other jurisdictions. Public notice of the suspension or extension, and reasons, would be posted on the online public Registry” (pg. 9).

Issue 57: Authority to suspend timelines would be available only for “proponent-driven” reasons, and authority to extend timelines would only be used for government activities. Potentially impacted Indigenous communities such as the AOO will not have the ability to request timeline extensions or suspensions to help facilitate their meaningful engagement.

Recommendation 57: The proposed regulations must include a mechanism by which the timeline can be extended and suspended for reasons identified by potentially impacted Indigenous communities, or by such jurisdictions under the Act which are substituted IA administration, that consist in whole or in part of Indigenous government entities.

1.1.12 Timelines for Integrated Assessments with Lifecycle Regulators

Preamble

The Government of Canada (2019) states:

“Where projects are regulated by lifecycle regulators such as the Canadian Energy Regulator, the Canadian Nuclear Safety Commission or Offshore Boards, the Impact Assessment Agency of Canada would work collaboratively with the lifecycle regulator to draw upon their expert capacity and ensure key regulatory factors are considered as part of a single, integrated assessment. This includes their participation as members of Review Panels. For integrated assessments with lifecycle regulators, the timeline would be 300 days, with the ability for the Minister to set it to a maximum of 600 days if needed for more complex projects. The impact assessment phase timeline for an integrated panel review with a lifecycle regulator would be established by the Minister at the end of the Planning Phase and included in the Panel’s Terms of Reference” (pg. 9).



Issue 58: It is not clear whether a draft version of the terms of reference for an integrated review panel would be available for comment by AOO during the early engagement phase or subsequent to their finalization.

Recommendation 58: Indigenous groups such as the AOO must have the opportunity to comment on a draft of the terms of reference for an integrated review panel. We recommend a 60-day comment period be established for this purpose.

1.1.13 Consultation on Proposed Conditions

Preamble

The Government of Canada (2019) states:

“For assessments by a Review Panel, the Agency would begin the preparation of draft conditions under the Impact Assessment Act and conduct consultations on the proposed conditions, prior to the start of the decision-making phase” (pg. 9).

Issue 59: In order for AOO to understand the full scope and context for draft conditions, it is important that the Review Panel’s report be completed and made available to AOO prior to Canada’s consultation on proposed conditions.

Recommendation 59: The Agency must commence consultation on proposed conditions only after the Review Panel’s report is completed and made available to AOO.

1.1.14 Decision-making

AOO has no issues or recommendations.

1.1.15 Follow-up, Compliance and Enforcement

Preamble

The Government of Canada (2019) states:

“The public and Indigenous groups could also have an expanded role in monitoring impacts. Where circumstances warrant, the Agency would establish Environmental Monitoring Committees that would help provide additional confidence in the science and evidence used in follow-up programs” (pg. 11).

Issue 60: The proposed regulations do not describe under which circumstances establishment of an Environmental Monitoring Committee would be warranted, nor how they would be based on impacts to Aboriginal and Treaty Rights. The AOO has a special constitutional relationship with the Crown, and the membership of Environmental Monitoring Committees must reflect this. Members of the public do not have this relationship, nor the responsibilities under traditional law for stewardship of our homelands. Canada must recognize that AOO should have priority for involvement in such Committees in their asserted lands, and they should not have to have their rights and interests diluted through a mixed membership committee involving members of the public.



Recommendation 60: AOO must be given priority involvement in *Indigenous Environmental Monitoring Committees* where there is potential infringement of Aboriginal and Treaty Rights by a designated project, or a project as defined under section 81 of the Act. Furthermore, Environmental Monitoring Committees should not be established with a mixed membership between those with Aboriginal and Treaty Rights who are affected by a project/designated project and members of the general public or stakeholders.

1.2 Time Management

1.2.1 Suspension of Timelines

Preamble

The Government of Canada (2019) states:

“The three proposed criteria for the suspension of timelines are:

- 1. If the proponent requests that the timeline be suspended, for any activity, until such time as the activity is completed;*
- 2. For the proponent to provide information related to a design change, or change in construction or operation plans by the proponent that could change the potential impacts of the project;*
- 3. In the event of non-payment by the proponent of recoverable costs , until such time as the payment is received.*

Authorities to suspend timelines apply to:

- Planning phase: 180-day limit;*
- Minister’s referral of assessment to review panel: 45-day limit;*
- Impact assessment phase: 300-day limit for Agency-led assessment/600-day limit for panel-led assessment.*

There is no authority to suspend timelines for the decision-making phase” (pg. 13).

Issue 61: Authority to suspend timelines would be available only for “proponent-driven” reasons. The above list should not be considered exhaustive, and AOO submits that there are other criteria for the suspension of timelines.

Recommendation 61: The proposed regulations must include a mechanism by which the timeline can be suspended for reasons identified by potentially impacted Indigenous communities. For example, the timeline should be suspended when an Indigenous group notifies the Minister that it has received insufficient information at that step of the impact assessment process, or if the proponent’s or Crown’s obligations in the consultation process for a particular phase of the project (as defined by the consultation plan in the early planning phase) have not been met.



1.2.2 Extension of Timelines

Preamble

The Government of Canada (2019) states:

“Authorities to extend timelines are designed to address matters within the Government’s mandate, for example, to ensure continued alignment with other jurisdictions. The Minister may extend timelines once for a period of 90 days, with further extensions requiring Governor in Council approval. These authorities may be used once by the Minister to extend the timelines for:

- *Planning phase: 180-day limit;*
- *Impact assessment phase: 300-day limit for Agency-led assessment/600-day limit for panel-led assessment;*
- *Decision-making phase: 30 day limit for decision by the Minister/90 day limit for decision by the Governor in Council.*

The proposed Impact Assessment Act would also require the Minister to post the reasons of the Minister or the Governor in Council for any extension of the timelines, providing greater accountability and transparency” (pg. 14).

Issue 62: Authority to extend timelines would be available only for government activities. The above list should not be considered exhaustive, and the AOO submits that there are other criteria for the suspension of timelines.

Recommendation 62: The proposed regulations must include a mechanism by which the timeline can be extended for reasons identified by potentially impacted Indigenous communities. For example, the timeline should be extended when an Indigenous group notifies the Minister that it requires additional time to review and provide comment on documentation provided by the proponent, or if the proponent’s or Crown’s obligations in the consultation process for a particular phase of the project (as defined by the engagement and partnership plan in the early planning phase) have not been met.

1.2.3 Timeline Transparency

Preamble

The Government of Canada (2019) states:

“Transparency is a key theme of the proposed Impact Assessment Act. In order to ensure transparency on timelines, they would be tracked and all associated posting and reporting requirements would be made public through the new, online Impact Assessment Registry.

The Agency would review the implementation of the legislation, including timeline management, on an ongoing basis, a summary of which would be included in the annual report to Parliament that the legislation requires be tabled in Parliament. This review would inform ongoing policy to improve the management of timelines as appropriate.

The Agency’s review and feedback from stakeholders would also inform any future amendments to the Information Requirements and Time Management Regulations. The



review of these regulations would be included in the forward regulatory plan at 5-year intervals” (pg. 14).

Issue 63: Transparency of timelines is tied to the online public registry. The AOO submits that such heavy reliance on web-based tools is an unacceptable approach and is contradictory to the idea of accessibility. Simply making information *available* online does not mean that information is *accessible*, as it falsely assumes that all persons interested in, or potentially impacted by, the project speak English or French; have computers; have reliable broadband connections; possess sufficient internet and website navigational skills to find the correct files; and have the technical knowledge to understand materials filled with jargon.

Recommendation 63: AOO recommends that the proposed regulations include requirements that timeline information be provided to potentially impacted Indigenous communities in a format acceptable to them (e.g., documents translated into their language). The needs for this can be established in the early planning phase as part of engagement and partnership planning.

Issue 64: While there is a commitment to review timeline management on an “on-going basis” and to provide a summary in an annual report to Parliament, it is not specified how or by whom the review will be conducted. It is also unclear if policy improvements resulting from the ongoing review would first be brought forward for consultation. Additionally, the AOO submits that reviewing the proposed regulations every five years is too long.

Recommendation 64: Since many aspects of forthcoming Impact Assessment system are new, the ongoing review of timeline management and the periodic review of the regulations should be open, participatory and accountable, including timely public notices and appropriate comment opportunities (including webinars, workshops, and public meetings across Canada). Additionally, the initial regulatory review should proceed two years after the regulation first comes into force (instead of five). Following the first regulatory review, the interval can be extended (e.g., every three or four years).

1.3 Information Requirements

1.3.1 Project Description

Preamble

Annex 1 of the Discussion Paper describes the components of the Project Description.

AOO notes the following regarding the proposed Project Description components:

- Components are not substantially different than those under CEAA 2012 (Government of Canada, 2015),³ including no requirement to provide the Project Description Summary in the language of potentially impacted Indigenous communities.

³ Government of Canada. 2015. [Guide to Preparing a Description of a Designated Project under the Canadian Environmental Assessment Act, 2012](#).



- There is no requirement to disclose additional technical, economic or feasibility studies that may have been completed prior to the Project Description.
- The requirement to describe of alternatives to the project and alternative means of carrying out the project, including best available technologies, as listed in the Project Description components during 2018 consultation have now been removed.

Issue 65: Since the Project Description is the basis for engagement, it is critical for it and other project documents to be provided in the language of potentially impacted Indigenous communities, if requested, so that Indigenous peoples can meaningfully engage.

Recommendation 65: The regulations should be revised to require the proponent to provide a Project Description Summary in the language of every potentially impacted Indigenous community, if requested by the communities.

Issue 66: Since it is the basis of engagement, it is critical that the information provided in the Project Description be comprehensive and transparent to facilitate meaningful engagement.

Recommendation 66: The regulations should be revised to require the proponents to disclose all project pre-feasibility, feasibility, and/or economic assessment information that is material to the project and its investors/supporting partners, as part of a Project Description submission, and the Agency should provide access to such information on a publicly available federal registry.

Issue 67: Alternatives to the project and alternative means of carrying out the project, including best available technologies, are factors to be considered in the IAA. Since the Project Description is the basis for engagement, if the proponent is not required to provide this information in the early planning stage, proponents are free to determine alternatives without consultation. It is our view that considering input from Indigenous communities when identifying and comparing alternatives aligns with the sustainability principles underlying the IAA. Furthermore, given the possibilities of scoping IAs in part based on alternatives analyses, as per section 22 of the Act, it is imperative that AOO has the opportunity to be engaged and consulted on this critical but often overlooked aspect of the process.

Recommendation 67: Restore the requirement to describe in the Project Description the alternatives to the project and alternative means of carrying out the project, including best available technologies. Furthermore, ensure that any basis for scoping the IA on the alternatives analysis should be clearly described, and this must be included in early phase consultation with the AOO.



1.3.2 Format Requirements and Accessibility of Information

Preamble

The Government of Canada (2019) states:

“It is proposed that the regulations include requirements that information provided by proponents be provided in a machine-readable, accessible format. These requirements would be subject to applicable restrictions associated with privacy, confidentiality and security. This would support the Government’s commitment to Open Science and Data and would facilitate the sharing of information with the public through the Agency’s online public registry and the Government’s new Open Science and Data Platform...

...In order to support accessibility of information, the proposed regulations would also require proponents to provide a plain language summary of information, presented in a manner that can be easily read and understood by the public. (pg. 16).

Issue 68: The online public registry and the new Open Science and Data Platform are presented as the main method of sharing IA documents, and for inviting and gathering feedback on these documents from the public and Indigenous communities. The AOO submits that such heavy reliance on web-based tools is an unacceptable approach and is contradictory to the idea of accessibility. Simply making information *available* online does not mean that information is *accessible*, as it falsely assumes that all persons interested in, or potentially impacted by, the project speak English or French; have computers; have reliable broadband connections; possess sufficient internet and website navigational skills to find the correct files; and have the technical knowledge to understand materials filled with jargon.

Recommendation 68: The AOO recommends that the proposed regulations include requirements that the Agency and the proponents provide information to potentially impacted Indigenous communities in a format acceptable to them (e.g., documents translated into their language, face-to-face meetings rather than written submissions).

1.3.3 Agency Deliverables

Preamble

The Government of Canada (2019) states:

“The proposed regulations would also set out the products the Agency would be required to deliver to proponents, and to post on the Agency’s online public Registry, at the end of the planning phase:

- *Tailored Impact Statement Guidelines;*
- *Cooperation Plan;*
- *Indigenous Engagement and Partnership Plan;*
- *Public Participation Plan; and*
- *Permitting Plan.*



The guidelines and plans would be developed collaboratively for each project, with the objective of making all requirements clear from the start for proponents, Indigenous peoples, stakeholders, federal departments and other jurisdictions” (pg. 16).

Issue 69: The guideline and four plans listed above are central to the early planning phase, and the Cooperation Plan and Indigenous Engagement and Partnership Plan will be particularly important in ensuring Indigenous jurisdiction, rights and interests are respected throughout the IA process. However, the Discussion Paper provides only a brief description of each plan. Only the Tailored Impact Statement Guidelines are adequately described throughout the Discussion Paper and they are easiest to understand, as they serve much the same purpose as the Environmental Impact Statement Guidelines under CEAA, 2012.

Recommendation 69: The lack of detail on the four plans makes it difficult to meaningfully comment. Since the draft regulation will not be released for public comment prior to Royal Assent of the Act, the Government of Canada has failed to give AOO an opportunity to provide input on a critical element of the proposed regulations. We recommend that Canada consult on the draft regulation before Royal Assent, and/or provide the opportunity to comment further on this and any other regulations to follow.

1.3.4 Impact Statement Transparency

Preamble

The Government of Canada (2019) states:

“As one of a number of measures related to science and transparency, it is proposed that proponents provide information to the Agency on the individuals who prepared the Impact Statement Report. This requirement would provide the public with information about the Report’s lead authors, and would also provide the authors with an opportunity to highlight their expertise.

Proponents would be required to provide information on the name(s), education, experience or knowledge, company affiliation and contact coordinates of the individual(s) preparing the Impact Statement Report” (pg. 18).

Issue 70: Outside conducting a conformity check of the Impact Statement against the Impact Statement Guidelines, only one measure is described as it relates to transparency within the Impact Statement. While provision of lead author resumes is helpful, AOO believes transparency can best be achieved by clearly illustrating in the Impact Statement where Indigenous Knowledge is incorporated, and how issues and concerns expressed by Indigenous communities are addressed.

Recommendation 70: The proposed regulations should include a requirement that the Impact Statement include a description of how the proponent considered and used any Indigenous Knowledge, and addressed any issues or concerns raised by potentially affected Indigenous peoples. Where Indigenous Knowledge was not incorporated, or where an issue or concern could not be resolved, the proponent should describe the reasoning.

Issue 71: There has been an over-reliance and lack of rigor in federal EAs related to the use of professional judgement as a form of evidence. It is important that the IA process stipulates



increased transparency and rigor about the use of professional judgement in IA by the proponent/proponent's consultant through requirements to disclose more details about the professional's experience and related evidence (e.g., research, professional standards, case studies) supporting incidences of the use of this type of evidence.

Recommendation 71: The proposed regulation should include a requirement that statements of professional judgement used as a form of evidence include details about the professional's experience and related evidence (e.g., research, professional standards, case studies) supporting incidences of the use of this type of evidence.

1.4 Participant Funding Programs

Preamble

The Government of Canada (2019) states:

"The intent is to provide participant funding for all designated projects. The proposed regulations would provide that a participant funding program would be established for any project that is on the Project List or that has been designated in an order made by the Minister under subsection 9(1)) of the proposed Impact Assessment Act" (pg. 19).

The AOO supports the provision of participant funding for all designated projects. However, AOO notes the following issue regarding participant funding programs:

Issue 72: It is unclear when participant funding will be made available to potentially impacted Indigenous communities during each phase of the IA process. Timely and early provision of adequate participant funding is required to facilitate meaningful engagement.

Recommendation 72: The proposed regulations must expressly include provisions specifying when participant funding will be made available to Indigenous communities for each phase of the IA process, and should clarify that each phase will not begin until a capacity funding agreement is in place with the potentially impacted communities.

1.5 Time Limit to Respond to a Request for a Regional or Strategic Assessment

AOO has no issues or recommendations.

