Bruce Power

Bruce C Project

RESPONSE TO SUMMARY OF ISSUES

December 2024

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ABBREVIATIONS

Abbreviation	Definition
ABWR	Advanced Boiling Water Reactor
AP1000	Advanced Passive - 1000
APO	Annual Planning Outlook
BATEA	Best Available Technologies Economically Achievable
BCR	Bird Conservation Regions
BWRX	Boiling Water Reactor -10th generation
CANDU	Canada Deuterium Uranium
CHIP	Climate Hazard Information and Projection
CIA	Customer Impact Assessment
CKSPFN	Chippewas of Kettle and Stony Point First Nation
CNSC	Canadian Nuclear Safety Commission
CO_2	Carbon Dioxide
COPC	Contaminants of Potential Concern
COSEWIC	Committee on the Status of Endangered Wildlife
CSA	Canadian Standards Association
DGR	Deep Geological Repository
EA	Environmental Assessment
EAA	*Environmental Assessment Act*, RSO 1990, c E.18
EPR	Environmental Protection Report
EPRI	Electric Power Research Institute
EPR	European Pressurized Water Reactor

Abbreviation	Definition
ERA	Environmental Risk Assessment
ERO	Emergency Response Organization
ESP	Early Site Permit
FAA	Fisheries Act Authorization
FNFNES	First Nations Food, Nutrition, and Environmental Study
GBA Plus	Gender-Based Analysis Plus
GHG	Greenhouse Gas
GNSCR	General Nuclear Safety and Control Regulations
GWPP	Groundwater Protection Program
HHRA	Human Health Risk Assessment
HSM	Historic Saugeen Métis
I&E	Impingement and Entrainment
IA	Impact Assessment
IAA	*Impact Assessment Act*, SC 2019, c 28, s 1
IAAC	Impact Assessment Agency of Canada
IAEA	International Atomic Energy Agency
IESO	Independent Electricity System Operator
IPCC	Intergovernmental Panel on Climate Change
IPD	Initial Project Description
ISRW	Integrated Strategy for Radioactive Waste
kWh	Kilowatt Hour
LSA	Local Study Area

Abbreviation	Definition
LTPS	Licence to Prepare Site
MCA	Multi-criteria Analysis
MNO	Métis Nation of Ontario
MOU	Memorandum of Understanding
MWe	Megawatts Electric
NCA	Nuclear Cooperation Agreements
NII	Nuclear Innovation Institute
NIR	National Inventory Report
NLCA	*Nuclear Liability and Compensation Act*, SC 2015, c 4, s 120
NRC	Nuclear Regulatory Commission
NSCA	*Nuclear Safety and Control Act*, SC 1997, c 9
NSS-WWMF	Nuclear Sustainability Services, Western Waste Management Facility
NWMO	Nuclear Waste Management Organization
OEB	Ontario Energy Board
OPG	Ontario Power Generation
PAHs	Polycyclic Aromatic Hydrocarbons
PERA	Predictive Environmental Risk Assessment
PPE	Plant Parameter Envelope
PQRA	Preliminary Quantitative Risk Assessment
RSA	Regional Study Area
SACC	Strategic Assessment of Climate Change
SAR	Species at Risk

Abbreviation	Definition
SIA	System Impact Assessment
SOI	Summary of Issues
SON	Saugeen Ojibway Nation
TCA	Transmission Connection Agreement
TISG	Tailored Impact Statement Guidelines
TSC	Transmission System Code
UNESCO	United Nations Educational, Scientific and Cultural Organization
VCs	Valued Components
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

Bruce Power is the operator of the largest electric generating facility in Canada, providing clean, reliable nuclear power to Ontario, and cancer-fighting medical isotopes across the globe. Zero-emissions nuclear power is the backbone of Ontario's clean electricity system and is a crucial part of Ontario's clean energy future. Bruce Power currently produces 30 per cent of Ontario's electricity on a site that has been safely generating nuclear power for over 50 years.

The Independent Electricity System Operator's (IESO) 2023 Pathways to Decarbonization Study [R-1] highlighted the need for maximum planning flexibility to meet forecasted demand if Ontario is to pursue a low-carbon electricity future and meet net zero goals. In the 2024 Annual Planning Outlook (APO) [R-2], the IESO projected quicker demand growth in the near term than its previous APO and the Pathways to Decarbonization Study. This growth is driven by industrial growth, such as investment in electric vehicle manufacturing and related supply chains, electrification of transportation and population growth. In its "high-nuclear case", the 2024 APO assumed that capacity from Bruce C (the Project) would be available in the 2040s and illustrated that this new baseload nuclear would significantly contribute to addressing Ontario's electricity supply needs. Furthermore, in a public information session to preview the APO demand forecast for 2025, the IESO projected that electricity demand in Ontario is expected to increase by 75% by 2050, which is higher than the 60% increase previously forecasted in the 2024 APO.

Bruce Power is evaluating the feasibility of expanding its nuclear fleet, to create an option for future electricity planning. It will evaluate the impact of adding up to 4,800 megawatts electric (MWe) of nuclear capacity on the existing Bruce Power site. As proposed, the Project considers several reactor technologies and will be utilizing a plant parameter envelope (PPE) approach. Bruce Power plans to use the federally integrated Impact Assessment (IA) process to assess the impact that new nuclear would have on the environment, Indigenous Nations and Communities, and local municipalities.

Bruce Power recognizes that the Bruce Power site is located within the Saugeen Ojibway Nation (SON) Territory, the shared treaty and traditional Territory of the Chippewas of Saugeen First Nation and Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing). Bruce Power is dedicated to honouring Indigenous history and culture and is committed to moving forward in the spirit of reconciliation and respect with the Indigenous Nations and Communities we work with. We are committed to strong and respectful relationships with the SON, the Métis Nation of Ontario Region 7 (MNO) and Historic Saugeen Métis (HSM).

2.0 APPROACH TO RESPONSE TO SUMMARY OF ISSUES

Following the submission of the Bruce C Initial Project Description (Bruce C IPD) [R-3], the Impact Assessment Agency of Canada (IAAC), in collaboration with the Canadian Nuclear Safety Commission (CNSC) conducted a public comment period and prepared the Summary of Issues (SOI). The SOI was provided to Bruce Power on November 6, 2024. Bruce Power understands that Table I of the SOI is seeking information that IAAC and CNSC require to support decision-making on whether an IA is required for the Project (more specifically, additional information regarding the scope of the Project as a federal work or undertaking, licensing sought under the *Nuclear Safety and Control Act (*NSCA) and information required to determine whether activities could be considered incidental to the Project). Table II of the SOI contains a summary of issues, comments, advice, and recommendations received by IAAC during the public comment period relevant to an IA of the Project. Bruce Power understands that the responses to the SOI may support tailoring of the Project Tailored Impact Statement Guidelines (TISG), and the other Planning Phase documents prepared by IAAC. Bruce Power understands that IAAC is not requiring Bruce Power to submit a Detailed Project Description for the Project at this time.

Bruce Power has prepared responses to each of the issues raised in IAAC's Table I and Table II, which can be found in its "Bruce Power Response" column in the attached tables (Table 1 and Table 2 provided below). In preparing the responses, Bruce Power reviewed the summary provided in the SOI table and also reviewed the original submissions posted on the Canadian Impact Assessment Registry Internet site (Registry).

Bruce Power is currently in the Planning Phase of the IA process and has provided responses based on information that is currently known about the Project, recognizing that assessment of potential positive and negative effects of the Project will be completed during the Impact Statement phase of the IA process.

3.0 UPDATE ON STUDIES

To provide additional information to support the Response to the SOI, Bruce Power has provided additional information in Appendix A regarding studies that commenced during the Pre-Planning and Planning Phases of the IA process. This information provides an overview and status of each of the studies. Within the Response to SOI table, Bruce Power has provided cross-reference to this information to supplement the response provided.

4.0 UPDATE ON ENGAGEMENT

4.1 Indigenous Engagement Update

Bruce Power is committed to early, frequent, community driven engagement to support collaboration with Indigenous Nations and Communities. Bruce Power has a history of engagement with SON, HSM, and MNO related to the Bruce Power site and will continue to engage with these Indigenous Nations and Communities for the Project. Bruce Power will also be reviewing previous submissions as part of other regulatory processes to take into account all input related to nuclear development. Bruce Power is progressing with the IA process in a transparent manner. If additional Indigenous Nations and Communities are added to IAAC's Indigenous Engagement and Partnership plan, Bruce Power will engage them as outlined in the Bruce C IPD [R-3].

The following provides an update on Indigenous engagement activities since Bruce Power has submitted the Bruce C IPD. Bruce Power is committed to engagement throughout the IA process.

4.1.1 Saugeen Ojibway Nation

SON and Bruce Power have continued to meet regularly to share information and develop approaches to support collaboration throughout the IA process. SON provided a submission to the Registry, which will be addressed through Bruce Power's response to the SOI and through ongoing engagement directly between Bruce Power and SON throughout the assessment process. Bruce Power acknowledges that SON's comments are preliminary. Bruce Power will continue to work with SON on an ongoing basis through the IA process to develop strategies and implement methodologies that can address issues and concerns identified in SON's submission to the Registry and additional issues and concerns that may arise through SON's ongoing review of the Project.

4.1.2 Historic Saugeen Métis

HSM and Bruce Power have continued to meet regularly following the submission of the Bruce C IPD. HSM provided Bruce Power concerns and interests related to the Bruce C IPD prior to the submission, and Bruce Power was able to provide direct responses to those concerns and interests. HSM and Bruce Power continue to meet routinely and have recently discussed the SOI. Bruce Power will continue to work with HSM throughout the IA process including with respect to any issues and concerns identified.

4.1.3 Métis Nation Ontario (Region 7)

MNO and Bruce Power have continued to meet regularly following the submission of the Bruce C IPD. MNO provided Bruce Power concerns and interests related to the Bruce C IPD prior to

the submission, and Bruce Power was able to provide direct responses to those concerns and interests. MNO and Bruce Power continue to meet routinely and have recently discussed the SOI. Bruce Power will continue to work with MNO throughout the IA process including with respect to any issues and concerns identified.

4.1.4 Chippewas of Kettle and Stony Point First Nation

Chippewas of Kettle and Stony Point First Nation (CKSPFN) expressed their interest in additional information and engagement with Bruce Power on the IA and also submitted comments to the Registry. CKSPFN and Bruce Power have met to review CKSPFN's Bruce C IPD submission and to provide specific responses to CKSPFN's questions, comments and concerns. CKSPFN and Bruce Power will continue to meet on a regular basis throughout the IA process to share information and identify areas for CKSPFN participation in the IA.

4.2 Public Engagement Update

Bruce Power is committed to proactive, open, and transparent engagement and will provide multiple opportunities for input, both in-person and virtually. Bruce Power will keep the public informed and engaged throughout the IA process and will provide regular updates about the Project through a variety of channels to increase access to information. To ensure overall awareness of Project developments, company representatives include the Project in presentations about business activities at numerous speaking opportunities across the region and province.

A summary of engagement during the Pre-Planning Phase of the Project's IA prior to the submission of the Bruce C IPD was provided in Section 3 of the Bruce C IPD. Since submission of the Bruce C IPD, Bruce Power has reached audiences from Bruce, Grey, and Huron counties via the following communications methods:

- Hosted a Bruce C Community Information Virtual Livestream on July 29, 2024 with James Scongack, Chief Operating Officer and Executive Vice-President, presenting to over 360 participants.
- Posted one **news release** on Bruce Power's website that received 2,009 views and sent to media contacts to generate earned media coverage.
- Published one article in *The Point*, Bruce Power's **employee newsletter** available in print and digital formats.
- Collected an **enewsletter** subscriber list of 773 users and distributed one mass email that saw an open rate of 77%.
- Printed and distributed a **direct mail** informational flyer to 66,242 homes, businesses and farms across Bruce, Grey and Huron counties.

- Published an **informational booklet** to make available online and in print form to interested parties at events and the Bruce Power Visitors' Centre.

- Posted 19 **social media** posts across Facebook, Instagram, X and LinkedIn platforms. Select posts were boosted to advertise on Meta (Facebook and Instagram) and LinkedIn, reaching a total of 40,702 users and 3,873 engagements on the posts.

- Launched a **digital engagement platform** using Social Pinpoint software on October 21, 2024 resulting in 1,658 visits, and 187 engagements.

- Printed 50 **posters** about Bruce C Table Talks to place on local community poster boards.

Note that all above data was collected prior to the submission of this document, and metrics are expected to continue increasing.

Since the submission of the Bruce C IPD, Bruce Power has engaged with audiences via the following methods:

- Sent letters to all lower and upper tier municipalities in Bruce, Grey, and Huron Counties to inform them that the Bruce C IPD was submitted, provide **Notice of Commencement of Planning Phase of the IA**, and to encourage participation during the public comment period on the Registry. Followed up with email to advise that Bruce Power had requested and received a 45-day extension to the Planning Phase to ensure that the public, municipalities, and Indigenous Nations and Communities had additional time to engage on the Bruce C IPD.

- Interacted with municipal councilors and staff at the **Association of Municipalities of Ontario Conference** on August 18-20, 2024, **Clean Energy Frontier Conference** on September 30-October 1, 2024, and **Ontario West Municipal Conference** on October 25, 2024.

- Interacted with community members at **Port Elgin's Pumpkinfest** on Oct 4-5, 2024.

- Completed **regional polling** to gauge awareness and support for the proposed expansion of the Bruce Power site.

- Committed to **municipal capacity funding** for the Municipality of Kincardine, Town of Saugeen Shores and County of Bruce to support participation in the IA process.

- Working with the Municipality of Kincardine, Town of Saugeen Shores and County of Bruce to consider allocation of additional funding for a **municipal socio-economic impact review and/ or related studies**.

- Scheduled a series of small group conversations – **Bruce C Table Talks** – at eight locations in Bruce, Grey and Huron Counties.

- Scheduling presentations to community groups, organizations and workplaces as requested.

- Receiving and responding to inquiries through the Project's digital engagement platform and a dedicated Project email address.

- Receiving early input on key areas of interests, issues and concerns through a valued components survey. The survey will remain open until mid-January 2025 and results will help gauge community interests and guide outreach in the IA.

5.0 BRUCE POWER'S RESPONSE TO SUMMARY OF ISSUES

Table 1 and Table 2 below are the SOI tables received from IAAC. Bruce Power has added the "Bruce Power Response" column and provided responses based on the approach outlined in Section 2.0.

Table 1: **Bruce Power's Response to IAAC Table I:** ***Issues to Inform the Decision whether an Impact Assessment is Required***

Issues	Bruce Power Response
CNSC Licensing Requirements	
Clarity on the nature of the licence application request Bruce Power is seeking under the *Nuclear Safety and Control Act* is required to understand the scope of an integrated assessment, should a positive impact assessment decision be made. Understanding the activities for which Bruce Power is seeking a licence will help tailor what requirements Bruce Power will need to follow when the Tailored Impact Statement Guidelines are being developed.	Bruce Power acknowledges that the Integrated IA is being led by IAAC in collaboration with the CNSC. Bruce Power understands this approach to be consistent with, and reflective of, the overarching framework established by the 'Memorandum of Understanding on Integrated Impact Assessments Under the *Impact Assessment Act* (IAA) between The Impact Assessment Agency of Canada and The Canadian Nuclear Safety Commission'. Bruce Power provided formal notice to the IAAC and the CNSC regarding its intent to submit an application for a Licence to Prepare Site (LTPS) along with the Impact Statement for the Project in the "Notice of Intent to Submit an Application for a Licence to Prepare Site and Commence an Impact Assessment" letter dated October 20, 2023 [R-4]. Bruce Power included information on the Integrated IA's consideration of the LTPS in the anticipated Project Schedule in the Bruce C IPD [R-3]. Project activities associated with site preparation are included in Section 9 of the Bruce C IPD. The Project activities will continue to be refined as the Project progresses and will be reflected in the Impact Statement and LTPS application.
Requirement for Other Permits or Authorizations	
In addition to the CNSC licensing information, provide a list of permits or authorizations that may be required by jurisdictions that have powers, duties or functions with respect to the Project, including for activities incidental to the Project.	Information on permits and approvals for the Project is included in Section 18 of the Bruce C IPD along with a preliminary list of potential permits and approvals that may be required for the lifecycle of the Project included in Appendix B [R-3]. The potential permits and approvals will continue to be refined as the Project progresses.
Transportation of Construction Material to Site by Boat or Other Means	
1. Describe the means of transport (e.g. boat, road, rail, or other) for construction material to site, and provide clarity regarding the geographic extent of transportation. State whether additional structures will be constructed for the Project (e.g. docks, rail line, roads). Identify whether new activities would result from the maintenance of these structures and their duration and frequency (e.g. land clearing, dredging). 2. Clarify ownership and responsibility for the construction material. Describe at what point the care and control of the construction material transfers from the seller to Bruce Power. 3. Clarify the relationship between Bruce Power and other parties related to the transportation of construction material, and whether Bruce Power can direct or influence the activity of transportation to site. Describe if a contract will be required if a third party has care and control of the activity.	Prior to addressing these questions, Bruce Power wishes to state that the transportation of construction material to site should not be an incidental project activity. Road transportation of construction material falls exclusively within provincial and municipal jurisdiction and is under the care and control of the local County and the Ontario Ministry of Transportation. Road transportation is not within the care and control of Bruce Power, and any ability Bruce Power may have to direct or influence truck operators is limited and constrained by the terms and conditions of the underlying supply agreement. The terms and conditions of such arrangements will be negotiated by the parties, which will be informed by industry/best practice for particular materials and any existing standard terms and conditions already in place. Rail and marine transportation are already highly regulated by Transport Canada and the Canadian Transportation Agency. The Project will utilize existing rail networks and marine shipping routes which have existing licenses for operations. Similar to road transportation, the shipment by

Issues	Bruce Power Response
4. Provide information about the potential for the transportation of construction material to site to benefit other proponents. 5. As applicable, describe engagement undertaken with Indigenous Nations and communities on the transportation of construction material to the project site and provide a summary of issues raised during this engagement. 6. If known, describe any potential impacts on rights of Indigenous Peoples from transportation of construction material to site by boat or other means and identify any mitigation or accommodations measures.	rail or marine will be in the care and control of the shipping entity and Bruce Power does not have the ability to direct or influence such activities. The construction of any new or the updates to existing shoreline infrastructure, including any existing docks, shoreline protection or tug-towed barges required for the Project will be within scope of the Project's IA and assessed as part of the Impact Statement. Responses to the specific questions raised are set out below: 1. Construction material is expected to be transported to the Bruce Power site via road, boat and/or rail. The individual suppliers will determine the method for delivery to the Bruce Power site based on size of the Project component, the nature of construction material, and distance of travel. Procurement of components and equipment and delivery of components is expected during the site preparation and construction phase. Bruce Power is currently completing a Critical Component and Logistics Study and a Transportation Assessment which will identify if any on-site new roads or upgrades are required. If determined to be required, the on-site road upgrades and/or new roads will be the responsibility of Bruce Power and will be assessed as part of the Impact Statement. Bruce Power is also assessing the current docks at Bruce A and Bruce B to determine feasibility of use for the Project, or the need to construct a new dock. If a new dock is required to be constructed to support the Project, the dock will be assessed as part of the Impact Statement. 2. Generally, the ownership and responsibility for the transportation of construction materials to the Bruce Power site will remain with each of the suppliers. However, the details with respect to the specific point at which care and control (risk and ownership) transfers from supplier to Bruce Power will be defined in the contract based on the agree-upon delivery terms and subject to the specific nature of the delivery method. These activities will all be carried-out following applicable Provincial and/or County/Municipal requirements. 3. The relationship between Bruce Power and the third parties transporting construction material to the Bruce Power site will be contractual, under which Bruce Power will be the buyer through a supply agreement or consignee through a transportation consignment arrangement which involves the shipment of goods from a consignor (sender) to a consignee (receiver) through a carrier (transportation company). Regardless of the structure, the terms and conditions of such arrangements will be negotiated by the parties, and the nature of the terms and conditions will be informed by industry/best practice and any existing standard terms and conditions already in place. 4. Generally, the activity of transporting construction materials is not unique to the Project and the suppliers, consignors and transportation companies who will be engaged for such services will be experienced providers undertaking similar activities for the benefit of a variety of proponents and projects.

Issues	Bruce Power Response
	5. Engagement with Indigenous Nations and Communities on the transportation of construction materials to the Bruce Power site has not yet occurred but will occur once Bruce Power has sufficient information about the scope of transportation of construction materials related to the Project. Engagement on construction of any new and/or updates to shoreline infrastructure, including docks and shoreline protection or the use of tug-towed barges will commence once sufficient information is available to support engagement, including whether new infrastructure or modifications to existing infrastructure is required. 6. Potential impacts to the rights of Indigenous Peoples related to transportation of construction material to Bruce Power site will be assessed and engaged on as per the response above.
New Switchyard and Transmission Line Upgrade	
1. Describe the additional capacity and geographic extent for a new switchyard and transmission line required as a result from the Project. Describe the predicted schedule for when structures and activities related to the transmission line upgrade would occur. 2. Clarify ownership, responsibility, cost and financial responsibility for new transmission line. Should Bruce Power not be responsible for the transmission line, the relationship between Bruce Power, the owner and who has care and control of the transmission line needs to be clarified in clear details. 3. Clarify the relationship between Bruce Power and other parties related to the new switchyard and transmission line upgrade, and whether Bruce Power can direct or influence the activity. Describe if a contract will be required if a third party has care and control of the activity. 4. Provide information about the ways in which the new switchyard and transmission line upgrade may benefit other proponents. 5. As applicable, describe engagement undertaken or planned with Indigenous Nations and communities on the impacts of building a new switchyard and upgrading transmission line and provide a summary of issues raised during this engagement. 6. If known, describe any potential impacts on the rights of Indigenous Peoples from a new switchyard and transmission line upgrade and identify any mitigation or accommodation measures.	Prior to addressing these questions, Bruce Power wishes to state that electricity transmission is within the exclusive jurisdiction of the provincial government and should not be an incidental project activity. The design, construction and operation of a new switchyard and any transmission line upgrades for the Project, if required, will be subject to a robust coordinated connection process conducted by Ontario's IESO and Hydro One Networks Inc. (Hydro One) under the oversight of the Ontario Energy Board (OEB). It will also be subject to a provincial Environmental Assessment (EA) process. The new switchyard and electricity transmission is under the care and control of Hydro One, an independent major utility in Ontario that Bruce Power does not control and has no ability to direct or influence. The IESO is responsible for the overall planning and reliability of Ontario's electricity grid and ensures that any new generation capacity aligns with provincial energy plans and market needs. A new or modified connection facility cannot be placed into service until the IESO has determined that it complies the IESO *Renewed Market Rules* (Market Rules) [R-5]. New transmission facilities required to incorporate the new generation will be assessed by the IESO and Hydro One, and if directed by IESO, Hydro One will proceed with a provincial EA for the Transmission Facilities under Ontario's *Environmental Assessment Act* (RSO 1990, c E.18) (EAA). Ontario's Electricity Projects Regulation (*Ontario Regulation* 116/01), made under the EAA, stipulates the EA requirements for electricity projects in Ontario on the basis of the project type (for example, transmission lines, transformer stations, power generation plants) and, in the case of transmission lines, the voltage level and distance traversed. Bruce Power understands that as part of the Draft Tailored Impact Statement Guidelines Template and REGDOC-1.1.1 *Site Evaluation and Site Preparation for New Nuclear Facilities* [R-6], layouts of proposed transmission corridors and switchyard are required. Through engagement with Hydro One, Bruce Power will include on-site transmission information as well as the proposed location of the on-site switchyard.

Issues	Bruce Power Response
	Assessment of the impacts of any new transmission and switchyard infrastructure will be completed by Hydro One and assessed under the provincial EAA. Responses to the specific questions raised are set out below: 1. Based on preliminary engagement with Hydro One, there is transfer capacity available from the Bruce Power site on the given system conditions at that time. This is based on the 2022 transmission system and does not include the impacts of other resources in the Bruce zone reaching end of life or procurement of new resources through ongoing IESO resource acquisition processes. Depending on the technology chosen and target capacity of the Project, additional transmission capacity may be required to support new generation. The schedule for the structures and activities related to any required transmission line upgrades will depend upon technology selection and receipt of a mandate from the Province of Ontario. The formal process to initiate transmission upgrades begins with a request to the IESO for connection from Bruce Power. This would initiate a customer impact assessment (CIA) by the transmitter (i.e. Hydro One) and system impact assessment (SIA) conducted by the IESO. Generally, CIA and SIA applications for major transmission upgrades are submitted approximately 8 to 10 years prior to connecting of new generating assets. Bruce Power plans to file a CIA/SIA application after technology selection has been made, and a mandate from the Province of Ontario is received with respect to future phases of the Project. 2. In accordance with the Market Rules, anyone planning to establish or modify a connection to the IESO-controlled grid must obtain approval through the IESO's Connection Assessment and Approval (CAA) process. The CAA process allows the IESO to assess the impact of new or modified connections on the IESO-controlled grid. For complete details of the IESO's CAA process, refer to the IESO's "Market Administration Manuals, Part 1.4: Connection Assessment and Approval." [R-7]. The transmission infrastructure for the connection of the Project to the IESO-controlled grid is and will be under the care and control of Hydro One and the IESO with oversight from the Ontario Energy Board. As described below, while Bruce Power will be making a request for interconnection and will be contributing to the capital costs for the connection line from the Project to the point of connection and any required network upgrades, it does not have control or influence over the process, the technical and impact studies and the provincial EA which will be completed. Ownership of and responsibility for the transmission line will rest with the transmitter selected for the transmission line project. The relationship between Bruce Power and the transmitter will be described in the Transmission Connection Agreement (TCA) and consistent with the Transmission System Code (TSC) issued by

Issues	Bruce Power Response
	the OEB. Generally, the transmitter (i.e., Hydro One) is responsible for all aspects of the transmission line, including design, planning (including the EA), development, construction, operation and maintenance. With respect to cost and financial responsibility, in Ontario, the cost allocation for transmission infrastructure required to connect a power plant to the grid is generally determined by the policies and regulations set by the OEB. The cost allocation can be complex and depends on several factors, including the nature of the required infrastructure upgrades and who benefits from them. The generator or developer is typically responsible for the costs directly associated with connecting their facility to the transmission or distribution system. This includes the costs of the connection line from the plant to the point of connection on the grid, as well as any equipment needed to make the connection, such as transformers or switching gear. The generator may also be responsible for paying for network upgrades that are required specifically because of their project and that primarily benefit their facility. The transmission company, such as Hydro One, is responsible for the operation and maintenance of the transmission system. While the transmitter does not typically bear the costs of new connections, they may be involved in the construction and later operation of the new infrastructure. Costs for broader system reinforcements or expansions that benefit multiple users of the grid may be included in the transmitter's regulated asset base and recovered from all ratepayers through transmission rates, subject to OEB approval. While the IESO does not directly incur costs for transmission infrastructure, it plays a key role in determining the need for system upgrades and enhancements. The IESO's planning processes help identify which upgrades are necessary to maintain system reliability and support the efficient operation of the electricity market. These system upgrades may be classified as "network" or "connection" facilities, with cost allocation principles differing for each. Bruce Power expects future switchyard and transmission activities, to be carried-out by Hydro One, will follow a similar approach related to cost and ownership of the new Bruce A and B switchyards underway by Hydro One and the previously constructed Bruce-Milton transmission line. Costs for upgrades that are considered part of the shared transmission network are often socialized across all ratepayers in the form of transmission rates, as they benefit the overall system and its users. The OEB approves transmission rates and ensures they are just and reasonable. The OEB's decisions on cost recovery are made through public hearings and regulatory proceedings. Therefore, Bruce Power may be required to make capital contributions from time to time for

Issues	Bruce Power Response
	transmitter-owned connection facilities (e.g. a switchyard) based on economic evaluations outlined in the TSC. Bruce Power will be responsible for connection of the new nuclear generating station to the transmitter's connection facility with a clear delineation between Bruce Power and transmitter-owned assets. The decisions with respect to what infrastructure is required and the design, planning, specifications and technical specifications of any such required infrastructure remain with the IESO and the transmitter (i.e. Hydro One). Applications to construct, operate and interconnect with the transmission system are overseen by the OEB. Should additional transmission capacity be needed, Hydro One would be required to undertake a provincial EA for any required Transmission Facilities. 3. Any portion of new transmission lines, including a switchyard located on the Bruce Power site will require discussions between the transmitter, Bruce Power, and Ontario Power Generation (OPG) to establish easements under the current site lease. Bruce Power cannot direct or influence the activity of adding additional transmission lines from the Bruce Power site. Addition of transmission lines is influenced and directed through: • IESO bulk-system planning (Bruce C connection is within the scope of IESO's current South and Central Bulk Planning activities); • Transmitter development efforts; • A provincial EA, and • A Leave to Construct hearing by the Ontario Energy Board. 4. New transmission capacity could enable other generating or storage assets, depending on routing, final decisions on incremental capacity, and proponents pursuing additional projects. Other proponents or third parties seeking to connect to the Ontario bulk transmission system would follow a similar process as highlighted above, with a CIA/SIA application followed by establishing a TCA. 5. & 6. Engagement with Indigenous Nations and Communities on potential impacts, including potential impacts to rights, of a new switchyard and any required transmission line requirements will occur once those requirements are known and a determination is made of the responsible party. It is expected that Hydro One at a minimum would lead any Indigenous engagement with respect to any required transmission line upgrades as part of the provincial EA process.
Transportation of New Fuel to Site	
1. Clarify the fuel type for all reactor technology being considered, as well as the source of the fuel and potential geographic extent of transportation for the fuel to the project site. Indicate if the nuclear fuel will need to cross international or provincial borders.	Prior to addressing these questions, Bruce Power wishes to state that the transportation of new fuel to the Bruce Power site should not be an incidental project activity. Consistent with arrangements for the operations of Bruce A and Bruce B reactors, a CNSC licenced third-party supplier will be responsible for transporting any additional new fuel to the Bruce Power site for the

Issues	Bruce Power Response
2. Clarify ownership and responsibility for the new fuel. Describe at what point the care and responsibility of the nuclear fuel is transferred from the seller to Bruce Power. 3. Clarify the relationship between Bruce Power and other parties related to the transportation of nuclear fuel, and whether Bruce Power can direct or influence the activity of new fuel transportation. Describe if a contract will be required if a third party has care and control of the activity. 4. Provide information about the ways in which the choice of reactor technology and associated fuel may benefit other proponents. 5. As applicable, describe engagement undertaken or planned with Indigenous Nations and communities on the impacts of transportation of nuclear fuel, and provide a summary of issues raised during this engagement. 6. If known, describe any potential impacts on the rights of Indigenous Peoples from the transportation of new fuel to site and identify any mitigation or accommodation measures.	Project. The transportation route and packaging must be approved by the CNSC. Bruce Power's involvement in the transportation to the Bruce Power site is expected to be limited to arranging for a suitable delivery time at the Bruce Power site and ensuring Bruce Power's resources are available to receive the shipment and facilitate fuel handling activities. All aspects of fuel production, from mining through to transportation of new, fully fabricated fuel to the Bruce Power site are the responsibility of other entities in compliance with existing regulations. Hence, it is not reasonable to include new fuel transportation as an incidental project activity as this does not fall under the responsibility of Bruce Power as a project applicant, nor would it be the responsibility of Bruce Power during the operating phase of the Project. The transportation of radioactive material is one of the most highly regulated class of dangerous goods transported in Canada, having to meet the requirements of the *Transportation of Dangerous Goods Act* 1992 and regulations enacted thereunder, and the *Packaging and Transport of Nuclear Substances Regulations* 2015, enacted under the NSCA. Category 1, 2 and 3 nuclear materials as defined in Section 1 of the *Nuclear Security Regulations*, such as the fuel types for the ABWR, AP1000, BWRX300 and EPR technologies are subject to the *General Nuclear Safety and Control Regulations* (GNSCR) that defines the route or schedule for the transport as prescribed information. CNSC's security regulations therefore prohibit disclosure of the transport route or schedule to anyone unless they are licensed to receive that information. Irrespective of the source location, Section 26 of the NSCA prohibits the possession, transfer, import, export, use or abandonment of any nuclear substance, including any nuclear fuel, barring the issuance of a licence for the activity in question. As a result, the possession, care, and control of fuel from its source to the Project, would be subject to the licensing requirements of the CNSC, and the issuance of an appropriate licence. In accordance with Subsection 24 (4) of the NSCA, licences can only be issued if, in the opinion of the CNSC, the applicant: • is qualified to carry on the activity that the licence will authorize the licensee to carry on; and, • will, in carrying on that activity, make adequate provision for the protection of the environment, the health and safety of persons, and the maintenance of national security and measures required to implement international obligations to which Canada has agreed. Furthermore, international conventions on nuclear liability and national laws in various countries, including Canada, are premised on the principle that the licensee bears the responsibility. Accordingly, the *Nuclear Liability and Compensation Act* (NLCA) imposes absolute liability on the licensee for any damage to property or personal injury suffered by the public arising from a nuclear incident, subject to limited exceptions such as acts of war. The NLCA requires all licensees to purchase nuclear liability insurance from a federal government approved insurer in specified amounts. Responses to the specific questions raised are set out below:

Issues	Bruce Power Response
	1. Bruce Power is considering a range of reactor technologies through the IA. All technologies considered have been previously constructed or are an evolution of previously constructed designs. The fuel used for the ABWR, AP1000, BWRX300 and EPR can have enrichment up to 5% U-235, and these fuels are already licensed in jurisdictions around the world. The exact nuclear fuel, and the route it will take will depend on the technology selected and commercial agreements; however, there is no enrichment currently in Canada so enriched fuel will require international border crossing. The fuel used for the Monark is expected to be an incremental increase to the fuel used by the existing CANDU fleet at Bruce Power. The fuel is shipped to the Bruce Power site with approved shipping containers, following the relevant international and Canadian regulations. Commercial agreements will specify the exact fuel route approved by CNSC. Regardless of fuel-type, all fuel will be transported to the Bruce Power site in accordance with CNSC requirements, using a CNSC certified transportation package and a pre-approved transportation route. The supply chain and transportation route issues will be factors considered during the technology selection process. 2. The specific fuel management and transportation arrangements for the Project will be derived from technology selection and will be assessed as part of the CNSC's licensing process including in accordance with the comprehensive design requirements and guidance informed by accepted international codes and practices within REGDOC 2.5.2, *Design of Reactor Facilities* [R-8]. Generally, the fuel management from the Project will either be consistent with Bruce Power's current practices, or new, with latter being more likely should a non-CANDU technology be selected for deployment. Should the selected technology utilize a CANDU Fuel, Bruce Power may be able to leverage existing supply chain relationships and processes that support the operation of Bruce A and Bruce B reactors. Fuel will be transported to site by the supplier by roadway in accordance with the CNSC and the United States (US) Nuclear Regulatory Commission if the fuel originates from the US. Currently under our existing CANDU fuel contract, ownership is transferred to Bruce Power upon final quality service representative inspection, after which the fuel is either stored for later shipment or shipped to the Bruce Power site. Despite this transfer of ownership to Bruce Power, the fuel supplier remains responsible for the fuel up until the point that it is received at the Bruce Power site. For safety and efficiency, approximately one month worth of fuel is stored on the Bruce Power site with an additional approximately five months of finished fuel stored at the fabricator. The fuel used for the ABWR, AP1000, BWRX300 and EPR is physically provided shortly before a schedule re-fuelling outage. The exact nuclear fuel will depend on technology selected which may also impact the commercial agreements.

Issues	Bruce Power Response
	3. Currently fuel transportation is the responsibility of our fuel supplier Cameco. Cameco packages fuel bundles in reusable skids that are shipped to the Bruce Power site by a freight company that is qualified to ship nuclear fuel and employs personnel with the necessary security clearances and qualifications. The fuel used for the ABWR, AP1000, BWRX300 and EPR can have enrichment up to 5% U-235. The exact nuclear fuel will depend on technology selected which will also impact the commercial agreements and transportation arrangements. There are strict regulatory requirements for the transportation of enriched fuel that will be followed by the company that fabricates the enriched fuel. The possession of nuclear fuel, like any nuclear substance, is subject to Subsection 26(1) of the NSCA. As a result, parties responsible for the transfer of nuclear fuel, like any nuclear substance, must have a valid licence issued by the CNSC in accordance with Subsection 24(4) of the NSCA, having been found, both: (i) qualified to carry out the activity; and, (ii) assured to make adequate protection for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed. Any licensee who has been licensed to transfer material, including nuclear fuel to or from the Bruce Power site, would detail within its application how it proposes to carry out the activity to be licensed, including: (i) the applicable information required by section 3 of the *General Nuclear Safety and Control Regulations* including, but not limited to: a. the measures to control access to the nuclear substance; b. the measures to prevent loss or illegal use, possession or removal of the nuclear substance; (ii) the information required by section 5 of the *Nuclear Security Regulations*; Any licence application will be independently assessed by the CNSC to determine whether it should be approved taking into account the proposed methods to prevent unreasonable risk to the environment, the health and safety of persons, national security, or conformity to the measures of control and international obligations to which Canada has agreed. 4. In general, the choice of reactor technology and fuel can benefit other nuclear proponents by enabling shared supply chain, economics of scale, and collaborative research. Standardized fuel type may streamline regulatory processes, enhance safety through shared data, and fosters innovation.

Issues	Bruce Power Response
	5.& 6. Engagement with Indigenous Nations and Communities on potential impacts, including potential impacts to rights, of transportation of new fuel to the Bruce Power site will occur when further information is known.
New Long-term and Interim Radioactive Waste Storage Facility	
1. Describe the anticipated types and quantities of new radioactive waste (i.e. low-level, medium-level and high-level) which would be generated during site preparation activities (i.e. under a Licence to Prepare Site), as well as throughout the Project's lifecycle. Explain how that waste is expected to be managed including if existing licenced facilities will be used, or if new waste facilities would need to be constructed (and whether on-site or off-site). 2. Clarify ownership and responsibility for long-term and interim radioactive waste storage. 3. Clarify the relationship between Bruce Power and other parties related to the management and storage of radioactive waste, including for the proposal of new storage facilities, as applicable. Explain whether Bruce Power can direct or influence the need and development of potential new facilities. 4. As applicable, describe engagement undertaken or planned with Indigenous Nations and communities on the impacts of potential new long-term and interim storage facilities, and provide a summary of issues raised during this engagement. 5. If known, describe any potential impacts on the rights of Indigenous Peoples from new long-term and interim radioactive waste storage facilities and identify any mitigation or accommodation measures.	Prior to addressing these questions, Bruce Power wishes to state that any new long-term radioactive waste storage facilities will be subject to a separate review process and should not be considered an incidental project activity. Interim waste management is defined in the Bruce C IPD and will be further assessed as part of the Impact Statement as discussed further below. Since the 1970s, OPG has responsibly managed, transported, and processed all radioactive waste from Bruce A and Bruce B. Waste is currently stored by OPG at its Nuclear Sustainability Services, Western Waste Management Facility (NSS-WWMF) on the Bruce Power site on an interim basis until long-term disposal facilities are established. The CNSC and the International Atomic Energy Agency (IAEA) monitor and inspect nuclear waste sites and waste management facilities to ensure compliance with national and international nuclear safety regulations. In accordance with Canada's *Nuclear Fuel Waste Act* (SC 2002 c 23), all costs for the permanent storage/disposal of radioactive waste, including used nuclear fuel, are to be fully funded by waste generators/ owners in a trust, ensuring no financial burden is left to future generations. The *Nuclear Fuel Waste Act* mandates the establishment by nuclear energy corporation, of a waste management organization. As a result, the Nuclear Waste Management Organization (NWMO) was established, as a non-profit entity to manage the long-term management of Canada's nuclear fuel waste. The NWMO is implementing Canada's plan for the safe, long-term management of used nuclear fuel. Responses to the specific questions raised are set out below: 1. No radioactive waste will be generated during site preparation activities under the LTPS. During the operation, decommissioning, and abandonment phases, subject to the IA decision and subsequent CNSC licensing decisions of the Project, the anticipated types of waste include: • Low-level waste: consisting of miscellaneous industrial items such as mops, rags, cloths, paper towels, clothing, floor sweepings and replaced system components that have become contaminated with low levels of radioactivity. • Intermediate-level waste: consisting primarily of ion exchange resins and filters used to purify reactor water systems, and reactor core components that may be replaced. • High-level waste: used nuclear fuel. Quantities of new radioactive waste will be provided in the Impact Statement. Based on the information currently known, it is anticipated that the Impact Statement will assess the effects of alternatives for waste management associated with the Project including:

Issues	Bruce Power Response
	• Interim storage of low-level and intermediate-level waste at one or more existing or new appropriately licensed facilities. • Interim storage of high-level waste at an existing or new appropriately licensed facility at the Bruce Power site, with high-level waste contained in fuel specific dry storage containers. The assessment will assume permanent storage of used nuclear fuel as well as non-fuel high and intermediate-level radioactive waste in a Deep Geological Repository (DGR) implemented and managed by NWMO [R-9] consistent with the policy outlined by the Federal Government. In October 2023, the federal Minister of Energy and Natural Resources endorsed the recommendations of NWMO's Integrated Strategy for Radioactive Waste (ISRW) [R-10]. The ISRW was developed based on two years of engagement with the public, Indigenous Peoples, waste generators, and waste owners. The strategy's recommendations were also informed by detailed technical studies and international best practices. With regards to long-term storage of low-level waste, NWMO recommended that waste owners and generators manage disposal in near surface disposal facilities. Final disposal of low-level waste generated by the Project is assumed to occur in a near surface disposal facility following interim storage. 2. As described above, there are a number of interim and long-term waste management alternatives that will be considered for the Project. Details related to how Bruce Power will assess the effects of the Project are provided in Response #1. 3. The NWMO was established in accordance with the *Nuclear Fuel Waste Act* to design and implement Canada's plan for the long-term management of used nuclear fuel. Under the *Nuclear Fuel Waste Act*, the Government of Canada is responsible for reviewing the study of long-term management options prepared by NWMO, selecting a long-term option from the proposed, and ensuring oversight during its implementation. Since 2010, the NWMO has been engaged in a multi-year, community-driven process to identify a site where Canada's used nuclear fuel can be safely contained and isolated in a DGR, which will protect people and the environment for generations [R-9]. NWMO has recently selected the Wabigoon Lake Ojibway Nation-Ignace area as the site for Canada's DGR for used nuclear fuel. Waste generated from Bruce A and B is currently stored on the Bruce Power site on an interim basis until long-term disposal facilities are established. With respect to the Project, Bruce Power will be evaluating a number of alternative means of waste management.

Issues	Bruce Power Response
	The extent to which Bruce Power can influence or direct waste management activities carried out by any third-party service provider will depend on the details of the necessary commercial agreements that would ultimately need to be negotiated between the parties. The scope of this relationship is outside the scope of this assessment. As outlined in NWMO's submission during the Bruce C IPD Public Comment Period [R-11], "by the end of 2024, the NWMO is expected to select a site for a deep geological repository for Canada's used nuclear fuel, with a willing host municipality and First Nation. Both sites being considered for Canada's used nuclear fuel repository have, from a geological perspective, the capacity for expansion and we are confident that both could house the used fuel from existing reactors and from announced new nuclear projects. Emplacement of the waste is technically feasible in either location. However, to maintain flexibility, the NWMO is also exploring the potential to include future used fuel from small modular reactors (SMRs) and other new nuclear in the same repository that we will use to manage the intermediate-level waste and non-fuel high-level waste. The outcome of the NWMO's current siting process for Canada's used nuclear fuel and the subsequent regulatory decision-making process is independent of the Bruce C Nuclear Project's regulatory process, as Canada's Policy for Radioactive Waste, the *Nuclear Fuel Waste Act* and the NWMO's mandate remains in place regardless of the outcome of any of these processes." Since NWMO's submission on the Registry, NWMO has selected the Wabigoon Lake Ojibway Nation-Ignace area as the site for Canada's DGR for used nuclear fuel. Transfer of used fuel to the NWMO facility for long-term management is out of the scope of the Project's IA. Bruce Power has no direct control of influence regarding the NWMO mandate. As indicated above, the regulatory decision-making process for the DGR is independent of the Project and will be for the broader benefit of other nuclear generation projects. 4. Engagement with Indigenous Nations and Communities on potential impacts, including potential impacts to rights, of the interim storage of waste for the Project will occur as part of the Impact Statement and subsequent CNSC licensing processes for the waste management facility. Engagement with respect to potential impacts to rights of long-term storage of waste will be conducted by NWMO once the proposed long-term site is selected. 5. The impacts of current interim radioactive waste storage facilities on the rights of Indigenous Peoples have been previously reviewed by the CNSC as part of prior licensing applications for the NSS-WWMF.

Issues	Bruce Power Response
Transportation of Radioactive Waste	
1. Clarify if radioactive waste would be transported off-site and under what circumstances. 2. Describe the means of transport (e.g. truck, rail, or other) for radioactive waste to off-site storage facilities and provide clarity regarding the geographic extent of transportation. 3. Clarify ownership and responsibility for radioactive waste. Should Bruce Power not be responsible for radioactive waste once it has been transported off-site, Bruce Power should clarify the relationship between the producer, owner and who has care and control of the waste. 4. Clarify the relationship between Bruce Power and other parties related to the transportation of radioactive waste, and the degree to which Bruce Power can direct or influence the activity of radioactive waste transportation. 5. Provide information about the potential for radioactive waste to be used, sold, or recovered for other nuclear generating ventures. 6. Describe Bruce Power's role in emergency response related to transportation of radioactive waste. 7. As applicable, describe the engagement undertaken or planned with Indigenous Nations and communities on transportation of radioactive waste, provide a summary of issues raised during this engagement. 8. If known, describe any potential impacts on the rights of Indigenous Peoples from the transportation of radioactive waste and identify any mitigation or accommodation measures.	Prior to addressing these questions, Bruce Power wishes to state that transportation of radioactive waste should not be an incidental project activity. Any transportation of nuclear waste and used nuclear fuel off the Bruce Power site is expected to be undertaken by licenced third parties, and it subject to a separate licensing process. The transportation of nuclear waste and used nuclear fuel in Canada is jointly regulated by the CNSC and Transport Canada. It is one of the most highly regulated class of dangerous goods in Canada, having to meet Transport Canada's requirements under the Transportation of Dangerous Goods Act, 1992 (SC 1992, c 34), and the CNSC's licensing requirements under the Packaging and Transport of Nuclear Substances Regulations (SOR/2000-202) enacted under the NSCA of the CNSC. Responses to the specific questions raised are set out below: 1. In October 2023, the federal Minister of Energy and Natural Resources endorsed the recommendations of NWMO's ISRW [R-10]. Used nuclear fuel as well as non-fuel high and intermediate-level radioactive waste is expected to be stored on-site until long-term disposal facilities are established by NWMO. Once NWMO's long-term disposal facilities are designed, approved, constructed and operating, Bruce Power anticipates that used nuclear fuel, high and intermediate level radioactive waste will be transferred to such facilities for long-term disposal. With regards to long-term storage of low-level waste, NWMO recommended that waste owners and generators manage disposal in near surface disposal facilities. Once the long-term low level waste storage facilities are established, approved, constructed and operating, Bruce Power anticipates that low level radioactive waste will be transferred to such facilities for long-term disposal. 2. Used nuclear fuel as well as non-fuel high and intermediate-level radioactive waste is expected to be stored at the Bruce Power site until long-term disposal facilities are established by NWMO. Once NWMO's long-term disposal facilities are designed, approved, constructed, and operating, Bruce Power anticipates that radioactive waste will be trucked by NWMO to NWMO's off-site facility in accordance with Transport Canada and CNSC requirements. At this time, it is anticipated that the transportation of nuclear waste will be under the care and control of the NWMO, an independent organization that Bruce Power does not control, and Bruce Power has no ability to direct or influence the transportation of fuel and nuclear waste. Low-level radioactive waste is also expected to be stored at the Bruce Power site until long-term disposal facilities are established. Once the long-term low level waste storage facilities are established, approved, constructed, and operating, Bruce Power anticipates that low level radioactive waste will be transferred by a licenced third-party to such facilities for long-term disposal.

Issues	Bruce Power Response
	3. In October 2023, the federal Minister of Energy and Natural Resources endorsed the recommendations of NWMO's ISRW [R-10]. The ISRW was developed based on two years of engagement with the public, Indigenous Peoples, waste generators, and waste owners. The strategy's recommendations were also informed by detailed technical studies and international best practices. The NWMO is entrusted with implementing the plan for the safe, long-term management of used nuclear fuel, high level waste, and Intermediate level waste. Further the activities, plans, policies related to how nuclear waste is transported and stored goes beyond Bruce Power and is undertaken for the benefit of all nuclear power generation facilities and other proponents. NWMO will need to complete the regulatory processes to obtain the requisite licences and Impact Assessment required for its long-term storage facility. This will require a demonstration to the applicable regulatory agencies that the safety and security of any transportation system before transportation to the repository can begin. With regards to long-term storage of low-level waste, NWMO recommended that waste owners and generators manage disposal in near surface disposal facilities. Low level radioactive waste is expected to be stored at the Bruce Power site until long-term disposal facilities are established. 4. The transportation of radioactive waste will not be within the care and control of Bruce Power, and any ability Bruce Power may have to direct or influence carriers is constrained by the terms and conditions of the underlying agreement and the requirements of Transport Canada under the Transportation of Dangerous Goods Act, 1992 and the CNSC under the Packaging and Transport of Nuclear Substances Regulations. Bruce Power has little to no influence over the operation or management of other parties, beyond selecting and contracting with those that satisfy all such applicable legislative requirements. 5. The potential for radioactive waste to be used, sold, or recovered for other nuclear generating ventures is not currently being contemplated as part of the Project. 6. Bruce Power is committed to ensuring public safety and environmental protection by collaborating with provincial and federal agencies, emergency services, and other utilities as part of the coordinated response framework for transportation emergencies. Bruce Power has a Radioactive Material Transportation Emergency Response Plan (TERP) which is designed to safeguard the health, safety, welfare, and property of the public, as well as personal safety of emergency responders in the unlikely event of a transportation accident involving radioactive materials [R-12]. Bruce Power works with the Ontario Provincial Police (OPP) as well as other emergency agencies to coordinate responses to any incidents that may occur on site or in the surrounding area. Additionally, Bruce Power provides technical expertise and resources in the event of transportation incident involving nuclear materials, including radiological assessments, monitoring, and

Issues	Bruce Power Response
	communication of potential risks to public and environment. The response to emergency from Bruce Power is led by a trained and qualified Emergency Response Organization (ERO). A transport emergency response drill is conducted once a year with local emergency response organizations invited to participate. Bruce Power ensures compliance with safety and regulatory requirements set out by the CNSC and Transport Canada, assisting in incident investigation and resolution. Bruce Power also maintains a mutual aid agreement with other nuclear utilities, to ensure a coordinated response in emergencies, including transportation emergencies. This response framework covers both on-site and off-site events within a predetermined zone with the nearest utility responding to the transport event. 7. & 8. Engagement with Indigenous Nations and Communities on potential impacts, including potential impacts to rights, related to transportation of radioactive waste for interim storage will occur as part of the IA. Engagement with respect to the transportation of radioactive waste for long-term storage would be undertaken under the separate process as described above.

Table 2: Bruce Power's Response to IAAC Table II: *Other Issues Relevant to Tailoring the Impact Statement Guidelines*

Issues	Bruce Power Response
1. Accidents and Malfunctions	
a. Concerns about effects on the Great Lakes ecosystem, human health and surface and drinking water from accidents and malfunctions of the Project. Request to consider long-term management and monitoring for residual effects following an accident or malfunction. ♦[1]	Bruce Power will be undertaking an Assessment of Accidents and Malfunctions as part of the Impact Statement for the Project. This will include identifying hazards for each Project phase, qualitatively analyzing the likelihood and consequences of potential accidents and malfunctions, and quantitatively assessing one or more plausible bounding scenarios. Given that a reactor technology has not been selected, the assessment of consequences of nuclear accidents will consider bounding releases corresponding to the Large Release Frequency and the Small Release Frequency limits specified in REGDOC 2.5.2, Design of Reactor Facilities. The Assessment will include description of mitigation measures, long term management and monitoring measures that would be implemented in the event of an accident. Indigenous Nations and Communities will be engaged throughout the IA process.
b. Concerns about cumulative risks of accidents and malfunctions and the potential effects on Saugeen Ojibway Nation Territory with the addition of new reactors at the Bruce site. ♦	The assessment of Accidents and Malfunctions will include assessing the likelihood and consequences of potential accident scenarios. The effects of potential accidents and malfunctions will be assessed in the Impact Statement. The assessment of nuclear accidents will include quantitative assessment of consequences of plausible bounding releases corresponding to the Large Release Frequency and the Small Release Frequency limits specified in REGDOC 2.5.2, Design of Reactor Facilities. These relate to events with a maximum frequency of 1E-05 per reactor year (Small Release Frequency), and 1E-06 per reactor year (Large Release Frequency). These risks associated with Bruce Power's existing nuclear power plants are assessed in the Bruce A and Bruce B Safety Reports, which are maintained as part of licensing requirements under the *Nuclear Safety and Control Act*. Bruce Power will engage with SON on the methodologies to be used for the assessment of accidents and malfunctions.
c. Concerns about adequate development and communication of emergency response plans and procedures, including plans for communications and the delivery of emergency response program exercises to potentially affected populations in case of accidents and malfunctions. Need for translation of emergency response plans and procedures in Indigenous languages for potentially affected Indigenous Nations and communities. ♦	Bruce Power has robust response plans as part of existing operations, and through the IA will determine the need for and make the required changes to existing emergency response plans to the extent they need to be amended to accommodate the Project. Bruce Power will work with Indigenous Nations and Communities to ensure that existing and future emergency response plans are communicated clearly and accessible by members of Indigenous Nations and Communities. Bruce Power has never received and is not aware of any interest from Indigenous Nations and Communities for translation of emergency response plans and procedures or other documents into Indigenous languages. If such a request is made, Bruce Power will work with representatives of the respective Indigenous Nation or Community to determine the best approach to work with Community language speakers.

[1] As indicated under issue #15 below, issues relevant to Indigenous Interests and raised by Indigenous Peoples are interwoven across multiple categories of issues and are identified using the symbol "♦".

Issues	Bruce Power Response
d. Need for expanded emergency response resources and capabilities to meet the demand of new nuclear development. The Saugeen Ojibway Nation notes past engagement in nuclear emergency planning and preparedness has been limited and more engagement is required. ♦	The need for expanded emergency response resources associated with the Project will be assessed in the Impact Statement. Bruce Power will engage with SON to share information and engage on emergency preparedness plans and response resources.
2. Alternative Means of Carrying Out the Project	
a. Need to consider how the potential for effects on valued components (e.g. migratory birds, fish and fish habitat, species at risk) would change based on alternative siting options and condenser cooling options, and how these changes would factor in the selection of the site location and condenser cooling technology. ♦	An Alternative Means Assessment will be included in the Impact Statement for the Project. Bruce Power is considering alternative means of achieving the Project's objective of producing up to 4,800 MWe of new nuclear generating capacity at the Bruce Power site by assessing alternative means that are technically and economically feasible through the use of best available technologies. It will also consider alternative siting layouts on the Bruce Power site, referenced as Siting Scenarios in the Bruce C IPD. Bruce Power is committed to engaging Indigenous Nations and Communities and the public on the Alternative Means Assessment to be completed as part of the Impact Statement for the Project. The potential impacts of the Project on Valued Components (VCs) will be assessed in the Impact Statement and are not expected to change as a result of site locations, as the siting layouts are all within the Bruce Power site. VCs will serve as the focal points for the IA and consists of components that are of particular concern or value to the public and Indigenous Peoples that may be affected by the Project. Bruce Power will confirm the VCs based on the TISG and may also identify additional VCs beyond those included in the TISG, through engagement with Indigenous Nations and Communities and the public. As part of the development of the Impact Statement, Bruce Power will identify potential effects to the VCs that are likely to be caused by the carrying out of the Project. The interactions between the Project and VCs can be called "Pathways" or "Effects Pathways". This process will also be guided by the TISG that will outline the potential effects to be considered in the Impact Statement. Refer to Appendix A for additional information.
b. Need to consider potential releases of contamination related to historical land use in the site option analysis, and the potential for those releases to interact cumulatively with effects of the Project.	As outlined in the Bruce C IPD [R-3], during the Pre-Planning Phase of the Project's IA, Bruce Power commenced a siting process to support a thorough understanding of potential constraints and opportunities at the Bruce Power site. The siting process was completed to support conceptual layout development and evaluate suitable areas for potential development. The siting process was completed in two stages, comprised of a Site Suitability Screening Analysis and Site Options Analysis. The siting process allowed for an objective, transparent and rigorous understanding of the Bruce Power site relating to land footprint suitability and will provide foundational information that will assist with engagement with Indigenous Nations and Communities and local communities regarding siting. The siting process considered potential existing contamination from historical land use that could be released or cumulatively add to the Project's effects. Known Areas of Potential Environmental Concern (APECs) were amongst the environmental criteria used to define constraints during the Site Suitability and Site Options Analysis. In 2024, Bruce Power also commenced a Soil Sampling and Analysis Field Program in parallel with the Geotechnical and Hydrogeological Field Assessment. The objective of the Soils Sampling and Analysis is

Issues	Bruce Power Response
	to collect further baseline information for each of the Siting Scenarios on contaminants of potential concern (COPCs) and identify potential issues that may constrain site development or that may require further assessment as part of the IA. An Alternative Means Assessment will be included in the Impact Statement for the Project to consider alternative means of achieving the Project's objective of producing up to 4,800 MWe of new nuclear generating capacity at the Bruce Power site. Bruce Power will be engaging with Indigenous Nations and Communities and the public on the preferred and alternative locations on the Bruce Power site as part of the Alternative Means Assessment. Additional information related to the siting process is included in Appendix A.
c. Need to consider alternative designs for the proposed site infrastructure (e.g. the forebay, the water intake and the water outtake) to improve upon known issues and impacts of the current infrastructure of Bruce A and B facilities. ♦	Bruce Power will be undertaking a Best Available Technologies Economically Achievable (BATEA) Assessment, aligned with the requirements outlined in REGDOC 2.9.2 *Environmental Protection: Controlling Releases to the Environment* [R-13], and information contained in the Draft Tailored Impact Statement Guidelines Template. Information collected through the BATEA will inform the assessment of the condenser cooling strategy alternative to be carried through assessment in the Impact Statement. The BATEA Assessment will include evaluation of mitigation measures for the forebay and cooling water system design which can improve on impacts of the current infrastructure design of Bruce A and Bruce B facilities. Bruce Power will be engaging Indigenous Nations and Communities and the public on the BATEA and the Alternative Means Assessment. Additional information on the BATEA Assessment is included in Appendix A.
3. Alternatives to the Project	
a. Interest in understanding whether there are feasible and cost-effective alternatives to the Project, including renewable power such as hydroelectricity and wind power, and energy conservation.	As outlined in the Bruce C IPD, Bruce Power is a private nuclear power operator and is proposing the Project in response to Ontario's electricity needs and as a contribution to provincial and federal climate change objectives by providing clean, reliable, and affordable power. Exploring new nuclear generation at the Bruce Power site is a key element in the provincial government's Powering Ontario's Growth plan [R-14]. Bruce Power's focus is on nuclear power generation. This Project would represent a partial implementation of the Province of Ontario's energy plan which is also considering many other clean energy developments. Therefore, this Project is not an alternative to other clean energy projects but would be implemented together with other clean energy projects by other proponents on behalf of the Province of Ontario. As noted in the Draft TISG Template, "In the case of a nuclear energy project, an assessment of energy mandates established through federal and provincial legislation or policy may not be within the scope of the impact assessment. As a result, the alternatives to the project presented by the proponent need not include alternatives that are inconsistent with federally mandated initiatives and/or a province's formal plans or directives. However, the proponent should explain where this rationale has been applied to exclude consideration of possible alternatives to the project." [R-15] Bruce Power is developing the Project under Province of Ontario mandate through its Powering Ontario's Growth plan [R-14]. The plan

Issues	Bruce Power Response
	contemplates development of additional wind, solar and hydroelectric resources along with energy efficiency. Ontario benefits from a diverse supply mix and all resources, including new baseload nuclear, are required to address growing electricity demand. Based on the information provided in the Bruce C IPD and information provided in the above response, Bruce Power has provided rationale to exclude consideration of possible alternatives to the Project.
4. Atmospheric Environment	
a. Concerns about effects on air quality and the effectiveness of applicable mitigation measures and monitoring plans during all phases of the Project.	The effects on air quality and the effectiveness of mitigation measures and monitoring plans during all phases of the Project will be assessed in the Impact Statement. The air quality assessment will consider all sources of non radiological emissions associated with the Project: stationary, mobile, and fugitive sources for all phases of the Project. Air emissions associated with these sources have been considered in the baseline study, including criteria air contaminants, particulate matter (total, PM2.5, PM10, diesel particulate matter, trace metals), as well as select volatile organic compounds (VOCs) and benzo(a)pyrene as a surrogate for polycyclic aromatic hydrocarbons (PAHs). These contaminants will be included in the effects assessment in the Impact Statement. A separate radiological assessment will include analysis of emissions of tritium oxide and tritium gas, carbon 14, noble gases, iodine-131, and particulates (gross beta/gamma). The Project would not release ozone emissions to the air; however, baseline ozone will be used in understanding atmospheric reactions involving oxides of nitrogen. As such, ozone is included in the baseline study. Hydrogen sulphide (H_2S), other reduced sulphur compounds, and other polycyclic aromatic compounds (alkylated PAHs, PAH transformation products, including nitro and oxy-PAHs, and dibenzothiophenes (DBTs)) are not expected to be emitted to the air from the Project and therefore will not be assessed.
b. Concerns regarding potential impacts on children and other vulnerable receptors from the effects related to transportation routes, including effects on air quality and the potential for collisions (also relevant for *Accidents and Malfunctions*). Need to consider avoidance of sensitive areas in designing and selecting transportation routes.	The potential effects on children and other vulnerable populations and the effectiveness of mitigation measures will be assessed in the Impact Statement.
c. Concerns regarding potential for transboundary effects on the atmospheric environment, such as from emissions due to construction activities.	Bruce Power will be assessing effects of the Project on the atmospheric environment as part of the Impact Statement which will include dispersion modelling. Bruce Power will be referring to Health Canada's Guidance for Evaluating Human Health Impacts in Impact Assessment: Air Quality [R-16].
5. Baseline Studies	
a. Need for baseline conditions to be based on recent information that is representative of the study areas for valued components and relevant to the Project effects (e.g. need to have a sufficient sample size and duration to understand of within-year and between-year variation).	The Bruce Power site has been studied and characterized with initial studies at the Bruce Power site beginning in 1954. The Project's IA will leverage the baseline data already collected on-site. The information from these studies will be considered in the Impact Statement as applicable. Bruce Power is also conducting additional field studies for environmental disciplines not covered or fully covered as part of existing programs including field programs for air quality, noise, light, hydrogeology, geotechnical, underwater noise and vibration, and wetlands.

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	During the Pre-Planning Phase of the Project's IA, Bruce Power prepared a Readiness Report, which was a comprehensive review of the Draft TISG Template, REGDOC 1.1.1 (*Site Evaluation and Site Preparation for New Reactor Facilities*) [R-17] and REGDOC 2.9.1 (*Environmental Principles, Assessments and Protection Measures*) [R-13], as well as legal compliance to current Acts and Regulations. The objectives of the Readiness Report were to consolidate the IAAC and CNSC requirements to identify existing information previously submitted, reviewed and accepted and/or approved by a regulatory agency. It was concluded that the majority of the baseline requirements for the Project's IA can be met through existing data and iterative assessments mandated by Bruce Power's licence and management system. This data has been previously submitted, reviewed and accepted and/or approved by regulatory agencies. Additional information on the Readiness Report and Request for Early Review process is provided in Appendix A.
b. Need to understand availability of detailed information on the diet and traditional foods for the potentially impacted Indigenous Nations and communities, as well as on cultural uses of wildlife species.	Indigenous Nations and Communities will be engaged throughout the IA process and will be encouraged to share information regarding diet, consumption, cultural and economic uses of wild / traditional foods as it pertains to the IA. Bruce Power has engaged Indigenous Nations and Communities regarding diet / food sources and consumption as part of assessing radiological risks for Bruce Power's 2022 Environmental Risk Assessment (ERA) [R-18]. Bruce Power conducted surveys, developed in conjunction with SON, MNO and HSM from 2019 – 2021 to refine intake rates for wild game and fish that previously assumed to be 95th percentile results from the First Nations Food, Nutrition, and Environmental Study (FNFNES). Surveys included information about diet, sources of food and water, and the use of wild flora for medicinal and ceremonial purposes. The data from these surveys was used to verify the intake rates and local intake fractions of fish, wild game, and other foodstuffs to ensure that the assessment is representative of the characteristics of Indigenous residents living near the Bruce Power site. Bruce Power is not aware of a public source for this information and would only disclose information shared by Indigenous Nations and Communities with expressed permission. Further discussion with Indigenous Nations and Communities will continue for potential refinement of scenarios, such as the Hunter/Fisher scenario, for the Human Health Risk Assessment (HHRA)
c. Concern regarding limited access to sources of baseline information referenced by Bruce Power. See comments from Environment and Climate Change Canada (Registry #40) for examples of sources that were not publicly accessible.	Certain source information requested is publicly available and can be provided. For requests for documents that may also contain Bruce Power confidential information, these would need to be considered on a case-by-case basis and may require additional protections prior to any potential disclosure. Bruce Power will seek to further understand the remaining requested information, and, to the extent confidential, will explore feasible mechanisms to share this information on a confidential basis.

Issues	Bruce Power Response
6. Climate Change and Greenhouse Gas Emissions	
a. Need to understand the potential for greenhouse gas emissions and contribution to climate change by project activities and components through all phases of the project lifecycle, including consideration of practices to reduce the expected greenhouse gas emissions, for example, replacing carbon-intensive construction materials.	The Project's greenhouse gas (GHG) emissions will be assessed for all Project stages (site preparation, construction, operations, and decommissioning) in the Impact Statement following the Strategic Assessment of Climate Change (SACC) and supporting draft technical guidance. Climate change is a factor that will be integrated throughout the Impact Statement. A BATEA Assessment is being conducted which includes an evaluation of construction alternatives to reduce GHG emissions, including construction materials. A qualitative summary of consideration of practices to reduce GHG emissions will be included in the Impact Statement. Additional information on the BATEA Assessment is included in Appendix A.
b. Need to understand contribution of the Project to Canada's net-zero emission targets by 2050, including how the Project's projected timelines affect its contribution.	The Project contributes to Canada's 2050 net-zero emission targets by committing up to 4,800 MWe of clean electricity, resulting in up to an estimated 20,098,944 metric tons CO_2 equivalent in avoided emissions annually, compared with natural gas as an alternative source of electricity generation (assuming full capacity nuclear power output annually). This value is based on a United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) study [R-19], where over average life-cycle equivalent emissions from nuclear power is only 12g CO_2 equivalent per kWh compared to alternative sources of electricity such as from natural gas which can emit 490g CO_2 equivalent per KWh over the average life cycle (data available in the Bruce C IPD , section 23.0 and [R-19]). The 2023 Bruce Power Green Bond Report [R-20] also reports on the carbon impact of nuclear electricity supply projects. In this report, using the 2021 data taken from the Government of Canada's National Inventory Report (NIR) 1990-2021 (2023)[R-21], the greenhouse gas intensity of electricity generated from natural gas in Ontario has been calculated as 420.88 g CO_2e/kWh. Every kWh of electricity generated from carbon-free sources, such as nuclear, avoids 420.88 g CO_2e compared to electricity generated in Ontario from natural gas. It is of note that the NIR data represents direct emissions from the generation plant only and does not include wider lifecycle emissions, such as extraction, processing, and fuel transport, which results in inherently higher generation intensity values. Applying this same methodology to the Project results in an estimated maximum of 17,697,162 metric tons CO_2 equivalent annually of emissions avoidance from the maximum of 4,800 MWe of power provided from the Project. The anticipated Project schedule is provided in Section 11 of the Bruce C IPD, which indicates that construction and commissioning could occur between 2031 and 2045. As indicated in the Bruce C IPD, the timeline for the actual sequence of the Project schedule is dependent on several considerations and therefore subject to change. In addition to the operations phase of the Project, Section 23 of the Bruce C IPD contains preliminary estimates of GHG emissions for site preparation, construction and commissioning phases of the Project based on current available information. These values will be revised once additional Project details are known. Additional information related to the Project's contribution to Canada's net-zero emission targets will be provided in the Impact Statement.
c. Concern about how the Project effect would interact with past, existing and foreseeable effects from climate change and increase risks on the rights and interests of Indigenous Peoples. Need to plan adequate mitigation and adaptation measures to mitigate these risks.	Climate change and related mitigation and adaptation measures will be assessed in the Impact Statement, which will also assess the potential impacts on the rights and interests of Indigenous Peoples. Climate change is a factor that will be integrated throughout the Impact Statement.

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7. CNSC Licensing	
a. Need to understand whether Bruce Power has, or will have, authority to carry out any licensed activities from the owner of the site.	Bruce Power will provide evidence of its authority to carry out licensed activities from the owner of the Bruce Power site as part of the Licence to Prepare Site application in accordance with the requirements of the *Class I Nuclear Facilities Regulations*, Section 3(c).
b. Clarify whether Bruce Power will prepare a Predictive Environmental Risk Assessment for the Bruce C project, in accordance with REGDOC 2.9.1.	Bruce Power will be completing a Predictive Environmental Risk Assessment (PERA) as part of the Impact Statement for the Project, and not a stand-alone report. The Impact Statement will be completed in accordance with IAAC's TISG and will include a human health and ecological risk assessment consistent with Canadian Standards Association (CSA) N288.6 *Environmental risk assessments at nuclear facilities and uranium mines and mills*. As set out in Section 3 of REGDOC 2.9.1 *Environmental Protection: Environmental Principles, Assessments and Protection Measures*, the CNSC requires that environmental effects of all nuclear facilities or activities be considered and evaluated when licensing decisions are made. As described in Section 3.1 of REGDOC 2.9.1, impact assessments under the IAA are conducted on projects identified as having the potential for adverse environmental effects in areas of federal jurisdiction. As a result, and in accordance with REGDOC 2.9.1, the Project is assessed under the IAA under an integrated impact assessment carried out jointly by the IAAC and CNSC pursuant to a Memorandum of Understanding (MOU) between the IAAC and CNSC to ensure a "one project-one assessment" approach is completed satisfying the requirements of both the IAAC and the CNSC. Given that this a new nuclear project, it will follow the requirements outlined in the TISG which will include a human health and ecological risk assessment consistent with CSA N288.6 as part of the evaluation of the predicted effects of the Project as a part of the Impact Statement. The content in the Bruce Power ERA (reflecting current site conditions), which includes both, human health and ecological risk assessment will support baseline conditions in the Impact Statement for effect predictions. The effects assessment of the Impact Statement will determine the potential effects of Project operations. The environmental recommendations and predictions from the IA will be incorporated into the Bruce Power Environmental Protection program. Bruce Power will continue to perform a PERA for the Bruce Power site in accordance with REGDOC 2.9.1 as a function of ongoing operations. A PERA will continue to be included in the ERA to account for changes to activities occurring on the Bruce Power site, including the Project and effects predictions will be incorporated into the existing site operations ERA. This will continue to be updated on a five-year cycle, including both the retrospective and predictive effects assessments.
8. Cumulative Effects	
a. Need to consider past, existing and foreseeable projects and activities in the cumulative effects assessment, including: nuclear facilities, continued above ground storage of nuclear waste, Major Components Replacement project, any proposed Deep Geological Repository for nuclear waste, large-scale battery storage facility, transmission lines, manufacturing and production plants, and natural gas pipelines. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA, which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last

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	several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
b. Need to consider cumulative effects on fish and wildlife, especially due to thermal effects, impingement and entrainment, contamination and habitat loss. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA, which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
c. Request to consider measures to mitigate or balance any increase due to Project effects on existing cumulative effects in the Great Lakes, to result in a reduction or no new net impacts. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA, which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
d. Concern about potential cumulative effects on the Saugeen Ojibway Nation due to transformation of archeologically significant ancestral landscape in Saugeen Ojibway Nation territory. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology, including discussing appropriate temporal boundaries. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA, which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement
e. Need for further information on cumulative impacts to Indigenous rights and interests, including on the ability to catch fish species for food, commerce and ceremony by their preferred means. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
f. Need to understand and consider historical context and impacts in assessing cumulative impacts. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology, including discussing appropriate temporal boundaries. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in

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	the 2022 ERA, which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
9. Economic Conditions	
a. Support for the potential positive effects on the local and regional economy (e.g. job creation, youth retention in the area, and indirect effects on local businesses). Importance of working with municipalities to understand local economic development plans and potential role of the Project.	The potential positive local and regional economic effects of the Project and the linkage to the development plans of local municipalities and the role of the municipalities will be assessed in the Impact Statement. Bruce Power will engage with local municipalities to understand local economic development plans and determine the potential role of the Project.
b. Concern about potential negative effects on availability of workforce for non-nuclear companies in the region (e.g. construction industry) and low wage jobs (e.g. hospitality, service, tourism, healthcare, childcare, manufacturing and agriculture).	The potential negative effects on workforce availability for local industries will be assessed in the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities, local municipalities and the public during the Impact Statement.
c. Concern about potential effects of the Project on local demand for housing and increased housing and rental prices. Consider mitigation measures to reduce pressure on local housing market (e.g., workforce housing program).	The potential effects on local housing demand, availability, and cost will be assessed in the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities, local municipalities and the public during the Impact Statement.
d. Need to identify types and number of jobs created (permanent/part-time), wages, conditions and benefits, necessary skills, and duration of employment at each phase of the Project, and to prepare mitigation measures to address potential shortage of skillsets (such as training programs), in order to adequately assess potential economic impact and support population and housing growth projections.	A description of the workforce requirements and associated management measures will be included in the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities, local municipalities and the public during the Impact Statement.
e. Concern regarding financial assurance for decommissioning and closure early should the Project no longer be economically viable. Bruce Power should provide information on costs and financing for each project stage, including decommissioning and long-term waste management. ♦	Bruce Power will provide a proposed plan for decommissioning as part of its application for a LTPS application in accordance with the requirements of the *Class I Nuclear Facilities Regulations*, Section 3(k). In accordance with the Canada's *Nuclear Fuel Waste Act* (SC 2002, c23), all costs for the permanent storage/disposal of radioactive waste, including used nuclear fuel, are fully funded by waste generators/owners in a trust ensuring no financial burden is left to future generations. Licensees are also required to have decommissioning plans which cover facility lifecycles and provide financial guarantees to ensure that sufficient funding is available for facility decommissioning in accordance with REGDOC-3.3.1, *Financial Guarantees for Decommissioning of Nuclear Facilities and Termination of Licensed Activities* [R-22]. The purpose of REGDOC-3.3.1 is explicitly to ensure, "[a]*pplicants and licensees [...] make adequate provision for the safe decommissioning of existing or proposed new nuclear facilities by ensuring that sufficient financial resources are available to fund all approved decommissioning activities should the licensee not be able to fulfill its obligations. Operationally, the Commission may also require that financial resources be available for termination of licensed activities other than for decommissioning of*

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	nuclear facilities." As a result, the CNSC will only issue a licence if Bruce Power is assessed to have an ability to provide adequate financial assurances.
10. Effects of the Environment on the Project	
a. Consideration of effects of the environment due to natural hazards, including effects from climate change, in determining site suitability and the preferred site option.	The effect of the environment on the Project will be assessed in the Impact Statement. To better understand how climate change may impact resilience and reliability of current operations at the Bruce Power site, Bruce Power is participating in Electric Power Research Institute's (EPRI) Climate READi (Climate Resilience and Adaptation Initiative) [R-23] and CHIP [R-24] (Climate Hazard Information and Projection) programs. These programs aim to develop a common framework for physical climate risk assessment, which includes facilitating climate data analysis and application to enhance planning, design, operation, and infrastructure investment. Bruce Power monitors changing environmental conditions, focusing on long-term trends, current conditions, physical and biological variables, as well as climate forecasts. This information is available in the 2024 Bruce Power Sustainability Report [R-25]. Water levels and increased water temperatures are of particular interest and are compared to the design basis of existing equipment to verify resilience to extreme weather events. Climatic forecasts will be integrated into the assessment during the Impact Statement phase. In addition, a Shoreline Natural Hazards Assessment will be conducted in 2025 to determine the flooding and erosion hazards on the Bruce Power site. This will be and used to identify vulnerable infrastructure such as existing roads, power plants, and administrative buildings as well as inform the future siting of components associated with the Project.
b. Consideration of potential flooding events in the evaluation of the storage and management plans for spent nuclear fuel at the waste facility site.	Effects of the environment, including surface water hazards, will be assessed in the Impact Statement.
11. Effects on Lands Outside of Ontario and Canada	
a. Need to clarify potential environment interactions of the Project with the wider Great Lakes ecosystem, including transboundary effects.	The potential environmental interactions of the Project with the wider Great Lakes ecosystem, including transboundary effects will be addressed in the Biophysical Environment and Effects of Accidents or Malfunctions sections of the Impact Statement.
b. Concern about potential effects on health and environmental conditions from accidents and malfunctions resulting from the Project on people, lands and waters outside Ontario.	Bruce Power will be undertaking an Assessment of Accidents or Malfunctions as part of the Impact Statement.
12. Fish and Fish Habitat	
a. Need to understand potential thermal effects on fish and fish habitat and aquatic species at risk, including but not limited to American Eel and Lake Whitefish egg, larval, and juvenile development. Potential for thermal plumes to act as a fish attractant. ♦	The potential thermal effects on fish and fish habitat and aquatic species at risk will be assessed in the Impact Statement.

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b. Need to understand potential effects from all project components and activities throughout its lifecycle on fish migration, recruitment, mortality (e.g. gizzard shad, lake whitefish etc.), health, spawning in adjacent spawning shoals, and on the spread or establishment of invasive species in fish habitat.	The potential effects of the Project on fish and fish habitat will be assessed as part of the Impact Statement.
c. Concern about potential for fish impingement and entrainment on local fish and aquatic species at risk populations, including eggs, larvae, juveniles and adults. ♦	The potential impacts related to fish impingement and entrainment will be assessed in the fish and fish habitat sections of the Impact Statement and will be considered as part of the assessment of preferred cooling water and intake outfall technologies.
d. Need to understand potential effects on benthic invertebrates through multiple pathways (e.g. effluent, thermal plume and/or entrainment and impingement) as benthic invertebrates have a vital role in aquatic ecosystems. ♦	The potential effects to benthic invertebrates from multiple pathways will be assessed in the Impact Statement.
e. Need to consider effects of the Project on fish and fish habitat in general with a focus of species of interest to the Saugeen Ojibway Nation; including but not limited to lake whitefish, lake sturgeon, yellow perch, suckers, bass, northern pike, and walleye. ♦	The potential effects of the Project on fish and fish habitat will be assessed in the Impact Statement. Bruce Power will engage SON to determine how species of interest to SON are included in the assessment.
f. Request to share information with the Saugeen Ojibway Nation on proposed baseline studies on fish and fish habitat, including biological indicator species, such as benthic invertebrate species. ♦	Available information on baseline studies has been shared with SON, and additional information will be shared towards developing collaborative approaches to studies that will be completed as part of the Impact Statement. Potential impacts to fish and fish habitat will be assessed in the Impact Statement.
g. Clarify whether the Project would result in an exceedance of the current thermal release maximum. ♦	The potential for exceedances of the current thermal release maximum is dependent on the selection and design characteristics of the outfall, location of outfall with respect to water current and depth as well as changing water temperature due to climate change. The effects of these aspects will be assessed in the Impact Statement and integrated into the Thermal Risk Assessment
13. Follow-up and Monitoring Programs	
a. Comment that mitigation measures and robust monitoring programs should be developed to avoid impacts to species at risk and their habitat, including critical habitat. Request that these plans should be provided to Indigenous Nations and communities for review and comment, if they choose to do so. ♦	Mitigation measures and monitoring programs will be included as part of the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities, local municipalities, and the public during the Impact Statement.
b. Request for further information on anticipated long-term monitoring plans during the decommissioning phase to the end of abandonment. ♦	Bruce Power will provide a proposed plan for decommissioning as part of its application for a LTPS application in accordance with the requirements of the *Class I Nuclear Facilities Regulations*, Section 3(k). Bruce Power would be required to submit an application for a licence to decommission to the CNSC and detail all elements required by the *Class I Facility Regulations, 2000*, Section 7, including details with respect to: • The proposed measures, methods, and procedures for carrying on the decommissioning; • The nature and extent of any radioactive contamination at the nuclear facility; • The effects on the environment and the health and safety of persons that may result from the decommissioning, and the measures that will be taken to prevent or mitigate those effects.

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	• The proposed location of points of release, the proposed maximum quantities and concentrations, and the anticipated volume and flow rate of releases of nuclear substances and hazardous substances into the environment, including their physical, chemical and radiological characteristics; • The proposed measures to control releases of nuclear substances and hazardous substances into the environment; • The proposed measures to prevent or mitigate the effects of accidental releases of nuclear substances and hazardous substances on the environment, the health and safety of persons and the maintenance of national security, including emergency response plan; and • A description of the planned state of the site on completion of the decommissioning. The NSCA limits the CNSC to issuing a decommissioning licence only to those applicants who are qualified and will make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.
14. Human Health and Well-Being	
a. Need to clarify health effect pathways based on Project interactions with the environment, including all potential contaminants and exposure pathways during all phases of the Project and the views of potentially impacted human receptors.	Health effect pathways based on Project interactions with the environment during all Project phases will be addressed in the Impact Statement together with views of potentially impacted human receptors, if available. Health baseline and effects will be assessed in the Impact Statement. An overview of pathways is included in Appendix A.
b. Concern about potential changes to drinking and recreational water sources resulting in health effects. Need to identify the location of all existing and potential future human receptors, including drinking and recreational water sources.	Potential effects to drinking and recreational water sources resulting in health effects and associated human receptors will be addressed in the Impact Statement.
c. Clarify whether the representative persons used in the radiological dose calculations result in measures that are protective of Indigenous persons.	The radiological dose calculations are protective (bounding) of Indigenous Peoples through the implementation and refinement of the hunter/fisher receptor in the radiological HHRA, which is available in the 2022 ERA [R-18]. The hunter/fisher receptor is defined as an individual who catches and consumes wild game and fish in significantly greater quantities than other residents. In this context, the hunter/fisher receptor is representative of Indigenous populations for the purposes of assessing risks to human health from the Project. Bruce Power previously engaged Indigenous Nations and Communities regarding diet / food sources and consumption as part of assessing radiological risks for Bruce Power's 2022 ERA [R-18]. Bruce Power conducted surveys, developed in conjunction with SON, MNO and HSM from 2019 – 2021 to refine intake rates for wild game and fish that previously assumed to be 95th percentile results from the FNFNES. Surveys included information about diet, sources of food and water, and the use of wild flora for medicinal and ceremonial purposes. The data from these surveys was used to verify the intake rates and local intake fractions of fish, wild game, and other foodstuffs to ensure that the assessment is representative of the

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	characteristics of Indigenous residents living near the Bruce Power site. Bruce Power is not aware of a public source for this information and would only disclose information shared by Indigenous Nations and Communities with expressed permission. Further discussion with Indigenous Nations and Communities will continue for potential refinement of scenarios, such as the hunter/fisher receptor, for the HHRA.
15. Indigenous Interests[2]	
a. Concerns about the level of detail pertaining to Indigenous engagement. Bruce Power is expected to provide details of engagement activities, including content shared and information received, the involvement of community leadership, hunters, fishers, Elders, youth, and women. The documentation should include the main issues raised by each Indigenous group and Bruce Power's responses, including how matters have been or will be addressed.	Out of respect for each Indigenous Nation and Community that Bruce Power engages with, the level of detail pertaining to Indigenous engagement is disclosed based on what each Indigenous Nation and Community determines is appropriate, and how they would like their information shared. As Bruce Power develops the Impact Statement, Bruce Power will work with Indigenous Nations and Communities to determine the most appropriate ways to share our engagement and to document how issues and concerns raised during our engagement have been addressed. Bruce Power also respects decisions and engagement protocols set out by Indigenous Nations and Communities to lead their own engagement activities with Community members, independent of Bruce Power, and perspectives that Bruce Power should not carry out engagement activities in Community or directly with Community members.
b. Lack of details regarding opportunities for collaboration with Indigenous Nations and communities during the assessment process. Bruce Power would be expected to share information about the Project and collaborate on the assessment on potential impacts to rights with all potentially affected Indigenous Nations and communities, as advised by IAAC. ♦	Bruce Power has and will continue to engage and collaborate with Indigenous Nations and Communities who have identified to Bruce Power that their rights may be impacted by the Project. Bruce Power will work with the Indigenous Nations and Communities on the assessment of potential impacts to rights; however, there is an understanding that Indigenous Nations and Communities may want to carry out the assessment of potential impacts to rights on their own and provide those assessments directly to IAAC. Bruce Power respects the fact that Indigenous Nations and Communities should be the ones to tell the proponent and IAAC if or how the Project could impact their rights.
c. Need to indicate how Bruce Power will provide sufficient information to Indigenous Nations and communities on the selected technologies throughout the IA process, how it will continue to follow-up with Indigenous Nations once the technology is selected, and how it will develop appropriate mitigation	Bruce Power has not decided on a specific reactor design technology for the Project. Accordingly, the IA uses a technology neutral approach through use of a bounding Plant Parameter Envelope (PPE) as the

[2] *Note:* Issues relevant to Indigenous Interests and raised by Indigenous Peoples are interwoven across multiple categories of issues and identified using the symbol "♦". The following section of the Summary of Issues focuses on issues pertaining to consultation and engagement with Indigenous Peoples, integration of Indigenous Knowledge, the current use of lands and resources for traditional purposes by Indigenous Peoples, Indigenous health and well-being, and potential impacts on the rights of Indigenous Peoples.

The issues are presented here in a consolidated manner to better convey the original comments. Bruce Power is strongly encouraged to refer to original comments on the Registry Site when preparing the response on how they intend to address issues raised by Indigenous Peoples.

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or accommodation measures with Indigenous Nations and communities for any of the potential technologies being considered.	project basis. Information about the reactor technologies that will be considered as part of the PPE approach were included in the Bruce C IPD. Irrespective of the technology that is ultimately chosen, Bruce Power will use the PPE to identify the potential impacts of each reactor design while at the same time ensuring that the assessment of effects is conservative. The bounding parameters of the PPE will inform the pathways of effect on health, social, cultural and economic conditions, as well as impacts on Indigenous Nations and Communities which will be carried through the assessment. Bruce Power has begun to share information with Indigenous Nations and Communities regarding the types of reactor technologies considered in the PPE and will share more information and engage in discussions on the PPE and reactor technologies throughout the IA process via the established engagement processes developed with each Indigenous Nation and Community.
d. Request for Bruce Power to clarify how they intend to include Indigenous Nations and communities' membership from both on and off reserve in engagement activities.	Bruce Power will only engage directly with the membership of Indigenous Nations and Communities at the direction of the Indigenous Nations and Communities. Currently, the Indigenous Nations and Communities Bruce Power routinely engage with take the lead on Community engagement and disseminating information to their Membership. If requested by Indigenous Nations and Communities, Bruce Power can host and/or participate in Community engagement or information events to share information and engage in discussions relevant to the Project and the Project's IA. Bruce Power has publicly accessible information available through our website for the Project, the IAAC registry, as well as mail-outs that are distributed locally. Information and links to these information sources are regularly shared on social media and print media resources. Off-reserve membership can access information through these sources. Bruce Power does not have access to membership mailing lists to share information with off-reserve members of Indigenous Nations and Communities but can provide hard copy (paper) information for mail-out.
e. Concern that the assessment process timelines and the lack of information on project design would limit the possibility for a comprehensive Project assessment by Indigenous Nations and communities. ♦	Bruce Power is committed to working with Indigenous Nations and Communities to ensure IA timelines enable engagement, collaboration, and Indigenous Nation-led assessments. Bruce Power must also make best efforts to work within the timeline and process set out by IAAC. Bruce Power will continue to engage with Indigenous Nations and Communities as the Project description and design are refined as part of the Impact Statement.
f. Use of consistent terminology should be applied, including referring to the Saugeen Ojibway Nation burial site as Jiibegmegoong. ♦	We acknowledge the inconsistent name use in the Bruce C IPD when referring to the SON burial site within the Bruce Power site. We will ensure that any future reference to the burial site is as Jiibegmegoong.

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g. Importance of providing opportunities for the sharing of culturally important information from Indigenous Nations and communities who wish to be meaningfully engaged, including but not limited to the Chippewas of Kettle and Stony Point First Nation. ♦	Bruce Power will engage with Indigenous Nations and Communities, including CKSPFN to ensure opportunities for sharing culturally important information in the IA.
h. Clarify how Bruce Power will consider and integrate Indigenous decision-making, Indigenous Knowledge and values, including consideration of free, prior and informed consent, in this project-specific decision making. Need to assess effects of the Project and process on Indigenous governance. ♦	Bruce Power will work with Indigenous Nations and Communities to ensure that Indigenous Knowledge Systems are part of the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities and work collaboratively throughout the IA process to gain support for the Project.
i. Respect of the United Nations Declaration on the Rights of Indigenous Peoples in the context of radioactive waste management and decommissioning, including meaningful engagement with Indigenous peoples, recognizing their unique status and rights, and ensuring their participation in the planning, development, and operation of radioactive waste management projects so that they can provide their consent to waste management solutions. ♦	Bruce Power will meaningfully engage Indigenous Nations and Communities on the assessment of radioactive waste management options and impacts as part of the Impact Statement.
j. Importance of providing sufficient information to clearly understand the Project's pathways of effects that could result in effects on Indigenous Peoples[3] and impacts on their rights. For example, a key issue is the potential impact on Indigenous health, fishing practices, and governance rights resulting from changes to fish and fish habitat and water quality, including in water temperature. Bruce Power would be expected to provide sufficiently detailed information to assess the effects from the new intake and discharge structures on Lake Huron to valued components that affect the practice of Aboriginal and Treaty rights. ♦	Bruce Power will assess the potential impacts and interactions of the Project with VCs during the Impact Statement, and work with Indigenous Nations and Communities to develop an understanding of potential impacts to Aboriginal and treaty rights.
k. Concern about the lack of detail on the historical and ecological importance of the Inverhuron area to the Saugeen Ojibway Nation. ♦	Bruce Power is working collaboratively with SON's Archaeological and Fisheries Programs through the Archaeological Assessments within the siting footprint for the Project. Through this collaborative work, Bruce Power will update our characterization of the local area to ensure sufficient detail is provided regarding the importance of local environments (such as Inverhuron).
l. Concerns about the protection of Saugeen Ojibway Nation sacred sites and culturally significant locations. Need to describe existing and proposed measures for the protection of culturally significant areas, including the manner in which the Saugeen Ojibway Nation has been consulted on the development of these measures. ♦	The Jiibegmegoong site is within the Bruce Power existing site fence, but not in an area under lease by Bruce Power. The Jiibegmegoong site was considered an exclusion (i.e., not an area considered for potential development) as part of the siting process. Additional information on the siting process is included in Appendix A. Bruce Power has worked and will continue to work collaboratively with SON's Archaeology Program to ensure that any previously unidentified or mischaracterized cultural or sacred sites are identified and protected.

[3] Per section 2(1) of the IAA:
(c) with respect to the Indigenous peoples of Canada, an impact — occurring in Canada and resulting from any change to the environment — on (i) physical and cultural heritage, (ii) the current use of lands and resources for traditional purposes, or (iii) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance;
(d) any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada;

Issues	Bruce Power Response
m. Concerns about the potential impacts of an increased human population and development in Saugeen Ojibway Nation Territory on the landscape and the ability of Saugeen Ojibway Nation members to fish or harvest and practice their rights. ♦	Bruce Power will work with SON through the Cumulative Effects Assessment to better understand and determine the potential impact of increased human activity on the environment of SON Territory and on the ability for SON members to carry out their way of life and practice their rights.
n. Concerns about the potential impacts on the effectiveness of fishers through the loss of Indigenous knowledge from loss of access to preferred fishing areas or loss of fish as a result of the project. ♦	Bruce Power will work with Indigenous Nations and Communities to better understand concerns regarding loss of Indigenous Knowledge resulting from loss of access to fishing areas. No physical exclusion, change, or loss of access to preferred fishing areas is anticipated to result from the Project. The Impact Statement will assess the potential direct and indirect impacts to fish and fish habitat and related potential impacts to Indigenous fishing. Avoidance and mitigation of impacts to fish and fish habitat will be prioritized. However, Bruce Power understands that there may be a perception and fear regarding radiological contaminants related to the Project that could result in changes to use of fishing area. Bruce Power will continue to work with Indigenous Nations and Communities through the Impact Statement to evaluate potential impacts on fish and fish habitat and Aboriginal and treaty fishing rights, and to avoid and mitigate impacts to fish and fish habitat. Additionally, Bruce Power aims to enhance information, education, and collaborative monitoring efforts to address perceptions of risk and address concerns related to radiological or other contaminants through the Impact Statement.
o. Lack of information about baseline characterization of the terrestrial ecology of Saugeen Ojibway Nation Territory. The Saugeen Ojibway Nation requests that the temporal boundaries for baseline conditions include the time prior to treaties, and prior to nuclear development at the site. ♦	Bruce Power will engage with Indigenous Nations and Communities in the development of the Cumulative Effects Assessment methodology, including discussing appropriate temporal boundaries. Bruce Power may leverage information from the existing environmental monitoring program, including information contained in the 2022 ERA which contained a PERA, to support the development of the Cumulative Effects Assessment methodology. Bruce Power's ongoing environmental monitoring efforts both on and off the Bruce Power site over the last several decades provides insights as to the cumulative effects of our operations, as well as supporting activities. Cumulative Effects will be more formally assessed in the Impact Statement.
p. Concerns regarding the archaeological investigations on the property not being conducted according to current provincial and Saugeen Ojibway Nation standards, with use of outdated maps within the proposed development envelope. ♦	Bruce Power and SON are collaborating on the Archaeological Assessments being completed as part of the development of the Impact Statement. Previous mapping concerns have been addressed and corrected.
q. Concerns about health inequalities between Indigenous Nations and communities and the general population and a health impact assessment should be tailored to each of the impacted communities. Indigenous Nations and communities should be offered the opportunity and the means to carry out their own assessment of project impacts on their health and well-being.	Bruce Power will engage with Indigenous Nations and Communities regarding socio-economic and health conditions and potential impacts of the Project and support Indigenous-led socio-economic and health assessments associated with the Project.
r. Clarity requested on how current monitoring results contribute to an understanding of impacts of site operations on Saugeen Ojibway Nation rights as stewards of the Land. ♦	SON and Bruce Power have been engaging over many years with a focus on Bruce Power's operations, monitoring programs and results and the potential impacts on SON Aboriginal and treaty rights based on the

Issues	Bruce Power Response
	results (e.g., impingement and entrainment, fish losses). Additional collaboration with SON through the Impact Statement will help us better understand how monitoring results relate to impacts to SON rights.
s. Concerns regarding economic impact inequity for Indigenous Peoples. Need for more information on the potential effects to economic conditions of local Indigenous Nations and communities (on and off reserves), including positive (e.g., training and hiring of community members, and Indigenous procurement) and negative effects (e.g. impacts to traditional territory and to traditional economic and resource use near the project site, affordable housing, cost of living, employment, education, and wage disparity). ♦	Bruce Power will continue to engage with Indigenous Nations and Communities to identify and assess socio-economic conditions and to assess potential impacts and benefits of the Project.
t. Concern regarding the impact of influx of temporary workers on Indigenous communities including crime, addiction and public health issues that are often associated.	Bruce Power will engage with Indigenous Nations and Communities regarding socio-economic and health conditions and potential impacts of the Project.
u. Request for involvement of Indigenous Nations and communities in the Socio-Economic Support Study to establish workforce and population projections as a result of the Project. ♦	Bruce Power welcomes the involvement of Indigenous Nations and Communities in the Socio-Economic Support Study.
v. Concerns about the lack of information on marine and terrestrial archeology and archaeological sites in the Project area and in Lake Huron (e.g. bathymetric mapping) and concern about potential impacts from the Project layout on previously established culturally sensitive and archeologically significant areas. ♦	Bruce Power will be working collaboratively with SON to undertake both Marine and Terrestrial Archaeology Assessments to inform the Impact Statement. Through our collaboration with SON, Bruce Power has excluded any known established culturally sensitive and archaeologically significant areas from our Project siting. Bruce Power will continue to incorporate assessment results and SON input to refine our siting process.
w. Potential impacts to Saugeen Ojibway Nation women's relationship with water, including their responsibility to protect the water as part of the assessment. ♦	Bruce Power maintains our commitment to collaborating with SON on the IA, including to better understand and explore the special relationship SON Women have with water and the potential impacts of the Project on these relationships.
16. Infrastructure and Services	
a. Concerns about the capacity of municipal governments to collaborate with provincial authorities and to secure funding and support required to upgrade the current regional infrastructure and services (healthcare services, hospital facilities) to meet the increased demands due to the Project and address the anticipated environmental and socio-economic impacts.	Bruce Power supports the efforts of municipalities in Bruce, Grey and Huron counties in articulating their unique challenges and the resources needed to meet current demand/growth and prepare for potential new energy infrastructure projects. Bruce Power is also financially supporting the municipalities of Kincardine, Saugeen Shores and Bruce County to ensure they have the capacity to participate in the IA process and is also prepared to allocate additional funding for a Socio-Economic Impact Review and/or additional studies related to the Project. Bruce Power is working with the Nuclear Innovation Institute (NII) and Clean Energy Frontier program to advocate to the federal and provincial governments for the interests of municipalities in Bruce, Grey and Huron counties. Bruce Power also supports the formation of a provincial multi-ministry table to engage with local municipalities to address anticipated impacts of the Project that fall within provincial jurisdiction.

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b. Concerns about potential effects of increased demand on healthcare services, childcare services and education, as well as community, recreational and emergency services.	The potential effects of Project-related increased demand on public services will be assessed in the Impact Statement.
c. Concerns about potential impacts of the Project on county and municipal infrastructure due to increased use of roads (e.g., intersections along Highway 21, intersection of Albert Street and Concession Road 2, and school transportation routes) and transportation infrastructure, public transit, sewer and water infrastructure, waste management. Concern that increased road traffic may cause unsafe conditions for active transportation (cyclists, pedestrians).	The potential socio-economic effects of the Project will be assessed in the Impact Statement.
d. Comments regarding influx of temporary workers as a result of the Project and the infrastructure and services required to support them (housing, transportation). ♦	The potential effects of Project-related increased demand on public services and infrastructure and housing due to any influx of temporary workers will be assessed in the Impact Statement.
17. Migratory Birds and Habitat	
a. Need to understand potential effects from all Project components and activities throughout its lifecycle on migratory birds and their habitat. Request to provide further information on migratory bird species that have the potential to be directly or indirectly affected by the Project.	Baseline information, potential effects and mitigation measures for migratory birds will be assessed in the Impact Statement. Currently, migratory birds are surveyed annually along the shoreline of the Bruce Power site and in Baie du Doré with the purpose of monitoring overwintering and stopover migration areas to trend species abundance and distribution over time. The shoreline of Bruce Power is surveyed for waterfowl and shorebirds with both binoculars and a spotting scope from a set of nine viewpoints which were selected to cover most of the shoreline from Gunn Point to Scott Point with very little overlap. There are three spring and three fall survey days each year for these surveys. Current information is provided in section 6.2.4.4 (Waterfowl and Shorebirds) of the 2023 Environmental Protection Report (EPR) [R-26]. Annual updates on biological surveys are provided in the Bruce Power EPR which is posted by May 1st each year.
18. Noise and Vibration	
a. Concern about the potential for Project activities (blasting) to cause on-land noise and vibration that may affect terrestrial wildlife including avian species and species at risk, in addition to underwater noise and vibration. Need for information on potential effects of on-land noise and vibration, as well as any planned on-land and underwater noise and vibration studies in the Project area.	The potential for Project activities (blasting) to cause effects to on-land and underwater biota will be assessed in the Impact Statement.
b. Potential impacts on recreational facilities and other sensitive receptors due to construction and noise vibrations. Need for plans to provide sufficient warning prior to of noise and vibration-intensive activities.	The potential effects of Project-related noise and vibration will be assessed in the Impact Statement. The Impact Statement will also include information on providing potential receptors with sufficient warning ahead of noise and vibration activities.
19. Project Activities	
a. Lack of detail on project components and activities during all project phases. Need to understand all waste and emissions that could be generated during all phases of the project and how these would be managed. See also Table I of this Summary of Issues.	Project activities associated with site preparation, construction, operation, decommissioning and abandonment of the Project are included in Section 9 of the Bruce C IPD [R-3] . The Project activities will continue to be refined as the Project progresses and will be detailed in the Impact Statement for the Project.

Issues	Bruce Power Response
	Bruce Power is currently completing an Alternative Means Assessment which includes proposed site layout scenarios. Information in the Bruce C IPD included site maps and information on proposed site layout scenarios including the location of the potential fenced facility and areas being assessed for supporting infrastructure. Bruce Power is currently completing several engineering, environmental and feasibility studies, and engagement to determine locations of Project components and infrastructure, which will inform the Alternatives Means Assessment and assessed in the Impact Statement. The siting layout scenarios are also being developed through input from the reactor vendors involved with Bruce Power's technology evaluation Request for Information Process, as well as input from constructors. Bruce Power will be engaging with Indigenous Nations and Communities on the proposed Project component locations and the studies being completed. The studies being completed to support Project component and infrastructure siting include: • Wetland Functions Assessment • Geotechnical Assessment • Hydrogeological Assessment • Soil Sampling • Archaeology Assessments • Water Intake and Outfall Feasibility • Transportation Assessment Detailed information on Project components, activities, and waste and emission sources will be provided and assessed as part of the Impact Statement. Additional information on the siting process is provided in Appendix A.
b. Need to determine restoration requirements, including offsetting ratios, in consultation with Indigenous Nations and communities. ♦	Bruce Power will engage Indigenous Nations and Communities in developing appropriate approaches to offset environmental impacts, including but not limited to restoration projects. Bruce Power has previously worked with Indigenous Nations and Communities developing appropriate restoration or offsetting measures (outside of standard measures commonly used such as stocking) as part of our Fisheries Act Authorization (FAA) process for existing operations.
20. Project Contribution to Sustainability	
a. Need to understand potential to use sustainable building practices and materials in Project construction and energy efficient measures throughout the lifecycle.	The BATEA Assessment will include mitigation measures and best practices including those associated with sustainable building materials and alternative energy sources. Additional information on the BATEA Assessment is included in Appendix A.
21. Public and Stakeholder Engagement	
a. Concerns about financial burden for Bruce County and municipalities to participate in the process for the Project and need for sources of municipal capacity funding to facilitate meaningful participation.	Bruce Power will be engaging with local municipal governments throughout the IA process. Through meetings and engagement with the Municipality of Kincardine, Town of Saugeen Shores, and County of Bruce to date, Bruce Power understands that capacity funding is required for the municipalities to fully

Issues	Bruce Power Response
	participate in the IA process. Bruce Power is providing funding for dedicated staff to support timely and focused information and input into the IA process. Bruce Power is also prepared to allocate additional funding for a Socio-Economic Impact Review and/or additional studies related to the Project.
b. Need to plan engagement activities for local residents and municipalities. Need to consider methods and strategies to ensure participation and solicit input from regional municipalities, as well as from marginalized, vulnerable or underrepresented populations.	Bruce Power is committed to proactive, open, and transparent engagement and will provide multiple opportunities for input, both in-person and virtually. Bruce Power recognizes the importance of people's voice in the IA process and will utilize a variety of information-sharing and engagement tools to reflect and meet the needs of the community. Efforts will be made to create inclusive, supportive, and welcoming engagement environments. Bruce Power will use Gender Based Analysis Plus (GBA Plus) to inform engagement strategies and to assess potential impacts of the Project. Bruce Power will provide regular engagement opportunities to ensure all municipalities in Bruce, Grey and Huron counties receive Project information and are provided an opportunity to ask questions and provide feedback on the proposed Project. Bruce Power will work with interested local municipal councils to understand their preferred way to receive information and participate in the IA process.
22. Reactor Designs and Plant Parameter Envelope (PPE) Approach	
a. Need to understand the production processes of each technology listed in the PPE, including the maximum capacity for each.	The maximum capacity of the reactor technologies under consideration is included in the PPE. The PPE will be included as part of the Impact Statement for the Project. Bruce Power will engage on the use of the PPE in the IA process.
b. Concern that use of multiple reactor technologies and condenser cooling options considered in the Plant Parameter Envelope (PPE) does not provide transparency for pathways of effects. Need to understand reactor technologies and condenser cooling options considered and their respective pathways of effects, including sourcing of fuel and heavy water, GHG emissions, accidents and malfunctions risks, waste management challenges and proliferation concerns. ♦	Bruce Power has not decided on a specific reactor design technology; accordingly, the Project description uses a technology neutral approach through use of a bounding PPE as the Project basis. A PPE provides an assessment of the likely effects of the Project by using typical bounding conditions to encompass the range of potential reactor designs. The PPE approach is used to ensure that the IA provides a conservative assessment of effects, considering any of the reactor technologies that may be chosen. This approach provides sufficient bounding parameters and characteristics to enable an assessment of impacts to be made without a need to select specific reactor technologies. Irrespective of the technology that is ultimately chosen, Bruce Power will use the PPE to identify the potential environmental impacts of each reactor design while at the same time ensuring that the assessment of effects is conservative. The bounding parameters of the PPE will inform the pathways of effect on health, social, cultural and economic conditions, as well as impacts on Indigenous Nations and Communities which will be carried through the assessment. Bruce Power will engage on the use of the PPE in the IA process. Condenser cooling options will be included in the BATEA and discussed in the Alternative Means Assessment. Cooling options will be assessed in the Impact Statement. Bruce Power will engage with Indigenous Nations and Communities and the public on the BATEA and Alternatives Means Assessment.

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c. Need to understand the radioactive and non-radioactive waste management systems anticipated for the reactor technologies considered within the PPE, including pre-disposal management, decommissioning of facilities, and waste disposal, in accordance with Canada's Policy for Radioactive Waste Management and Decommissioning, the Integrated Strategy for Radioactive Waste, and the *Nuclear Fuel Waste Act*. ♦	Bruce Power has not decided on a specific reactor design technology, accordingly, the Project description uses a technology neutral approach through use of a bounding PPE as the Project basis. A PPE provides an assessment of the likely effects of the Project by using typical bounding conditions to encompass the range of potential reactor designs. The PPE approach is used to ensure that the IA provides a conservative assessment of effects, considering any of the reactor technologies that may be chosen. This approach provides sufficient bounding parameters and characteristics to enable an assessment of impacts to be made without a need to understand specific reactor technologies or condenser cooling options. Irrespective of the technology that is ultimately chosen, Bruce Power will use the PPE to identify the potential environmental impacts of each reactor design while at the same time ensuring that the assessment of effects is conservative. The bounding parameters of the PPE will inform the pathways of effect on health, social, cultural and economic conditions, as well as impacts on Indigenous Nations and Communities which will be carried through the assessment. Bruce Power will engage on the use of the PPE in the IA process. Waste management and decommissioning strategies will be included in the Impact Statement. As discussed in Table 1, based on the information currently known, it is anticipated that the Impact Statement will assess the effects of alternatives for waste management associated with the Project including: • Interim storage of low-level and intermediate-level waste at one or more existing or new appropriately licensed facilities • Interim storage of high-level waste at an existing or new appropriately licensed facility at the Bruce Power site, with high-level waste contained in fuel specific dry storage containers • The assessment will assume permanent storage of used nuclear fuel as well as non-fuel high and intermediate-level radioactive waste in a DGR implemented and managed by NWMO [R-9].
d. Interest in a feasibility and level of impact analysis for Bruce A, B and C that includes cooling tower and/or air-cooling technology. ♦	The Project's IA will involve the Bruce C Project only, and not the alteration of any existing infrastructure for Bruce A and Bruce B.
e. Need to clarify the contractual relationship between the Bruce Power and OPG related to the selection of technology for the project, including assignment of liabilities and cost exposure, and whether OPG can direct or influence the selection of reactor technology.	Bruce Power is engaged in a technology evaluation process. There is no contractual relationship between Bruce Power and OPG that would assign liabilities and cost exposure from Bruce Power to OPG related to the Project, nor any provision that gives OPG the right to direct or influence the selection of reactor technology. Bruce Power has the authority to select the technology the company believes is best for the Project. However, given the broader impact this will have on the Province, this will be a collaboration with OPG and the Ontario Government.
23. Proliferation and Security Risks	
a. Need for further information on the proliferation and security risks related to fuel sourcing and production, fuel operations, and fuel waste generation and management for the Project.	Canada is committed, as a nation, to a policy on nuclear non-proliferation and disarmament based on the Treaty on the Non-Proliferation of Nuclear Weapons and reinforced by related initiatives. Canada seeks to halt the spread of nuclear weapons, reduce existing stockpiles, and irreversibly eliminate them [R-27].

Issues	Bruce Power Response
	Canada's nuclear non-proliferation policy establishes the conditions under which Canada is prepared to undertake nuclear cooperation with partner countries. Any country wishing to enter into nuclear cooperation with Canada must conclude a legally-binding Nuclear Cooperation Agreement (NCA) that includes: • Assurances that Canadian nuclear exports will be used only for peaceful purposes • The application of the International Atomic Energy Agency (IAEA) safeguards and provisions for the implementation of bilateral safeguards in the event that IAEA safeguards no longer apply • Canadian control over retransfers to third parties of Canadian nuclear items subject to NCA • Controls over the reprocessing of any Canadian spent nuclear fuel • Limitation on enrichment of Canadian nuclear material to less than 20% • Requirements for physical protection measures. The provisions of Nuclear Cooperation Agreements apply to items directly or indirectly exported from Canada. They also apply to non-Canadian equipment or nuclear material used in conjunction with Canadian nuclear items and to equipment manufactured on the basis of technology provided by Canada. Bruce Power is also committed to the policy on nuclear non-proliferation and disarmament and regularly welcomes inspections carried out by the IAEA. The inspections ensure the nuclear materials in our possession remain in accordance with Canada's international commitments to nuclear safeguards. Bruce Power will provide information specific to the implementation of safeguards for Bruce C as part of any licence application in accordance with the requirements of the *General Nuclear Safety and Control Regulations, 2000* Clauses (g) and (h) and the C*lass I Nuclear Facilities Regulations*, Clauses 5(h), 6(f).and 7(d). In turn, the NSCA limits the CNSC, and licences can only be issued to those applicants who are qualified and will make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.
b. Concern about consideration of reactor technologies that uses plutonium extracted from CANDU fuel or enriched uranium as fuel increases risk of nuclear weapons proliferation.	Canada is committed, as a nation, to a policy on nuclear non-proliferation and disarmament based on the Treaty on the Non-Proliferation of Nuclear Weapons and reinforced by related initiatives. Canada seeks to halt the spread of nuclear weapons, reduce existing stockpiles, and irreversibly eliminate them. Canada's nuclear non-proliferation policy establishes the conditions under which Canada is prepared to undertake nuclear cooperation with partner countries. Any country wishing to enter into nuclear cooperation with Canada must conclude a legally-binding Nuclear Cooperation Agreement that includes:

Issues	Bruce Power Response
	• Assurances that Canadian nuclear exports will be used only for peaceful purposes • The application of IAEA safeguards and provisions for the implementation of bilateral safeguards in the event that IAEA safeguards no longer apply • Canadian control over retransfers to third parties of Canadian nuclear items subject to the NCA • Controls over the reprocessing of any Canadian spent nuclear fuel • Limitation on enrichment of Canadian nuclear material to less than 20% • Requirements for physical protection measures. The provisions of Nuclear Cooperation Agreements apply to items directly or indirectly exported from Canada. They also apply to non-Canadian equipment or nuclear material used in conjunction with Canadian nuclear items and to equipment manufactured on the basis of technology provided by Canada. Bruce Power is also committed to the policy on nuclear non-proliferation and disarmament and regularly welcomes inspections carried out by the IAEA . The inspections ensure the nuclear materials in our possession remain in accordance with Canadaûs international commitments to nuclear safeguards. Bruce Power will provide information specific to the implementation of safeguards related to the Project as part of any applicable licence application in accordance with the requirements of the *General Nuclear Safety and Control Regulations, 2000* Clauses (g) and (h) and the C*lass I Nuclear Facilities Regulations*, Clauses 5(h), 6(f).and 7(d). In turn, the NSCA limits the CNSC to issuing licences only to those applicants who are qualified and will make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.
24. Species at Risk, Terrestrial Wildlife, and their Habitat	
a. Concern that potential effects to the Western Chorus Frog, a federal species at risk, are not considered. Bruce Power would need to provide additional information on the presence of Western Chorus Frog in the project area, including maps.	In 2023, Western Chorus Frogs (*Pseudacris triseriata*) were heard at a call level of 1 at the DGR/MMP 3 location (see figure 51 in 2023 EPR [R-26], during unrelated early season nocturnal owl surveys. It has not been recorded in any of the amphibian surveys from 2017 to 2022 but has historically been observed on the Bruce Power site. There is potential for Western Chorus Frogs to occur within the areas of proposed development on the Bruce Power site. Future surveys for the Western Chorus Frog will be completed in advance of the typical starting window for the other local amphibian species following the Draft Western Chorus Frog Detection Protocol for Ontario. Potential effects to the Western Chorus Frog will be assessed in the Impact Statement.
b. Concerns on how invasive populations will be controlled or eradicated. Need to consider whether Ontario's Invasive Species guidelines are applicable and would be implemented for the Project.	The Ontario invasive species guidelines may be implemented on a case-by-case basis when greater information on the source of materials for the Project are known. The environmental best practices

Issues	Bruce Power Response
	implemented at Bruce Power include several methods that aim to support Bruce Powerôs commitments to reducing the environmental impacts of operations as stated in the Environmental and Sustainability and Biodiversity Polices. The best practices that help minimize the spread of invasive species during site-projects and construction activities include sourcing of local materials (especially mixed organic materials), on-site re-use of soil/fill, and re-seeding with native plants.
c. Concern about potential effects to bat species at risk due to removal of vegetation.	A comprehensive bat acoustic monitoring survey of the Bruce Power site is planned for 2025. Potential effects to bat species will be assessed in the Impact Statement.
d. Need to identify the species at risk present within the three proposed Bruce C locations and provide maps of the areas where camera traps were located.	A complete list of Species at Risk (SAR) with moderate or high potential to occur on the Bruce Power site is provided in Table 11 of the ERA appendix [R-28]. Annual updates on biological surveys are provided in the Bruce Power EPR which is posted by May 1st each year. Information related to SAR will be provided in the Impact Statement. Additional information about the siting process is included in Appendix A.
25. Vulnerable Population Groups and Gender-based Analysis Plus (GBA Plus)	
a. Need further information on how Bruce Power will consider GBA Plus in the assessment of health, social and economic impacts to improve project design and develop mitigation measures that address differential impacts on historically excluded or underrepresented groups.	The Impact Statement will include health, social, and economic baselines, including disaggregated information about diverse groups within potentially affected populations gathered through research and engagement to facilitate the use of the analytical tool of GBA Plus. The Impact Statement will consider potentially differential effects and management measures for those diverse groups.
b. Need further information on how social, economic and health baseline data will consider GBA Plus and include disaggregated data.	The Impact Statement will include health, social, and economic baselines, including disaggregated information about diverse groups within potentially affected populations gathered through research and engagement to facilitate the use of the analytical tool of GBA Plus. The Impact Statement will consider potentially differential effects and management measures for those diverse groups.
c. Need to understand how Bruce Power will consider the potential risks of gender-based violence as a result of increased population of a transient workforce, as part of health and safety assessments.	The potential for gender-based violence and associated mitigation measures will be assessed in the Impact Statement.
26. Water – Groundwater and Surface Water	
a. Need to understand the potential effects from all Project components and activities throughout its lifecycle on groundwater and surface water quality, including effects resulting from decommissioning and reclaiming the Bruce C site. For example, concern about capacity for water to support the health and wellbeing of animals, plants, and people that rely on it. Dž	Effects to groundwater and surface water will be assessed as part of the Impact Statement. Potential effects to groundwater and surface water from current operations are assessed in the 2022 ERA [R-18] through a Groundwater Protection Program (GWPP) and surface water monitoring program. The GWPP is in alignment with CSA N288.7-15, *Groundwater Protection Programs at Class 1 Nuclear Facilities and Uranium Mines and Mills.*
b. Need to understand the potential effects of the Project components and activities on stormwater water runoff. Need to consider recent storm events in the design of stormwater management infrastructure and the effects of vegetation removal on increased rates of erosion and reduced infiltration.	A site water management plan for the Projectôs lifecycle will be included in the Impact Statement for the Project which will include stormwater management.

Issues	Bruce Power Response
27. Wetland Environments	
a. Need to understand the potential direct and indirect effects, mitigation measures, monitoring plans and residual effects on wetlands and wetland functions during all project phases as it relates to valued components (including biological, social, hydrological, migratory birds, species at risk). ♦	Potential direct and indirect effects on wetland and wetland functions will be assessed in the Impact Statement. A Wetlands Functions Assessment is currently being conducted to determine the locations and hydrological connection of wetlands within the lands to be assessed for the Project. The results from the Wetland Functions Assessment are being integrated into the siting considerations for the Project.

APPENDIX A:
UPDATE ON STUDIES SUPPORTING RESPONSE TO SUMMARY OF ISSUES

SITING PROCESS

As outlined in the Bruce C IPD [R-3], during the Pre-Planning Phase of the Project's IA, Bruce Power commenced a siting process to support a thorough understanding of potential constraints and opportunities at the Bruce Power site. The objective of the siting process is to support conceptual layout development and evaluate suitable areas for potential development to inform the IA. The siting process was completed in two stages, comprised of a Site Suitability Screening Analysis and Site Options Analysis.

The initial step in the siting process was the completion of the Site Suitability Analysis, which involved a screening analysis to understand constraints and opportunities at the Bruce Power site. A series of workshops evaluated suitable areas for potential development on the Bruce Power site with the objective to characterize the site relating to land footprint suitability and to define the Project for IA purposes. To complete the analysis, the siting team utilized GoldSET©. GoldSET© is a suite of geographical information systems and web-based tools that integrates a rigorous, multi-criteria analysis (MCA) approach, geospatial information management and the ability to evaluate Project performance (e.g., siting) based on key considerations. Based on the MCA approach, GoldSET© is driven by spatial information to evaluate site suitability and options analysis. The tool is designed to offer a simple and systematic process to evaluate Project alternatives and also provides a simple and intuitive visual representation of results. This makes it easier to interpret the meaning of the results and can also be used to support communications and promote better understanding among various stakeholders. The framework facilitates communication about the key impacts, benefits, and drawbacks of different alternatives, and provides traceability and transparency throughout the decision-making process. As part of the siting process, the Electric Power Research Institute's (EPRI) siting guide (Advanced Nuclear Technology Site Selection and Evaluation Criteria for New Nuclear Energy Generation Facilities) [R-29] was also reviewed and utilized, specifically the recommended siting procedure and siting criteria. A list of indicators was identified and compiled into environmental, technical/cost, cultural, and social themes which were further categorized into exclusions, constraints, opportunities, background and screened considerations.

The Site Options Analysis continued the work completed as part of the Site Suitability Analysis. The analysis provides detailed information on considerations to allow for informed decision-making to support the Project description for IA purposes. The Site Options Analysis also utilized GoldSET© and the Electric Power Research Institute's Siting Guide [R-29]. The Site Options Analysis delineated the lands to be assessed for the IA into three Siting Scenarios, referred to as Siting Scenario 1, Siting Scenario 2, and Siting Scenario 3 which were provided as figures in the Bruce C IPD. The analysis included a review of the existing constraints and opportunities for each of the three siting scenarios for input into the GoldSET© model. Each criterion was assigned a

quantitative or qualitative weight, and the siting scenarios were ranked relative to each other.

Bruce Power is currently completing several engineering, environmental and feasibility studies, and engagement to determine locations of Project components and infrastructure. The siting layout scenarios are also being refined through input from the reactor vendors involved with Bruce Power's Technology Evaluation Request for Information Process, as well as input from constructors. The outcome of the siting process will inform the Alternatives Means Assessment and siting scenarios that will be assessed in the Impact Statement. The studies being completed to support Project component and infrastructure siting include:

- Wetland Functions Assessment;
- Geotechnical Assessment;
- Hydrogeological Assessment;
- Soil Sampling;
- Archaeology Assessments;
- Water Intake and Outfall Feasibility; and
- Transportation Assessment.

The siting areas and scenarios will continue to be refined through engagement with Indigenous Nations and Communities and environmental and feasibility studies being completed to support the IA. Information in the Bruce C IPD included site maps and information on proposed site layout scenarios including the location of the potential fenced facility and areas being assessed for supporting infrastructure. An Alternative Means Assessment will be included in the Impact Statement for the Project to consider alternative means of achieving the Project's objective of producing up to 4,800 MWe of new nuclear generating capacity at the Bruce Power site. Bruce Power will be engaging with Indigenous Nations and Communities and the public on the preferred and alternative locations on the Bruce Power site as part of the Alternative Means Assessment.

BEST AVAILABLE TECHNOLOGIES ECONOMICALLY ACHIEVABLE ASSESSMENT

A Best Available Technologies and Techniques Economically Achievable (BATEA) assessment is a systematic approach used for transparent and comprehensive selection of technologies and techniques to mitigate potential effects from the Project. It supports continuous improvement and environmental protection through assessment of effectiveness and economic achievability of best practices utilized across all industries.

As part of the IA, the TISG will include Project specific considerations for alternative means and mitigation measures. The purpose of the BATEA assessment is to inform the alternative means assessment and mitigation measures associated with environmental impacts in the Impact Statement.

Using draft TISGs for nuclear projects provided by IAAC prior to the anticipated Project specific TISG, Bruce Power began scoping the BATEA Assessment. The Draft TISG includes requirements from REGDOC-2.9.2, Environmental Protection: Controlling Releases to the Environment which was published by the CNSC in 2024. REGDOC-2.9.2 requires new facilities to complete a BATEA assessment to determine adequate design of pollution control technologies and techniques to reduce releases to the environment to protect human health and the environment. In advance of the Project TISG expected in 2025, the BATEA assessment was started based on known potential contaminants and physical stressors associated with nuclear power plant operation.

The BATEA will identify mitigation measures that are technically and economically feasible and that would eliminate, reduce, control or offset adverse effects. This includes, but is not limited to, describing the mitigation measures, the expected outcomes in a demonstrable manner, and justification of trade-offs for other technically and economically feasible mitigation measures which were not selected. This applies to various aspects of the biophysical environment including, but not limited to, atmospheric, visual, surface water, vegetation, and wetland environments. It will also include review of mitigation measures through construction, operation, and decommissioning phases of the Project. Bruce Power will be engaging with Indigenous Nations and Communities on the BATEA Assessment and will be sharing information with the Public.

Plan and Methodology:

Part 1: Literature Review, High Level Advantages and Disadvantages

Part 1 includes identification of contaminants and physical stressors, grouped into “Elements” through the report which were determined based on operations of a nuclear power plant. Following identification of elements, literature reviews were completed for each element including technologies and techniques employed in a

variety of industries, including nuclear power plants across the globe. The intent was to identify areas which may require further detail and innovation, including those with heightened interest and mitigation potential (i.e. impingement and entrainment, thermal effluent, climate change). A description of the technology or technique is included, along with high level advantages and disadvantages.

Part 2: Analysis and Recommendations

The scope of Part 2 will be informed by the Project specific TISG in 2025 and will build on the document in Part 1. To prepare for Part 2, workshops will be held to confirm the Alternative Means Assessment needs as they relate to other siting activities in the Impact Statement, interests from Indigenous Nations and Communities and the public, and to understand potential anticipated outcomes from the biophysical environment effects assessment and cumulative effects. Technologies and techniques may be added to support the outcomes of the workshops and effects assessments. Part 2 will include criteria development, criteria analysis, recommendations, and justifications. It is expected that Part 2 will be a living document as the Impact Statement progresses to meet schedule needs and to be flexible for collaboration with Indigenous Nations and Communities.

EFFECT PATHWAYS

The requirements in the Project Tailored Impact Statement Guidelines (TISG) will be organized in categories that may be considered as Valued Components (VCs) for the Project. The VCs will serve as the focal points for the impact assessment (IA) and consists of components that are of particular concern or value to the public and Indigenous Peoples that may be affected by the Project. Bruce Power will confirm the VCs based on the TISG and may also identify additional VCs beyond those included in the TISG, through engagement with Indigenous Nations and Communities and the public. As part of the development of the Impact Statement, Bruce Power will identify potential effects to the VCs that are likely to be caused by the carrying out of the Project. The interactions between the Project and VCs can be called “Pathways” or “Effects Pathways”. This process will also be guided by the TISG that will outline the potential effects to be considered in the Impact Statement.

Figure 1 below is a representation of the components that will be assessed as part of the Impact Statement. These components are contained in the updated Draft TISG Template for Nuclear Proponents from the Impact Assessment Agency of Canada (IAAC) in October 2024.

Figure 2 is a representation of high-level pathways visual depicting interactions between the Project, the environment, social, economic, health impacts, public and Indigenous Peoples. Detailed pathways of effect will be developed and included in the Impact Statement, incorporating engagement feedback from Indigenous Nations and Communities and the public.

Figure 1: Components that will be Assessed as part of the Impact Assessment

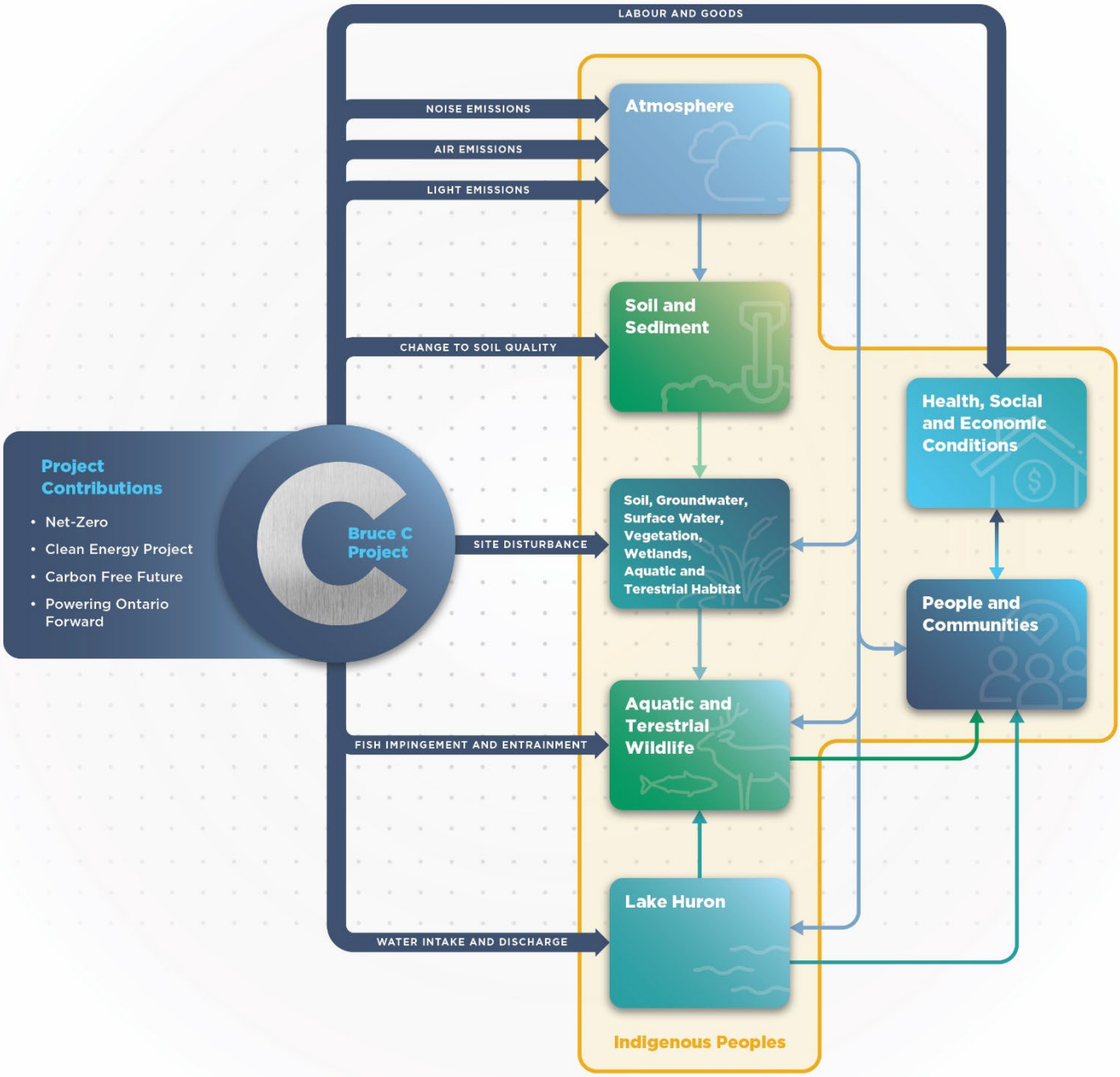

Figure 2: High Level Pathways Visual

READINESS REPORT & REQUEST FOR EARLY REVIEW PROCESS

The Bruce Power site is among the most studied sites in Canada with initial studies occurring at the site beginning in 1954. The Bruce Power site has safely hosted nuclear generating units for more than 50 years. As an operational site, the Bruce Power site is highly characterized with on-going monitoring, data collection, analyses, and risk assessments which are reviewed, approved, and regulated by multiple federal and provincial ministries on an iterative basis to maintain approvals, authorizations and permits for existing operations. Additionally, the CNSC provides ongoing oversight to Bruce Power as its life-cycle regulator. Since Bruce Power took over operations of the site in 2001, Environmental Assessments and ongoing environmental protection programs (e.g., Environmental Risk Assessment) have been conducted at key licensing and operational milestones. With the completion of each of the Environmental Assessments, progressively more environmental data has been collected. Follow-up monitoring has confirmed that effects were as predicted in the Environmental Assessments. The collection of this wealth of information has enabled Bruce Power to inform and refine the Environmental Risk Assessment which is updated every five years and includes both a retrospective examination of environmental risk over the last five years and a prospective look at the potential environmental effects of proposed activities on the Bruce Power site in the next five years. The 2022 Environment Risk Assessment was found to be compliant with the requirements of Canadian Standards Association N288.6-12 Environmental Risk Assessments at Class I Nuclear Facilities and Uranium Mines and Mills and was accepted by the CNSC in 2023. During the Pre-Planning Phase of the Project, Bruce Power prepared a Readiness Report, which was a comprehensive review of Draft Tailored Impact Statement Guidelines (TISG) by the Impact Assessment Agency of Canada (IAAC) and REGDOC 1.1.1 (*Site Evaluation and Site Preparation for New Reactor Facilities*) [R-17] and REGDOC 2.9.1 (*Environmental Principles, Assessments and Protection Measures*) [R-13] from the CNSC as well as legal compliance to current Acts and Regulations. The objectives of the Readiness Report were to consolidate the IAAC and CNSC requirements to identify existing information previously submitted, reviewed, and accepted and/or approved by a regulatory agency. The results of the Readiness Report have been summarized in a table which is provided below. It was concluded that the majority of the baseline requirements for the Project can be met through existing data and iterative assessments mandated by Bruce Power's licence and management system. This data has been previously submitted, reviewed and accepted and/or approved by regulatory agencies.

Following review of the Readiness Report, IAAC and CNSC provided Bruce Power with a procedure, "Tailoring of TISG and submission of existing information as part of an impact assessment by a review panel: Scenario of an integrated assessment with the CNSC" (the Procedure). The Procedure outlines a process and criteria for tailoring the TISG by "acknowledging the relevant information and studies and aligning the TISG requirements such that additional studies are not required". The Procedure also

includes options for an “early review” process at, or prior to, the Planning Phase. Bruce Power submitted a formal request for early review in 2023. In general, the feedback from both the IAAC and CNSC and the federal agencies has been supportive, acknowledging the wealth of knowledge Bruce Power has on the Bruce Power Site. For the majority of the baseline information deemed to be “uncertain”, IAAC and CNSC stated that when Project components and locations are known, the information could be reviewed further. It was recommended that Bruce Power provide information on the siting of the proposed reactor(s) as it provides important context for the assessment of the baseline studies. Additional siting information has since been shared virtually (2024), discussed during in-person workshops (held at Bruce Power, 2024), and has been included in the Bruce C IPD. Bruce Power will continue to work with Indigenous Nations and Communities to understand interest in baseline studies.

The Readiness Report was prepared based on the Draft TISG Template that was available to nuclear proponents at the time of drafting the Report. Bruce Power was provided an updated Draft TISG Template for Nuclear Proponents from IAAC in October 2024. Bruce Power is currently reviewing the updated Draft TISG Template to evaluate the existing baseline information available. The following table provides a preliminary review of the updated Draft TISG Template requirements and existing Bruce Power baseline information.

Bruce Power would like the existence of baseline information that has been previously reviewed and accepted by a regulatory to be deemed sufficient, and not re-reviewed as part of the IA and for this to be acknowledged in the Project TISG. Information previously reviewed and accepted by regulatory agencies should not be duplicated or re-reviewed as part of the IA process. This would allow the focus of the assessment to be on “net-new” information and on meaningful Indigenous engagement on the Project. Bruce Power will engage with Indigenous Nations and Communities on baseline information for the Impact Statement.

Bruce Power Led Assessments as Sources of Baseline Information:

- 2023 Annual Bruce Power Sustainability Report [R-25].
- 2021, 2022 and 2023 Annual Bruce Power Environmental Protection Reports (EPRs) [R-26][R-30][R-31].
- 2022 Environmental Risk Assessment (ERA) and Appendices [R-18][R-28].
- 2017 Environmental Risk Assessment and Appendices [R-32][R-33].
- 2016 Bruce A Refurbishment for Life Extension Environmental Assessment Follow up Monitoring Program [R-34].

- 2015 Preliminary Quantitative Risk Assessment (PQRA) [R-35].
- 2013 Screening Level Environmental Risk Assessment [R-36].
- 2008 Environmental Impact Statement (EIS) for the Bruce New Nuclear Power Plant Project (eventually withdrawn, CEAA) [R-37] and associated Technical Support Documents.

Readiness Report Summary Table – Identifying Existing Sources of Baseline Information

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
8.1 Meteorological environment	

describe the local and regional climate, in sufficient detail to highlight weather variations and characteristics of the regions affected by project activities and components, including historical records of relevant meteorological information.
• Five years of meteorological data should be used. Site-specific meteorological data may be used if it covers the most recent five-year period. The proponent should verify that the data covering the most recent one-year period is representative of the conditions at the site. If the data is not representative, then the five-year average data should be used. (REGDOC.-1.1.1 - Appendix C2).
• The regional and local meteorological data should be appropriate as bases for:
  • evaluation of potential changes in normal and extreme values;
  • severe weather phenomena;
  • assessing effects on air quality from the project, from site preparation to abandonment (REGDOC.-1.1.1 – Appendix.C2);
	• 2008 EIS: TSD Air Quality and Noise, Table 4.1.1-1, (p.100)
	• 2022 ERA Appendices
	• Annual EPRs

assessing the effects on design and siting of the reactor facility and its heat dissipation system (REGDOC.-1.1.1 - Appendix C2); • provide summary data and the reference to underlying data source, including unique weather station identifiers for: • monthly mean, maximum and minimum temperatures, • monthly mean, maximum and minimum precipitation • typical wind speed and direction, and • standard and reliable meteorological measurement to provide estimates of evaporation (e.g. using the Penman, Morton or Meyer Methods) or of evapotranspiration;	• 2008 EIS: TSD Air Quality and Noise, Table 4.1.1-1, (p.100) • 2022 ERA Appendices • Annual EPRs
identify the locations of all meteorological and air quality data collection stations on an appropriately sized topographical map and include a justification of their locations; (REGDOC.-1.1.1 - Appendix C2,)	• 2008 EIS: TSD Air Quality and Noise • 2022 ERA Appendix • Annual EPRs
describe the location of on-site meteorological stations and other local sources of meteorological data with respect to local topographic characteristics that could affect: • local airflow patterns (for example, local circulation conditions, such as “drainage flow”), and • if the site is located close to a lake, information about land-lake interactions; (REGDOC.-1.1.1 - Appendix C2) • [if required: provide reference to sources (and unique weather station identifiers) for hourly meteorological data (wind speed and direction, air temperature, dew point temperature or humidity, air pressure, precipitation data, and solar radiation (REGDOC.-1.1.1 - Appendix C2) (from a minimum of one year to support dispersion modelling that captures the normal variability of meteorological conditions;	• 2008 EIS: TSD Air Quality and Noise, Appendix - E2.5.1, Mixing Heights, Appendix E-21 (p.319) • 2022 ERA Appendices • Annual EPRs

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
demonstrate how criteria in the following safety guides were considered in baseline information: • NS-G-3.2, Dispersion of Radioactive Material in Air and Water and Consideration of Population Distribution in Site Evaluation for Nuclear Power Plants, and • SSG-18, Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations; (REGDOC.-1.1.1 - Appendix C2)	• Annual EPRs
describe the influence of climate change on the local and regional climate and on the risks of extreme weather events.	• 2008 EIS: TSD Air Quality and Noise
8.2 Geology, geochemistry and geological hazards	
describe the geomorphology, topography and geotechnical characteristics of areas proposed for construction of major project components including the presence and distribution of permafrost;	• 2008 EIS: TSD Geology and Hydrogeology, 4.1 Regional Geological and/or Hydrogeological Conditions (RSA), p.50 (92); 4.2 Local Geological/Hydrogeological Conditions (LSA), (p.94) • 2022 ERA: Appendix A, Section 1.5, Geology and Hydrogeology • 2005 Bruce A Refurbishment for Life Extension and Continued Operation Project EA: Geology, Hydrogeology and Seismicity TSD (p.52.)
describe the geology of the [surface, bedrock and unconsolidated sediments] for the project, including a table of geological descriptions, geological maps and cross- sections at appropriate local and/or regional] scale(s);	• 2008 EIS: TSD Geology and Hydrogeology - Figure 4.1.2-2 'Bedrock Stratigraphic Correlation Kincardine - Port Hope' (p.131)
describe the geological history of the site, local, and regional study areas including information on bedrock lithology and stratigraphy (REGDOC.-1.1.1 - Appendix C3.1);	• 2008 EIS: TSD Geology and Hydrogeology - 4.1 Regional Geological and/or Hydrogeological Conditions (RSA), (p.93), para 2 • 2022 ERA- Appendix A, Section 1.5, Geology and Hydrogeology.
describe the geotechnical and mechanical properties of the rocks and overburden, including shear strength and liquefaction potential (REGDOC.-1.1.1 - section 3.4.2);	• 2008 EIS: TSD Geology and Hydrogeology - 4.3.1 - Site Overburden Geology (p.98) • 2022 ERA- Appendix A, Section 1.5., Geology and Hydrogeology
identify and describe any geological hazards that exist in the areas planned for the project facilities and infrastructure, including: • [history of seismic activity in the area caused by mining activities or induced by earthquakes, and secondary effects such as the risk of seismic generated landslides and liquefaction]; • evidence of active faults; • structural geology and tectonic setting (REGDOC.-1.1.1 - Appendix C3.0); • an assessment of whether a fault or any part of a fault is capable, on the basis of geological, geophysical, geodetic, or seismological data (including paleoseismological, geomorphological data, etc.) (REGDOC.-1.1.1 - section 3.5.6); • isostatic rise or subsidence;	• 2008 EIS: TSD Geology and Hydrogeology - 'An evaluation of geotechnical parameters such as slope stability, bearing capacities, geotechnical hazards (if any) will be prepared upon the completion of the requisite geotechnical studies for detailed design of the Project.' (p.29)

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
• history of landslides, slope erosion and the potential for ground and rock instability/landslides, and subsidence during and following project activities; and • if near a shoreline: history of landslide-generated tsunamis, • if there is a marine infrastructure: history and potential of submarine/underwater landslides, and • if applicable: history and potential of volcanic related hazards;	
8.3 Topography, soil and sediment	
describe the terrain, soils and sediments within the LSAs and RSAs, including sediment soil types and stratigraphy, provide surficial geology maps and cross- sections of appropriate scale;	• 2008 EIS: Volume 1 section 8.2.6 • 2022 ERA: Appendix B, Section 2.3.5.1, Soil Environmental Fate and Transport Considerations and Appendix C, Identification of COPCs (note: soil and sediment quality data only provided for areas at the Site that contain ecological habitat), Appendix E, Section 5.1 Soil (sample results) • 2021 EPR: Included in section 6.1.5
provide maps depicting soil depth by horizon and soil order within the project area to support soil salvage and reclamation efforts, and to outline potential for soil erosion;	• 2008 EIS: Volume 1 8.2.3.3-2 • 2022 ERA: Appendix A, Section 1.5, Geology and Appendix C
describe the historical land use and the potential for contamination of soils and sediments;	• 2008 EIS: Volume 1 sections 8.2.6 and 8.9.2.2 • 2022 ERA: Appendix A, Section 1.1, Engineered Site Facilities; Appendix A, Section 1.3, Areas of Previous Environmental Investigation; Appendix B, Section 2.1.5, Soil Environmental Fate and Transport and Appendix C, Identification of COPCs (note: soil and sediment quality data only provided for areas at the Site that contain ecological habitat) and Appendix C, Identification of COPCs (note: soil and sediment quality data only provided for areas at the Site that contain ecological habitat) • 2021 EPR: Included in section 6.1.5
describe any known or suspected soil or sediment contamination with the study areas that could be re-suspended, released or otherwise disturbed as a result of the project;	• 2008 EIS: Volume 1 sections 8.2.6 and 8.9.2.2 • 2022 ERA: Appendix A, Section 1.1, Engineered Site Facilities; Appendix A, Section 1.3, Areas of Previous Environmental Investigation; Appendix B, Section 2.1.5, Soil Environmental Fate and Transport and Appendix C, Identification of COPCs (note: soil and sediment quality data only provided for areas at the Site that contain ecological habitat) and Appendix C, Identification of COPCs (note: soil and sediment quality data only provided for areas at the Site that contain ecological habitat) • 2021 EPR: Included in section 6.1.5
8.4 Ambient radioactivity	
describe the ambient radiological conditions at the project site and within the LSA and RSA. The Impact Statement must provide information on existing conditions including an inventory of sources, activity levels	• Radiological sources - 2022 ERA Appendix A and J. • Radioactivity levels in the environment - 2022 ERA Appendix L and N.

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
and origin for all environmental components including air, soil, food, water, aquatic sediments, plant and animal tissue;	
describe human and non-human biota exposed to ambient radioactivity, including information on radiation levels to which workers and members of the public are exposed;	• Dose to humans and radioactivity in the environment - see 2022 ERA Section 3.0 and Appendix L. • Dose to non-human biota - see 2022 ERA Section 5.0 and Appendix N. • Conventional COPCs considered - see 2022 ERA Section 4.1.1.1 and Appendix C
describe country food exposure pathways, taking into account cultural norms and traditional activities of Indigenous peoples;	• Indigenous diet survey completed, hunter/fisher human receptor updated and described in 2022 ERA Appendix Section 2.2.1.1. Culturally significant species included in Section 1.6.3.
describe current radiological monitoring, management programs and any special studies, including detailed results from these programs.	• Radiological monitoring - see 2023 Environmental Protection Report Section 6.0 and 2022 ERA Appendix L and N.
8.5 Electromagnetism and corona discharge	
describe the levels of noise;	• 2008 EIS: TSD Air Quality and Noise
describe potential induction effects to other infrastructure operators, and where applicable, describe any authorizations required and consultations with potentially affected infrastructure operators;	• 2008 EIS: TSD Air Quality and Noise
8.6 Atmospheric, acoustic and visual environment	
provide baseline ambient air concentrations for contaminants, in particular near key receptors (e.g. communities, traditional land users, wildlife) and quantify emission sources for the following: • total particulate matter, • particulate matter less than 2.5 microns (PM2.5), • particulate matter less than 10 microns (PM10), • carbon monoxide (CO), • sulphur dioxide (SO_2), • nitrogen dioxide (NO_2) and nitrogen oxides (NO_x), • ozone (O_3), • hydrogen sulphide (H_2S) and other reduced sulphur compounds, • volatile organic compounds, individual or an appropriate subset, • polycyclic aromatic compounds, including polycyclic aromatic hydrocarbons (PAHs), alkylated PAHs, PAH transformation products, including nitro and oxy-PAHs, and dibenzothiophenes (DBTs), • metals, • diesel particulate matter, • nuclear emissions including tritium oxide and tritium gas, carbon 14, noble gases, iodine-131, and particulates, and • any other relevant air pollutants from mobile, stationary or fugitive sources, including contaminants produced by the combustion of diesel fuel;	• 2008 EIS: TSD Air Quality and Noise • Radiological sources - 2022 ERA Appendix A and J. • Radioactivity levels in the environment - 2022 ERA Appendix L and N.

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
compare ambient air quality results with applicable regional, provincial and federal standards. For air pollutants with standards, the comparison must use the same averaging period and the statistical format associated with each numerical value. • standards include: Canadian Ambient Air Quality Standards, National Ambient Air Quality Objectives and relevant provincial standards. The proponent must refer to the new Canadian Ambient Air Quality Standards established by the Canadian Council of Ministers of the Environment (CCME) for PM2.5, O_3, SO_2 and NO_2 for 2020 and 2025; • for complete hazardous substance analysis, volatile organic compounds (VOCs) are compared to ozone; to particulate matter related to total suspended particulates (TSP); to particulate matter<10µm(PM10); and to particulate matter<2.5µm(PM2.5). Sulphur dioxide (SO_2), nitrogen oxides (NO_x) and carbon monoxide (CO) are included in the analysis;	• 2008 EIS: TSD Air Quality and Noise
provide current ambient noise levels at key receptor points (e.g. communities, traditional land users, sensitive human receptors and wildlife), including the results of a baseline ambient noise survey and permissible noise levels for each receptor. The information on usual noise sources (natural or anthropogenic), their geographic extent and temporal variations must be included. At the time of collecting baseline data for the study on ambient noise where there are human receptors, it is recommended that the following aspects be considered: • natural sounds, • soundscapes (see ISO 12913-1:2014. Acoustics — Soundscape — Part 1: Definition and conceptual framework), • expectations regarding quiet conditions in specific places or at specific times, • usual sleeping hours (the default assumption is 10 p.m. to 7 a.m.), and • degree of baseline annoyance attributable to existing noise sources (e.g. vehicle traffic, aircraft, other industrial noise);	• 2008 EIS: TSD Air Quality and Noise
8.7 Groundwater and surface water	
identify and describe the waterbodies and water resources potentially affected by the project; • for each major stream, the following information should be included in the description: flood frequency distributions, historical drought stages and discharges by month, and the seven-day once-in-10 years low flow (REGDOC.-1.1.1 - Appendix C4.2); • If influenced by intake or discharge structures, the description should include the size, location, and elevation of outlets, and elevation-area-capacity curves (REGDOC.-1.1.1 - Appendix C4.3); • a summary description of lake operating rules (for example, motorboat capacity); and • annual yield and dependability (REGDOC.-1.1.1 - Appendix C4.3);	• 2008 EIS: 5.1.1 Near Field Modelling (p.171) • 2022 ERA: Appendix C - 3.3.5 Surface Water (p.217) • 2008 EIS: E2.7 Model Data Input Requirements, p.289 – elevation • 2022 ERA: Appendix C - 1.2 Description of the Natural and Physical Environment (p.12)
for each water body used as a heat sink or process water source, information about maximum, average maximum, average, average minimum, and minimum monthly temperature of the water bodies;	• 2008 EIS: 'Lake Water Temperature' selected as environmental subcomponents - p.34 • 2022 ERA

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
screen baseline surface water quality data against recognized water quality guidelines such as the Canadian Environmental Quality Guidelines;	• 2022 ERA: Appendix C, Section 3.4.5, Appendix E, Table 129 to Table 132 • 2023 Environmental Protection Report: Section 6.2.1, Appendix E and Appendix F
if federal or provincial standards or guidelines are not available or where natural background as documented in an appropriate baseline study demonstrates the water quality standards or guidelines are not applicable, benchmarks from the peer-reviewed scientific literature may be used with appropriate rationale. Site-specific water quality objectives may be developed with the support of the scientific literature and the application of the procedures for deriving numerical water quality objectives as documented in the Canadian Environmental Quality Guidelines; (REGDOC.-1.1.1 - Appendix C.5.2,); [if detailed surface and ground water requirements are warranted, tailor the below list:	• 2022 ERA: Appendix C, Section 3.4.5, Appendix E, Table 129 to Table 132 • 2023 Environmental Protection Report: Section 6.2.1, Appendix E and Appendix F
provide complete hydrometeorological information (temperature, precipitation, evapotranspiration), based on data from nearby weather stations or from a weather station on-site;	• 2008 EIS: 'Lake Water Temperature' selected as environmental subcomponents - p.34 • 2022 ERA
describe and illustrate on one or more topographic maps, at appropriate scales, the drainage basins in relation to key project components. On the map(s), identify all waterbodies and watercourses, including intermittent streams, flood risk areas, wetlands, watershed and sub-watershed boundaries, and direction of flow; • show types of land use in drainage areas; • if applicable, indicate the intended locations of water crossing and watercourse diversions;	• 2008 EIS: see figure 1-1 'Site Location' (p.25) • 2022 ERA: Appendix A, Figure 1, Site Location (p.6)
provide flow hydrographs and corresponding water levels for nearby streams and rivers showing the full range of seasonal and inter-annual variations; as well as seasonal baseflow: • hydrographs may be based on data from nearby gauging stations or from gauging stations on-site; • approach used should take into account the need to provide information for use in fish habitat characterization and effects assessment as guided by the Canadian Science Advisory Secretariat's Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada; and • approach used should take into account the need to provide information for use in aquatic dispersion modelling for both groundwater and surface water;	• 2008 EIS: section 4.4.1 Drainage (p.110) • 2022 ERA: Appendix A, 1.8.1 Aquatic Habitat, p.83
provide stage hydrographs for lakes expected to be affected by the project showing the full range of seasonal and inter-annual water level variations;	• 2008 EIS: Table 2.3.4.-1 lists the VECs for Hydrology and Water Quality as Nearshore Lake Huron and Stream "C" (p.36) • 2022 ERA: Appendix A - 1.8.1 Aquatic Habitat (p.83)
provide information about current patterns • including frequency distributions of current speed, direction, and persistence; • at the local and regional spatial scale; and • at the whole-water body spatial scale within a reasonable distance from the site; (REGDOC.-1.1.1 - Appendix C.4.3);	• 2008 EIS: Lake circulation describes circulation patterns (p.170), Section 4.2.3 Nearshore Circulation (Local Study Area) (p.95), Table 4.2.3.1-1 Historic Nearshore Current Frequency Distribution (p.96) • 2022 ERA: Appendix A - 1.8 Aquatic Habitat (p.84)

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
for each waterbody and watercourse potentially affected by the project, provide a description of ice cover, thickness and conditions and the timing of freeze-thaw cycles;	• 2008 EIS: 4.3 Lake Water Temperature (p.100) • 2022 ERA: Appendix A - 1.10.2 Impacts to Lake Huron - 1.10.2.1 Water Temperature
provide for each waterbody potentially affected by the project, bathymetry, maximum and mean depths, vertical profile information, information on stratification and turnover, and sediment composition (e.g. particle size analysis and sediment quality);	• 2008 EIS: Description of the velocity at site in Section 5.1.1 Near-field Modelling (p.94) • 2022 ERA: Appendix A - Details on discharge of each near-shore and on-site aquatic habitat (p.84).
using traditional field and mapping techniques, provide a delineation and characterization of groundwater–surface water interactions, including an identification of groundwater-dependent ecosystems, wetlands, discharge and recharge areas that are potentially affected by the project - use this information to calibrate and verify numerical flow modelling;	• 2008 EIS • 2022 ERA: Appendix A, 8.1 Aquatic Habitat, discussion of 'on-site wetlands' (p.85)
provide baseline data for relevant physicochemical parameters and chemical constituents for surface water, groundwater and sediment quality that are expected to change throughout the project lifecycle, including: physicochemical parameters may include temperature, pH, electrical conductivity, dissolved oxygen, turbidity, total suspended solids, total hardness, total dissolved solids; • relevant chemical constituents may include major and minor ions, total and dissolved trace metals, radionuclides including radionuclide plumes, total mercury, methylmercury, polycyclic aromatic compounds, nutrients, organic and inorganic compounds, or other compounds of potential concern; • water sample collection and analysis should use appropriately sensitive detection limits and the data should illustrate the seasonal and inter-annual variability in baseline surface water quality with sufficient years of baseline data to fully characterize natural variability, including possible variabilities due to groundwater–surface water interactions; and • screen baseline sediment quality data against Federal Sediment Quality Guidelines;- if an appropriate baseline study demonstrates that natural background exceeds the available standards or guidelines (or that none exist for the COPC of interest), sediment quality benchmarks from the peer-reviewed scientific literature should be used with appropriate rationale; (REGDOC.-1.1.1 - Appendix C5.3)	• 2022 ERA: Appendix C, Section 3.4.5, Appendix E, Table 129 to Table 132 • 2023 Environmental Protection Report: Section 6.2.1, Appendix E and Appendix F
identify domestic, communal or municipal water wells within the local and regional areas, and provide information on their depth, distance from the project, stratigraphy, screened hydrostratigraphic unit and piezometric level and capacity, and describe their current use, potential for future use, and whether their consumption has any Indigenous cultural importance;	• 2008 EIS: Volume 1, Figure 8.2.5.3-1, • 2022 ERA: Appendix A, Section 1.9, Human Land Use; Appendix C, Section 3.3.7, Drinking Water • 2021 EPR: Included in section 6.1.3 • 2022 ERA: Appendix C, Section 3.4.4, Groundwater; 2022 ERA Appendix C, Section 3.4.7, Drinking Water
provide a summary of key groundwater monitoring wells within the RSA used to inform the conceptual model, and identify their location, groundwater quality information and monitoring frequency. Provide representative hydrographs showing the range of seasonal and inter-annual water level variations and indicate any spatial variation in the RSA. Provide graphs illustrating historical analytical data for CPCs for	• 2022 ERA: Appendix C, Section 3.3.7, Drinking Water, notes that the Site does not rely on potable wells and that there is no groundwater flow from on-site to any off-site drinking water well.

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
selected wells. Trends in concentration should be interpreted and described (REGDOC.-1.1.1 - Appendix C5.4):	
8.8 Vegetation, riparian and wetland environments	
provide a description of the biodiversity8, relative abundance and distribution of vegetation species and communities of ecological importance and of importance for human uses (e.g. recreational and economic uses), within the LSAs and RSAs of the project, including: • rare plant communities and communities of limited distribution, old growth forests, • species at risk, including those listed in Schedule 1 of the SARA, provincially listed or assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) to be 'at risk,' including species of concern, • critical habitat as described in final or draft recovery strategies or action plans for species at risk, • species or communities of importance to Indigenous Peoples, including for traditional, medicinal and cultural purposes, and • species who have harvest level records maintained by provincial, local conservation agencies or organizations (REGDOC.-1.1.1 Appendix C6);	• 2022 ERA: Appendix A, Section 1.9: Species at Risk; Table 11 (vascular plants section of table); Section 1.6.2: Plant Species; Section 1.6.3: Culturally Significant Plant Species, Table 7 (SON), Table 8 (MNO), Pages 64-65 (HSM)
provide maps, at an appropriate scale, of the vegetation species and communities of importance within the LSA, and where available, the RSA;	• 2022 ERA: Appendix A, Section 1.6.1: Plant Communities, Fig 9 & 10
describe the current level of both anthropogenic and natural (e.g. fire, flood, drought) disturbance associated with vegetation, including a description of level of habitat fragmentation and loss, historical and current disturbance, any proximate activities that have resulted in changes to fire regimes (e.g. fire suppression, flooding, insect infestations); • describe any weed species, other invasive species and introduced species of concern; • describe past site clearing and shoreline development, if applicable (this information determines the succession trajectory of the site habitat) (REGDOC.-1.1.1 - Appendix C7.1);	• 2022 ERA: Section 6.5: Habitat Alteration
describe the use of local vegetation for medicinal purposes, or as a source of country foods (traditional foods) and whether its consumption has any Indigenous cultural importance;	• 2022 ERA: Section 1.3.4.5: Saugeen Ojibway Nation, Section 1.3.4.6: Métis Nation of Ontario, Section 1.3.4.7: Historic Métis Saugeen • 2022 ERA: Appendix A, Section 1.6.3: Culturally Significant Plant Species, Table 7 (SON), Table 8 (MNO), Pages 64-65 (HSM)
describe the shoreline, banks, current and future flood risk areas, and wetland catchment	• 2008 EIS: Volume 1, Section 1.2.1: Ecological Constraints, Section 8.3.4.1: Water Quality and Site Drainage Regional and Local Study Area, Figure 8.3.4.1-2: Catchment Areas
quantify, describe and map riparian areas within the LSA and RSA potentially affected by the project;	• 2008 EIS: Volume 1, Section 8.3.4.1: Water Quality and Site Drainage Regional and Local Study Area, Figure 8.3.4.1-1; Section 8.5.2.2: Aquatic Habitat Local and Site Study Areas, Figure 8.5.2.2-3

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	• 2022 ERA: Appendix A, Section 1.8.1: Aquatic Habitat, Section 3.4.5.3: Surface Water Results, Figure 48
quantify, describe and map wetlands (e.g. fens, marshes, peat lands, bogs) within the LSA and RSA potentially affected by the project, in the context of list, as applicable: • wetland class, ecological community type and conservation status; • biodiversity; • wetland habitat that provides important functions for species at risk, migratory birds and species of importance to Indigenous Peoples; • abundance at local, regional and provincial scales; • distribution; and • current level of disturbance;	• 2022 ERA: Appendix A, Section 1.2, Description of the Natural and Physical Environment; Section 1.2.4: Areas of Environmental Significance; Section 1.8.2 Aquatic Vegetation (Macrophytes) • 2008 EIS: Volume 1, Section 8.4.3: Plant Communities and Species; Section 8.4.4: Wildlife Habitat (Scott Point wetland complex) • 2023 EPR: Section 6.2
determine whether these wetlands are within a geographic area of Canada where wetland loss or degradation has reached critical levels, or considered ecologically, socially or economically important to a region;	• 2022 ERA: Appendix A, Section 1.6, Vegetation Communities; Appendix A, Section 1.7, Wildlife Habitat and Communities
identify a RSA of sufficient size to capture effects to wetlands within the larger drainage area and include wetlands located outside of the LSA that may be affected by hydrological changes as a result of cumulative effects.	• 2022 ERA: Appendix A, Section 1.2.4: Areas of Environmental Significance • 2008 EIS: Volume 1, Section 8.3.4.1: Water Quality and Site Drainage Regional and Local Study Area
8.9 Terrestrial wildlife and wildlife habitat	
describe any locations within the study areas that might constitute sensitive areas for terrestrial wildlife, and show on maps, such as: • species at risk critical habitat that has been designated or is under consideration; • ecological reserves; wildlife management areas, established or proposed sanctuaries and protected areas, in proximity to the project location or that could be affected by routine project operations; • any lands in the study areas that might constitute sensitive areas and habitat for wildlife; • nearby environmentally significant areas such as; National Parks, areas of natural or scientific interest, National Wildlife Areas, World Biosphere Reserves or UNESCO Natural World Heritage Sites; and areas under consideration or study for such designation; and • travel corridors and alternate routes for travel corridors that could potentially be affected by the project;	• 2022 ERA: Appendix A, Section 1.2, Description of the Natural and Physical Environment; Appendix A, Section 1.7.4, Species at Risk
describe the levels of disturbance currently affecting wildlife and wildlife habitat, such as habitat fragmentation and the extent of human access and use;	• 2022 ERA: Appendix A, Section 1.2, Description of the Natural and Physical Environment
describe the natural disturbance regimes and their sources (e.g. fire, floods, droughts, diseases, insects and other pests);	• 2022 ERA: Appendix A, Section 1.2, Description of the Natural and Physical Environment

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
8.10 Species at risk and their habitat	
provide a list of all species at risk that are likely to be in the project area, including: • species listed in Schedule 1 of SARA; and • species assessed by COSEWIC as extirpated, endangered, threatened or of special concern. It is recommended to refer to the most recent COSEWIC annual report for the list of assessed wildlife species posted on its website;	• 2022 ERA: Appendix A, Sections 1.8.9 and 1.9, Species at Risk
for each species at risk identified in the list above: • describe abundance (including relative abundance in each habitat type), population status, and distribution; • provide a map showing survey sites, species sighting records, the areas of highest concentration or areas of use; • provide information and/or mapping at an appropriate scale for residences, seasonal movements, movement corridors, habitat requirements, key habitat areas, identified or proposed Critical Habitat and/or recovery habitat (where applicable) differentiated by federal and non-federal lands; • describe the general life history (e.g. breeding, foraging) that may occur in the project area, or be affected by the project; and • identify critical periods (e.g. denning, rutting, spawning, calving, breeding, roosting), setback distances, or other restrictions related to these species;	• 2022 ERA: Appendix A, Section 1.7.4, Species at Risk
describe the source of the Species at Risk data, including survey design, sampling protocols and data handling: • when using recognized standards, provide details of any modifications to the recommended methods and rationale for these modifications; and • indicate who was consulted in the development of the baseline surveys (e.g. federal/provincial wildlife experts, specialists and local Indigenous groups), and describe how community and Indigenous Knowledge was incorporated.	• 2008 EIS: Aquatic Environment TSD • 2022 ERA: Appendix A, Section 1.8, Aquatic Habitat and Communities
8.11 Climate change	
assess the project's GHG emissions as described in section 3 of the SACC and section 2.1 of the Technical Guide;	• 2008 EIS: TSD Air Quality and Noise
based on preliminary calculations conducted by IAAC with the support of expert federal authorities during the Planning phase, if the project upstream GHG emissions are likely greater than or equal to the thresholds outlined in Table 1 in section 3.2.2 of the SACC: assess GHG emissions upstream of the project, as described in section 3.2 of the SACC and section 5 of the Technical Guide;	• 2008 EIS: TSD Air Quality and Noise
provide a quantitative and qualitative description of the project's positive or negative effects on carbon sinks as described in section 5.1.2 of the SACC and section 4 of the Technical Guide;	• 2008 EIS: TSD Air Quality and Noise

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8.12 Fish and fish habitat	
prepare a list of all waterbodies and watercourses (permanent and intermittent) that may be directly or indirectly affected by the project and provide: • type of waterbody or watercourse; • size and depths of the waterbody or watercourse; • streamflow types and characteristics; • substrate type, vegetation and anthropogenic barriers to fish; • description of any proposed water work; an • for crossings, describe the anticipated method of crossing (trenched or trenchless);	• 2008 EIS: Description of the velocity at site in Section 5.1.1 Near-field Modelling (p.94) • 2022 ERA: Appendix A, Details on discharge of each near-shore and on-site aquatic habitat (p.84).
as relevant: describe primary and secondary productivity in affected waterbodies with a characterization of trophic levels, biodiversity, key functional interactions and processes (e.g. food web and nutrient cycling), seasonal and year-to-year variability, ranges and sensitive periods and include the rationale for the selection of biodiversity metrics and indicators;	• 2008 EIS: TSD Aquatic Environment
provide conceptual models of existing baseline aquatic biota endpoints (for example, survival, growth, reproduction, age/size distributions) including linkages with abiotic environmental media and other biota (feeding). The conceptual model must: • describe the baseline sources and distribution of stressors along transport and exposure pathways resulting in baseline hazard quotients for contaminants to aquatic organisms through diet and direct exposure; and • include potential receptor from each trophic level (for example, piscivore, benthic prey feeder, zooplankton feeder, herbivore, primary producers);	• 2022 ERA
characterize reference locations that would not be exposed to project effects;	• 2008 EIS: TSD Aquatic Environment

for each potentially affected waterbody or watercourse frequented by fish, provide the location and area of potential and confirmed fish habitat and a detailed assessment of physical and biological habitat characteristics. Present information as maps using satellite imagery overlaid with relevant information and text description, with associated summary tables. Relevant physical and biological habitat characteristics for fish habitat include:
• surface and ground water characteristics requested in section 8.5.1;
• overlap of areas of project activities with aquatic VC habitat in time and space (including VC home range and migration and dispersal estimates) (REGDOC.-1.1.1 - Appendix G.5);
  - seasonal variation of species; and
  - seasonal variation of water quality (REGDOC.-1.1.1 - Appendix G.5)
• baseline extent of habitat disturbance (e.g. fragmentation);
• habitat use or suitability for fish and aquatic species present, including critical habitat and residences for species at risk, and habitat function (e.g. spawning, calving, nursery, growth, prey, invertebrate
	• 2008 EIS: Volume 1 Section 8.5.2.2
	• 2008 EIS: TSD Aquatic Environment
	• 2022 ERA: Appendix A, Section 1.8, Aquatic Habitat and Communities

Draft Integrated TISG Requirement, 2024 (8.0 Biophysical Environment)	Internal Sources of Information
population, food availability, foraging, migration, cover habitat, thermal and overwintering habitat) and sensitive times for these activities; and • substrate type, aquatic vegetation, riparian vegetation, bank stability, light penetration, presence of woody debris, presence of beaver dams, stream segment type (riffle, run, pool), natural or anthropogenic barriers to fish passage, and geomorphological features and processes;	
present fish habitat mapping that includes existing operations thermal discharge areas of elevated temperatures and physical disruption of lake currents (depth and area) identification of habitats exposed to existing facility stressors and those potentially exposed through data review and field reconnaissance, including: • contaminant and thermal effluents and plumes; • storm water release points; • present and projected radiological and conventional groundwater contaminant plumes; • hydrological characteristics associated with any identified critical fish habitat; • nuclear and conventional accidents and spills (REGDOC.-1.1.1 - Appendix C7.1);	• 2022 ERA
describe parameters and ecological processes relevant to predicted effects on fish and aquatic species listed above. For example, it may be necessary to establish a broader ecological baseline if the project affects a spawning area for a migratory species but does not affect the larger area they depend on for life processes. Relevant parameters and ecological process may include migratory patterns, food webs and trophic levels, structural and functional linkages (e.g. predator-prey interactions), life history and population dynamics, sensitive habitats and periods, behaviour or other relevant ecological processes that fish depend on to carry out their life history; • use either a qualitative or a quantitative approach to characterize ecological processes, as appropriate, and include a rationale to support the selected approach;	• 2008 EIS: TSD Aquatic Environment • 2022 ERA: Appendix A, Section 1.8, Aquatic Habitat and Communities
identify and describe the data sources used, including information on data collection (e.g. gear and catch methods, location of sampling stations, date of catches, date of surveys, species surveyed, size and lifecycle stage, catch per unit effort). It is recommended that the information be presented in the form of detailed maps and tables;	• 2008 EIS: TSD Aquatic Environment
describe the use of fish and aquatic plants] as country foods or for other traditional purposes, including a description of the particular species of importance and whether its consumption has cultural importance for Indigenous groups, including medicinal use. Where possible, sites used in the study areas or historically important sites for the collection of country foods must be identified and mapped, such as important fishing sites;	• 2008 EIS: Volume 1 Section 8.12.2.5 • 2022 ERA: Appendix A, Section 1.8.7, Fishery

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8.13 Birds and their habitat	
identify any applicable Bird Conservation Regions (BCRs) and BCR strategies;	
describe the biodiversity of bird species and their habitats that are found or are likely to be found in the LSAs and RSAs;	• 2022 ERA: Appendix A, Section 1.7.2, Birds • 2023 Environmental Protection Report, Sections 6.2.4.4 to 6.2.4.8
identify, and show on maps, areas of concentration of birds, including sites used for breeding, feeding, wintering, resting, staging and migrating;	• 2022 ERA: Appendix A, Section 1.7.2, Birds • 2023 Environmental Protection Report, Sections 6.2.4.4 to 6.2.4.8
describe food webs and trophic linkages to summarize biotic interactions;	• 2022 ERA: Section 4.1.1.2, Receptor (Valued Ecosystem Component) Selection
for avian species at risk, locate on an appropriately scaled map the potential habitats, survey locations, records of the species, residences and critical habitat, except where locations and records are considered sensitive information; • identify any and all federal species at risk and/or critical habitat in the study areas; and • identify any sites that are likely to be sensitive locations and habitat for birds or environmentally significant areas. List as relevant: These include National Parks, Areas of Natural or Scientific Interest, Migratory Bird Sanctuaries or other priority areas or sanctuaries for birds, National Wildlife Areas or World Biosphere Reserves, offshore Marine Protected Areas and Ecologically and Biologically Significant Marine Areas;	• 2022 ERA: Appendix A, Section 1.2, Description of the Natural and Physical Environment; Appendix A, Section 1.7.4, Species at Risk
describe the use of (magnitude, timing) birds as a source of country foods (traditional foods) and whether consumption has Indigenous cultural importance;	• 2022 ERA: Appendix A, Section 1.7.4, Culturally Significant Wildlife Species

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