

## Additional Comment Table from Saugeen Ojibway Nation on "Integrated TISG for Bruce C"

November 3, 2025

### Submitted to IAAC, CNSC, and Bruce Power as SON Expectations to shape the Impact Statement

This table should be read with the cover letter provided by SON. SON was not provided sufficient time to finalize and submit these comments during the Planning Phase of the Integrated Impact Assessment. SON requested additional time for this, but this request was refused. These comments have been submitted as soon as possible.

TISG Section	Comment/Concern
General Comments	<b>In response to these additional comments, Bruce Power must provide SON with a concordance table showing how each comment has been addressed, and if not addressed, provide a rationale.</b> Bruce Power must work with SON on an appropriate plan of study for assessing the potential impacts of the Bruce C Project, and strive to come to agreement with SON on which studies will be carried out: i) by Bruce Power, ii) by SON, and iii) collaboratively. For studies conducted by Bruce Power that use SON-data, SON must be allowed to validate the appropriate use, context, and interpretation of SON-data, including any conclusions or determinations made on the significance of potential project-related impacts and how they may or may not affect SON including, but not limited to, social, cultural, or economic well-being elements. <b>SON Knowledge must be included in the assessment where determined to be necessary by SON. SON Knowledge must be used with guidance from SON and must be accorded equal weight to western scientific knowledge.</b> Current conditions do not constitute an appropriate baseline. Appropriate baselines must be determined in collaboration with SON and should consist of conditions representing a "healthy environment", against which current conditions and potential impacts can be assessed. <b>The appropriate number of years of studies required to assess the proposed Bruce C project must be discussed and determined with SON. If agreement cannot be reached, the Impact Statement must document the difference in perspective.</b> <b>Temporal and spatial boundaries for valued components must be determined in collaboration with SON. Where agreement cannot be reached, the Impact Statement must acknowledge the difference in perspective.</b> Bruce Power must clearly come to agreement with SON about the limitations in existing studies on which it seeks to rely (e.g., bias, absence of consistently-collected long term data, incomplete study area coverage, etc.). SON is concerned with the inaccuracy of the statement that Bruce Power has 20+ years of existing data that are appropriate for the assessment of Bruce C. Bruce Power must come to agreement with SON regarding what existing data can and cannot be applied to the assessment of Bruce C, and in so doing, identify where there are gaps in existing data that must be filled to sufficiently assess the proposed Bruce C project. To support this conversation, SON has requested a complete list of all data that Bruce Power intends to rely on for this assessment. To date Bruce Power has not yet supplied that list. Bruce Power must refrain from making determinations on the significance of impacts to SON rights and interests, including those to identified SON valued components. Those determinations should be made by, or in collaboration with, SON. Information and conclusions used in the assessment of the Project on SON valued components should be validated by SON for accuracy and to ensure appropriate context. Bruce Power must refrain from lumping SON together with other Indigenous groups as the TISG has done. SON is the only established rights holder in the SON Territory, and the obligations owed to SON are significantly different. SON is the only Nation whose FPIC is required. These comments are not comprehensive. SON intends to submit further comments as additional input is sought from membership on key concerns and interests. See July 22 Submission from SON to IAAC and CNSC. See additional general comments in cover letter.
	<b>Part 1 – Tailored Impact Statement Guidelines</b>
	<b>1. Introduction</b>
	<b>1.1 Site evaluation and site preparation for new nuclear reactor facilities</b>
	<b>1.2 Factors to be considered in the integrated assessment</b>
	<b>1.3 Gender-Based Analysis Plus (GBA Plus)</b>
	<b>1.4 Preparing the Impact Statement</b>
	<b>1.5 Format and accessibility</b>
	<b>2. Proponent Information</b>
	<b>2.1 The Proponent</b>
<b>2.2 Qualifications of individuals preparing the Impact Statement</b>	
<b>2.3 Management system for site evaluation</b>	
<b>3. Project Description</b>	
<b>3.1 Project overview</b>	
<b>3.2 Project location</b>	
<b>3.3 Regulatory framework and the role of government</b>	

<p><b>3.4 Project components and activities</b></p>	<p>The impact statement must recognize and acknowledge the dependence of the new proposed project upon the existing infrastructure of the existing nuclear facility. The impacts of existing infrastructure must be included in the assessment and consideration of the cumulative elements. Bruce C and the studies / data assembled to consider the project must not be separated from historical development on the property and associated development in the region that have significantly impacted SON.</p> <p>The Proponent will describe and provide a visual summary of the overall/cumulative project footprint, which includes the larger sequence of projects. These should be presented in a clear and visual manner such that they provide an intuitive grasp of the nature of the project and how it will alter or change the local built and natural environment. The written and visual summary will encompass all components of the Project, including construction, operations and decommissioning/closure. The Impact Statement should explicitly state where and why alternatives that might reduce aquatic impacts were excluded due to higher-level mandates. For instance, if a cooling-tower design that greatly reduces lake withdrawals was dismissed as "uneconomical," that rationale must be clearly presented alongside its aquatic benefits.</p> <p>Bruce Power must provide a table or appendix that lists all aquatic-centric design options (e.g., closed-loop cooling, hybrid cooling) and why any were deemed feasible or infeasible, including technical limitations, cost comparisons, or regulatory conflicts.</p> <p>While alternative energy sources (e.g., wind, hydro) may fall outside the regulatory scope, water-management technologies are squarely within the Project's scope. There needs to be evaluation of at least three cooling/intake alternatives such as closed loop cooling, hybrid cooling and a submerged diffuser.</p> <p>SON expects seasonal restrictions for inwater works with respect to fish timing windows. The proponent should engage SON to imagine alternative configurations or operating regimes that align with seasonal fish behaviors and reduce impacts.</p> <p>Rather than simply "meet regulatory limits," SON's perspective would include "no net increase in thermal plume" as an alternative performance target. This could be tested against multiple design options to identify the least-impactful choice. Ideally Bruce C could be designed in a way to actually reduce the existing thermal plume.</p> <p>Packaging intake-screen upgrades, seasonal operating windows, and habitat offset programs as a combined "alternative mitigation package" provides a benchmark against which the chosen design's impacts can be judged.</p> <p>Bruce Power must outline each water-related design alternative, list benefits/downsides, and show the rationale for any exclusion.</p> <p>Bruce Power must describe how SON were invited to propose and review alternatives.</p> <p>Frame some alternatives that minimize cumulative thermal and entrainment impacts, demonstrating a clear SON and aquatic-protection objective.</p>
<p><b>3.4.1 Plant parameter envelope approach</b></p>	<p>The proponent must ensure that SON are meaningfully engaged in discussions about the Plant Parameter Envelope (PPE) approach. While the PPE aims to provide a bounding assessment of potential reactor technologies, it is crucial that the range of possible reactor designs, including those most likely to impact SON's traditional fisheries, are clearly communicated. SON's input on which reactor technologies are considered "plausible" and the associated impacts must be incorporated into the decision-making process.</p> <p>The PPE approach identifies that initial activities, such as site preparation (e.g., clearing, grading, and excavation of cooling water intake tunnels), may proceed without final technology selection. These activities, however, can still have significant impacts on aquatic environments, especially in water-intake and discharge areas. SON must be engaged to ensure these early-stage activities are properly assessed and mitigated for potential effects on fish habitats.</p> <p>The PPE approach aims to assess the worst-case scenario, but there should be specific attention given to how uncertainty in technology selection could affect SON's interests in protecting fish populations and aquatic ecosystems. For example, if one reactor design uses more water for cooling, it may increase thermal discharges, which could negatively affect fish spawning and migration. The Impact Statement must identify clear mitigation strategies for these unknowns and assess the uncertainty surrounding their impacts, with a focus on protecting fisheries and water quality.</p> <p>It is essential that the pathways of effects for each reactor technology are thoroughly outlined and compared. For SON, key areas of concern include impingement, entrainment, entrapment, invasive species, thermal pollution, changes in water flow, and the effects of cooling water intake and discharge systems. Each reactor's cooling system design should be specifically assessed for its impact on SON, and fish and fish habitat, particularly during seasonal migration and spawning periods. The Impact Statement should provide transparency about how each technology's unique features (e.g., water intake structures, thermal discharge systems) could impact these factors.</p> <p>While the PPE approach identifies potential reactor designs, it is essential to conduct a cumulative impact assessment that accounts for other ongoing and future industrial activities in the region. This should include the cumulative effects of an increased human population, thermal pollution, waterbody alterations, and habitat degradation. For SON, this means understanding how this project will compound existing pressures on local fish populations and water quality, particularly with respect to other industrial activities.</p> <p>The proponent is encouraged to narrow the scope of potential reactor technologies. This narrowing should consider environmental criteria that reflect SON's interests in protecting fish habitats and their right to practice traditional fisheries. For example, reactor technologies with significant water usage or thermal discharge should be excluded unless proven to have minimal impact on fish populations. A more focused list of reactor types would help streamline both the environmental review process and the consultation with SON.</p> <p>Engagement should go beyond just reporting results in the Impact Statement. There should be ongoing discussion with SON. This process should allow SON to directly assess the potential impacts of each reactor design on fisheries, including changes to fish abundance and distribution, invasive species assemblages and distribution, water temperature, habitat quality, and fish migration patterns. Engagement should be structured to ensure that SON can provide informed input on the environmental effects and their mitigation.</p> <p>Given the potential risks to fish species during site preparation and construction phases, the Impact Statement should detail proactive environmental mitigation measures. These should include fish habitat protection, sediment control, and water quality monitoring systems. Moreover, any activities that could lead to water diversion, erosion, or thermal shock during construction should be assessed with SON's input on the most effective mitigation strategies. These mitigation strategies should extend throughout the project life cycle, including decommissioning and abandonment, to ensure the health of the aquatic environment.</p> <p>The Impact Statement should include SONK in evaluating the potential impacts of the various reactor technologies. This could include knowledge of historical fish spawning areas, fish migration routes, and fishing practices that could be disrupted by changes in water quality and habitat. The proponent must include SONK as part of their ongoing monitoring efforts and adaptive management plans, ensuring that SONK is used in real-time decision-making.</p>
<p><b>3.4.2 Incidental activities</b></p>	<p>The transportation of construction material, particularly by boat, could have direct and indirect impacts on water quality and aquatic habitats. These impacts may include oil spills, fuel leaks, and the introduction of invasive species through ballast water. For SON, the protection of fishing waters is paramount. The proponent should assess the potential effects of boat traffic on fish habitats, especially in sensitive areas like spawning grounds and migratory pathways. The proponent should describe measures to mitigate the risks of spills, water contamination, and the accidental introduction of invasive species. These should include proper vessel maintenance, spill response plans, and monitoring of water quality along transportation routes.</p> <p>The construction of a new switchyard and transmission line upgrades could lead to habitat fragmentation, especially if they cross water bodies or wetlands that are crucial for fish and other aquatic species. Transmission lines near aquatic environments may also increase the risk of electromagnetic field effects on aquatic life.</p> <p>SON is concerned about the long-term impacts of such infrastructure on fish migration, particularly during spawning seasons. The environmental assessment must include detailed studies on the potential disruptions to fish passage and habitat quality, including an evaluation of potential light pollution and noise from the infrastructure.</p> <p>The transportation of new fuel to the site is another potential incidental activity that may pose risks to water quality and aquatic ecosystems. Fuel spills could contaminate nearby waterways, impacting aquatic life and SON's fishing practices. This must be considered and assessed.</p> <p>The proponent must outline spill prevention and contingency plans, including emergency response strategies and the location of any fuel storage near water bodies. SON should be engaged in the development of these plans to ensure that the cultural and ecological importance of water resources is fully considered.</p> <p>The proposed facility is located on Lake Huron, and so there is an increased risk of contaminating fish habitats and drinking water sources. The proponent must provide clear evidence of the facility's safety design, containment measures, and its potential impacts on water quality.</p> <p>The proponent must assess the cumulative impacts of these incidental activities in combination with other ongoing or planned industrial projects in the region, particularly Bruce Power operations. The combined effects of transportation, construction, and waste management activities on water quality and fish populations need to be addressed comprehensively.</p> <p>For example, the proponent must assess the impacts of aggregate sourcing (within SON Territory) and associated impacts on the terrestrial environment, including along truck transport routes (e.g., wildlife mortality, avoidance behaviour, vehicle noise and vibration, impacts on residential areas) to the construction site.</p> <p>Bruce Power must assess cumulative impacts of increased staffing (as per Workforce Requirements, Section 3.5, but also cumulative since pre-development of the site), including (but not limited to) vehicle impacts of commuting staff, and housing and infrastructure development to support (past, present and anticipated future) staffing and their families, and other associated human activities throughout the zone of influence (Zoi) of the nuclear facilities at the site. The Zoi should equate to the "Regional Study Area" (RSA). Impacts are likely to include, but not be limited to: direct habitat loss and degradation, water quality effects, changes in wildlife populations, vegetation cover, soil health, pollution (contaminant, light, noise) levels.</p> <p>Given the potential long-term effects of these incidental activities on aquatic and terrestrial ecosystems, the proponent should propose continuous monitoring and an adaptive management plan that incorporates feedback from SON. This will ensure that any unexpected impacts can be identified and mitigated promptly.</p>
<p><b>3.5 Workforce Requirements</b></p>	<p>The Impact Statement must describe the proponent's existing and planned programs, policies, and procedures to ensure an inclusive and culturally safe workplace for SON employees, including women and Two-Spirit individuals</p> <p>The Impact Statement must describe the proponent's plans to reduce barriers to training and employment for SON members, including through the use of a social determinants lens and considering employment with contractors supplying goods and services to the project</p> <p>Bruce Power must assess the cumulative environmental, cultural and socio-economic impacts (per 3.4.2) of stated workforce requirements, particularly on SON social, cultural, and economic realities, and on the health of the lands, waters and biological diversity of SON Territory, wherever the "workforce" resides and on the lands through which they commute to the Bruce.</p> <p>Bruce Power's presence in the territory has and will continue to increase demand for housing in SON Territory, with Bruce Power reportedly employing over 4,000 people in the area. This also increases demand for infrastructure to sustain this growing population. This has contributed to significant changes to the landscape in a region of high archaeological potential, as Building Permits have not historically / still do not trigger archaeological assessment. This problem has been especially visible in Saugeen Shores over the past years, with record numbers of building permits issued, none of which triggered archaeological assessment unless requiring a Minor Variance, Severance, or existing trigger under the Planning Act. Bruce C is forecasted to create ~20,000 new jobs and bring even more population and development to the surrounding area, posing serious risks to archaeological resources if archaeological assessments are not undertaken. The proponent should have an obligation to help ensure responsible development and minimize such impacts associated with the project. It is important to note that similar impacts have and would occur to terrestrial ecology, aquatic ecology, and hydro-geology within the sphere of influence.</p> <p>In addition to "workplace policies and program for Indigenous employment", Bruce Power must describe SON-specific hiring requirements that would be put in place.</p>
<p><b>4. Project Purpose, Need and Alternatives Considered</b></p>	<p>No comments to date.</p>
<p><b>4.1 Purpose of the Project</b></p>	<p>No comments to date.</p>
<p><b>4.2 Need for the Project</b></p>	<p>No comments to date.</p>
<p><b>4.3 Alternatives to the Project</b></p>	<p>While an assessment of energy mandates or projected energy needs may fall outside the scope of the assessment, SON is of the view that it is important to consider alternatives to the project. Specifically, while there may be sound justifications for increasing investments in nuclear energy, careful consideration should be given to where nuclear projects ought to be sited. The SON Territory already houses one of the world's largest nuclear facilities, as well as a significant proportion of Canada's nuclear wastes. While the existing infrastructure may facilitate the construction of additional reactors at the Bruce site as compared with a greenfield site elsewhere, there are serious questions around fairness, justice, and risk that ought to be considered.</p> <p>Include a detailed analysis of alternative cooling technologies and energy production methods that reduce thermal pollution and impingement/entrainment impacts on fish populations, aquatic habitats and the ability of SON members to fish and use the Territory.</p> <p>Bruce Power must ensure that the analysis of each alternative thoroughly addresses potential disruptions to local ecosystems, including the food web and fish critical to SON fisheries and culture, and respects treaty rights.</p> <p>Bruce Power must model and assess impacts not just under normal operating conditions but also during peak thermal discharge events and accidents.</p> <p>Bruce Power must analyze potential impacts on species at risk under the Species at Risk Act (SARA) and identify mitigation measures that could avoid or minimize these impacts.</p> <p>SONK must be included, ensuring that the concerns of SON are prioritized.</p> <p>A comprehensive study of the potential release of contaminants during the project's construction and operation should be carried out, considering both the historical and ongoing impacts.</p> <p>Bruce Power must provide a detailed comparison of alternative sites, particularly those that minimize impacts to fish habitats, wetlands, and SON, while also assessing the cumulative effects of multiple environmental stressors.</p> <p>The proponent has only considered siting locations within the fenced perimeter of the existing development, which has already had profound impacts to cultural heritage (including impacts to archaeological sites, landscapes, ancient shorelines, and SON membership access to ancestral places that range from fishing sites to burial grounds). The Impact Statement must consider all of the impacts, historical and otherwise, must be documented, and extensive archaeological studies must be undertaken in consultation with SON, led by SON, and not limited in scope and design.</p>
<p><b>5. Description of Public Participation and Views</b></p>	<p>No comments to date.</p>
<p><b>5.1 Summary of public engagement activities</b></p>	<p>No comments to date.</p>
<p><b>5.2 Analysis and response to questions, comments and issues raised</b></p>	<p>Comments covered in section 6.</p>
<p><b>6. Description of Engagement with Indigenous Nations and Communities</b></p>	<p>SON role is required all the way along from project conception, analysis, conclusions and consent for the project as per UNDRIP.</p> <p>SON Knowledge must be incorporated with guidance from SON. SON should be the experts on how this information is included and considered.</p> <p>Bruce Power must provide consistent capacity funding to SON throughout the life of this assessment process.</p> <p>The impact statement and Work Plan must include a commitment to OCAP and come to agreement with SON regarding data sharing.</p> <p>Work with SON to establish a rights-impact threshold, assess all plausible pathways first, then rank significance, avoid "non-negligible" gatekeeping.</p> <p>All documented Indigenous archaeological sites within the fenced perimeter and vicinity of Bruce Power (eg. Inverhuron, etc.) are ancestral to SON. The Impact Statement must ensure that engagement regarding archaeology and cultural heritage matters reflect this and acknowledge SON's unique and singular role in directing the necessary cultural heritage / archaeological studies and making any determinations regarding such matters.</p> <p>The proponent must undertake the necessary archaeological studies / provision SON-led studies in order to analyze and respond to the concerns related to cultural heritage, impacts and cumulative effects. Without the completion of the necessary archaeological studies required by SON, these questions and concerns cannot be addressed by the proponent or the IAAC process.</p> <p>SON has been clear that the scope of the necessary archaeological assessments cannot be limited to the proposed development envelopes for terrestrial or marine archaeology. Site-wide archaeological assessment is required to begin to understand impacts and cumulative effects. SON has already worked with BP and their consultant WSP to better define these areas in preliminary mapping, to ensure that in particular, all culturally sensitive areas are included in the terrestrial archaeological assessments (this may include a SON-led component), and that the marine assessment captures the necessary geographic area surrounding the Facility and is not limited to the intakes/ buffers. The scope of all cultural heritage studies and archaeological assessments must be acceptable to SON and undertaken with fullsome direction from SON.</p> <p>The continued lumping together of Indigenous nations and communities needs to be addressed. SON is the only established rights holder in the SON Territory, and the obligations owed to SON are significantly different. SON is the only Nation whose FPIC is required.</p>
<p><b>6.1 Indigenous Knowledge considerations</b></p>	<p>SON prefers the term SON Knowledge instead of generic "Indigenous Knowledge".</p> <p>SON are the experts and ultimately SON will decide what is SON knowledge and how and where SON knowledge should be used.</p> <p>While the TISG requires that the proponent apply IAAC and CNSC guidance on Indigenous knowledge, the proponent must demonstrate adherence to the SON process for SON knowledge.</p> <p>SON knowledge considerations must also be applied to archaeology and cultural heritage, including in establishing the necessary studies as required by SON, and the scope (spatially and temporally) of cultural heritage considerations and impacts.</p> <p>Baseline conditions must be determined by or with SON.</p>

	SON Knowledge is an equal knowledge system to be evaluated/weighted with academic knowledge - in cases even more weight to SON knowledge when defining baselines of past Territorial health and changes observed since development of the Bruce site.
	Bruce Power must create a SON Knowledge matrix showing where and how SONK changes methods, predictions, and mitigation.
6.2 Record of engagement	SON is the only Indigenous Nation with established rights in the area in question. SON understands that the duty to consult has a low trigger and that IAAC may need to provide notice to MNO and HSM who assert rights, however, a clear distinction must be made between the obligations owed to SON as compared with MNO and HSM. Any duty owed to MNO and HSM could be satisfied with notice. SON, on the other hand, is owed consultation at the highest end of the spectrum, and also has FPIC rights.
	Bruce Power must provide FPIC status table.
6.3 Issues identification and resolution	The use of significance is subject to differing perspectives and lived experiences and a holistic approach is required. Establish joint significance-rating workshops with SON. Bruce Power must quantify co-defined benefits and link them to monitoring indicators. Bruce Power must work with SON to establish a dispute-resolution process to resolve impasses. Bruce Power must give SON more time to work through each phase. All of the necessary archaeological studies identified by SON must be designed / undertaken and completed in consultation with SON.
6.4 Collaboration with Indigenous Peoples following the submission of the Impact Statement	Bruce Power must establish long term monitoring plans with SON if the project proceeds. Bruce Power must establish a funded process and mechanism for restitution to SON to be applied in the case a project proceeds and adverse impacts occur. e.g. restitution for SON who have experienced real impacts of major events like Gizzard Shad kill crisis.
7. Assessment Methodology	Bruce Power must establish a decommissioning plan, including funding. There are ancestral sites and an ancestral burial ground within the fenced perimeter of the nuclear facility that would house the proposed Bruce C. The proponent must ensure, in addition to conducting all of the necessary archaeological studies, that SON leadership and membership can readily access these ancestral sites for purposes that should not be limited to ceremony. Areas of concern where surficial burials have become exposed by weathering in the past should also be inspected in the spring and fall by SON Archaeology.
	Comments contained in sub-sections.
	Bruce Power must work with SON to establish critical uncertainties.
	Require 95 % CI or equivalent metrics for all quantifiable claims.
7.1 Uncertainty and bias	Bruce Power must add funding/source bias and disclose unpublished studies. Bruce Power must provide a matrix template to aggregate bias & uncertainty by VC. Bruce Power must give SON Knowledge equal weighting. Bruce Power must seek independent audit of the uncertainty analysis. Require plain-language visual summaries for SON membership review. It is critical that the proponent utilize appropriate data, modelling, etc. in consultation with SON, including in relation to 'baseline' or Valued Components. Of particular relevance are existing data limitations for the Bruce Power study area, which are very significant. In particular, existing data are (and potentially EIA study data may be) biased because of: - Knowledge gaps such as on the status of cryptic and difficult to survey taxonomic groups (rare and vulnerable invertebrates, non-vascular plants, nocturnal species, secretive taxa) - Surveyor expertise is typically limited (or specialized) - Absence of consistently-collected long term data - Absence of data essential to adequately understand complex ecological relationships and functions - Incomplete study area coverage (temporal, geographic extent) - Annual weather variations affect affecting results (e.g., detectability of certain species; habitat conditions); for this reason, for major projects, SON recommends multi-year field data collection (minimum 3-4 years) combined with extensive background information gathering, including SON knowledge. Minimums for field work depend on the project scale, extent and condition of the site, the ecosystems and species of particular interest or concern, and how much is already known about the site and impact types.
	From SON's perspective the baseline for cumulative impacts should be established at a pre-settler timeframe. Within the current context, each additional impact is synonymous with cumulative loading and, from SON's perspective, pushes SON further away from an acceptable threshold of significance. Further, in this context, it becomes imperative that assessments consider the ability of new proposals to ameliorate, rather than to further deteriorate, existing conditions. The Impact Statement must acknowledge this context and correctly establish and account for a heavily damaged baseline condition by assessing this proposal according to a pre-treaty baseline.
	Bruce Power must clearly and explicitly acknowledge that the conditions of the lands and waters during pre-settlement times shaped SON knowledge, spirituality, livelihoods, art, and stewardship responsibilities for the lands, waters and relations. An understanding of pre-settlement conditions at the Bruce nuclear site and throughout the Zone of Influence (ZoI) of nuclear operations is therefore essential to defining what a "healthy environment" means to SON.
7.2 Baseline methodology	Pre-nuclear development environmental conditions (i.e., pre-1960) are another important contextual baseline upon which cumulative effects of nuclear development at the site must be assessed. In addition to the baseline there should be efforts to understand current conditions so that predictions about future states can be made and evaluated. Bruce Power must provide maps with explicit spatial buffers and justification. Bruce Power must provide an equal-weight matrix for SON Knowledge (SONK), and note that "auditability" may be significantly different for SONK than for other forms of knowledge. Bruce Power must provide for open-data release in interoperable formats. Bruce Power must adhere to ISO/CSA standards for QA/QC and provide audit appendices. Bruce Power must include historical/legacy stressor review in baseline narrative. A mandatory Baseline Study Design checkpoint should be agreed to with IAAC/CNSC and SON. This section should also explicitly include cultural heritage and archaeology, for which the 'baseline conditions' must be established by SON. The appropriate number of years of studies required to assess the proposed Bruce C project must be deemed appropriate by SON. The 2022 ERA will be helpful in establishing current conditions but it is an inappropriate choice for informing baseline conditions at pre-settler levels (or even pre-nuclear development, i.e., pre-1960, levels). It appears that Bruce Power considers current conditions to represent baseline conditions which is in SON's perspective entirely incorrect. The approach of using current conditions as the baseline introduces a significant risk of shifting baselines and associated problems. Bruce Power must acknowledge this, and adjust assessment of baseline conditions to meet SON requirements.
	Bruce Power must acknowledge that the use of the word "baseline" in the title of section 7.2.1 of the TISG and in Appendix 1 is misleading, as it has the potential to create confusion with "baseline conditions" upon which potential impacts and cumulative effects are to be assessed. This section and the appendix would better refer to "existing information" sources, since in many, if not most, cases, the information they contain does not necessarily reflect baseline conditions, but rather conditions at the time of data collection.
	Bruce Power must have SON and third party peer review of results.
	SON knowledge equal but separate knowledge system to be used under OCAP.
7.2.1 Existing baseline information	Given the legacy of lack of consultation with respect to nuclear development at the Bruce Power site, cumulative effects of nuclear development (on site and the ZoI) must be taken into account. There are at least two legitimate baselines (neither of them being "current conditions"): o Environmental conditions at the site and surrounding landscape (ZoI) pre-nuclear development (ca. 1960). o Environmental conditions at the site and surrounding landscape at the signing of Treaty 45/46 (ca. 1836), as conditions at that time represent what SON considers an ecologically healthy, functioning landscape that supports the SON way of life, knowledge, ceremonial practices, deep ecological relationships, full representative native biodiversity, and stewardship responsibilities.
	Bruce Power must recognize that Indigenous knowledge should not be "integrated" but must stand equally alongside other forms of knowledge to inform decision-making. Appendix 1 – Sources of baseline information Bruce Power must acknowledge that in many cases, particularly in relation to species occurrence observations, available information isn't necessarily baseline, but merely a snapshot-in-time. The list of information sources in Appendix 1 of the TISG is missing available data source such as Ontario Reptile and Amphibian Atlas, eButterfly, and any available conservation authority data and mapping. Also, historical literature, original surveyor notes, elder interviews, etc., may provide valuable information to understand pre-development baseline conditions. The source list includes "environmental assessment documentation, including monitoring reports, from prior projects in the area and similar projects outside the area." However, some of these reports may be difficult to access (SON, through engagement with proponents, will have some of them in-house). It should be noted that the BP Environmental Protection Reports listed in the Appendix provide only high-level summary information in relation to terrestrial ecology and as such do not provide the level of detail necessary for EIA. The detailed background reports and raw data would be expected to provide more useful information, both to conduct assessment as well as to identify data and methodological deficiencies. Bruce Power must: 1) include the additional data sources noted above in the IA; 2) explicitly acknowledge the limitations of existing available data for adequate assessment of impacts of past, current and potential future nuclear operations at the site, particularly with respect to impacts on local and regional biodiversity and SON valued components.
	Bruce Power has, and continues to provide a substantial volume of background reports to SON for review. Bruce Power must incorporate these reports into the baseline information and ensure that this data and information follows the criteria outlined in Sections 7.1 and 7.2. of the TISG. Bruce Power must recognize any data gaps, related to any temporal or spatial scales, presented by SON and collect additional data to the satisfaction of SON.
	The choice of American Eel as a valued component is an prime example of why it is so critical that SON lead the selection of valued components. Any American Eel that might be found in Lake Huron are likely strays as a result of human made canals. It is unlikely that any meaningful positive impact on reproduction or the American Eel occur as a result of the presumably occasional stray into Lake Huron. Furthermore, to SON team's knowledge there is no cultural connection to American Eel in Lake Huron as a result.
	SON Valued Components have not been included in the Draft or Final TISG. Bruce Power needs to explicitly acknowledge the disparities between the proponent and Crown government timelines and SON's timelines. This TISG was pushed through before VCs could be appropriately developed by SON. - Bruce Power must agree to update Valued Components list with SON VCs after community engagement (and/or accept that SON will conduct their own assessment). - The TISG SAR section is missing impacts such as vehicle mortality, off-site development in ZoI, which must also be assessed by Bruce Power as part of the IA. - The TISG vegetation, riparian & wetland environment section does not explicitly note that location of nuclear facilities could affect all natural habitat types (i.e., including upland) and associated biota (including Anishinaabe medicines, clan animals, harvested species, etc.), but Bruce Power must do so as part of the IA. - The TISG terrestrial wildlife and habitat section does not explicitly note that assessment must consider related offsite development (in ZoI), resource (i.e., aggregate) extraction, introduction of invasive species, and impacts on harvested species, but Bruce Power must do so as part of the IA. - Similarly, the aquatic environment impacts assessment must thoroughly consider the natural linkages to terrestrial and wetland habitats - Bruce Power must also explicitly consider qualitative (e.g., cultural, spiritual, aesthetic) impacts on VCs, as well as impacts on access to sites for harvesting, ceremony, etc., as part of the IA.
	Valued Components in relation to Cultural Heritage / Archaeology in the TISG (p.42) are brief and broad: eg. "Indigenous physical and cultural heritage, and structures, sites or things of significance, including:...", Bruce Power must ensure that more detailed SON VCs are incorporated into the assessment as they are identified. The broad umbrella VC does not acknowledge the existing documentation on known impacts to cultural heritage and known sites, or the gaps in existing documentation, or the studies that are necessary to begin addressing cumulative effects and potential impacts of the project, etc. <i>Re. "Indigenous physical and cultural heritage, and structures, sites or things of significance, including: sacred sites and culturally significant locations; and (SOI Issue 15);" Linked to the Summary of Issues-&gt; 15: "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."</i> This statement suggests that SON only requires avoidance and protection of ancestral sites, which is not the case. The property has never been adequately physically or systematically assessed for archaeology, and there are significant archaeological investigations that are necessary for the development envelope (underway now with Bruce Power's Consultant WSP) and necessary for the surrounding culturally sensitive areas where we know some impacts to ancestral sites have already occurred. It must be understood that the documented sites were identified in the past based on purely surficial finds in specific areas. Robust archaeological assessment of the property and high potential/concern areas is required under the direction of SON.
	The rationale for inclusion in the TISG goes on to say: "Changes to the terrestrial and aquatic [...] landscape in SON Territory" - This is helpful, but without more details seems to gloss over significant impacts to ancestral sites like the Upper Mackenzie (BbH-6) that were already identified in Bruce Power's own existing reporting (Fitzgerald 2009), as well as other impacts to SON's cultural heritage. The culturally sensitive area associated with Jibegmeogong (BbH-12) was reportedly also impacted (bulldozing) based on information detailed with artifacts from the site that SON has been examining in the Bruce County Museum & Cultural Centre legacy collection of Fritz Knechtel. Preliminary examination of this area during site visits would seem to likewise provide evidence of historic machine activity in the surrounding area. The Proponent must conduct the necessary studies in consultation with SON in order to address these impacts, SON's VCs and concerns regarding Indigenous physical and cultural heritage.
7.3 Selection of Valued Components	The mental well-being component must be emphasized within the topic of "Health, social, and economic conditions". Health assessments will conform to the Guidance from Health Canada's 2024 Interim Guidance document on Health Impact Assessment of Designated Projects under the Impact Assessment Act. In particular, the Proponent will apply a social determinants of health (SDH) approach to this assessment that considers structural, social, and intermediary social determinants of health. Such an approach is required to gain a meaningful understanding of baseline well-being conditions in SON communities. Further, psychosocial impacts from past nuclear industrial activities and operations are evident amongst SON members and communities. The SDH approach must give consideration to the detection and appraisal of mental well-being stressors originating from prior nuclear industry psychosocial impacts, and how they may be exacerbated or be affected synergistically with project-related effects.
	SON has identified this component of the assessment as a priority that includes sensitive membership data. The proponent must work closely with SON in carrying out all aspects of this analysis. This includes enabling SON to lead and control all or parts of the study related to the assessment of social determinants of health and potential psycho-social impacts Under the category of "Current use of lands and resources for traditional purposes by Indigenous Peoples, including fishing and harvesting", the proponent will clearly articulate SON current traditional land and resource use (TLRU) as a function of recognized TLRU activities (i.e., give a spatial reference for how much of SON's lands and resources are currently used relative to 100% of their traditional territory). The proponent will also clearly indicate any trends in usage of SON TLRU areas and make note of the aspirations of SON for future TLRU activities of its members. Accompanying this discussion will include comments on the adequacy of current use to sustain or satisfy subsistence needs of SON members. This information is critical to understand the baseline condition of lands and resource use activities and how the Project might affect them.
	SON has identified this component of the assessment as a priority that includes sensitive data specific to SON rights and interests. The proponent must work closely with SON in carrying out all aspects of this analysis. This includes enabling SON to lead and control all or parts of the study related to the assessment of SON's current and planned land and resource use Under the category of "economic and health inequity for Indigenous Peoples", the proponent must apply a Social Determinants of Health approach to assess current baseline conditions and potential health trends affecting SON members. The SDH will consider structural, social, and intermediary social determinants of health. Such an approach is required to gain a meaningful understanding of baseline well-being conditions in SON communities. Further, psychosocial impacts from past nuclear industrial activities and operations are evident amongst SON members and communities. The SDH approach must give consideration to the detection and appraisal of mental well-being stressors originating from prior nuclear industry psychosocial impacts, and how they may be exacerbated or be affected synergistically with project-related effects. The cumulative effects assessment of health factors and mental well-being must give consideration to issues of past trauma from SON's history of colonization, including experiences with residential school, resource expropriation, environmental inequity and racism, and consequent impact on recreancy (i.e., the failure of institutional actors to carry out their responsibilities with the degree of vigor necessary to merit the societal trust they enjoy, as per Freudenburg WR. Contamination, Corrosion and the Social Order: An Overview. Current Sociology. 1997;45(3):19-39. doi:10.1177/001139297045003002). These cumulative mental stressors should be assessed in terms of psychosocial impacts and how resilient or vulnerable segments of SON society are to project-related impacts to social determinants of health. Under the category of "Indigenous rights", the Impact Statement must discuss the level of agency and occupation of SON on matters related to its decision-making authority on SON territory. Agency is an important aspect of Indigenous governance and reflects SON's ability to make decisions on SON rights and interests and to meaningfully take part as a decision-maker in venues where SON's rights and interests are affected.
	For example, with regards to agency, the nuclear industry has infringed on SON rights and interests by excluding SON leadership from basic decision-making processes related to SON lands, resources, and members. The loss of decision-making power and leadership's inability to avoid adverse impacts represents a loss of agency in governance matters. Under the category of "Indigenous rights", the Impact Statement will discuss language use and practice. Language plays a critical role in cultural well-being and continuity. The relative state of language fluency and use and how continued regional industrial development will affect efforts to learn and practice language is an important consideration when assessing potential project effects on SON rights and interests.

	<p>The concept of a "holistic Indigenous VC" needs to be clarified and given more context. As written, it appears as though it is sufficient to provide an overall commentary on Indigenous well-being. While SON supports this, such an analysis must be treated with the same rigor and effort as a comprehensive cumulative effects assessment. It also needs to meaningfully support and respect Indigenous values and understanding of SON's worldviews. The notion of a holistic VC is an encapsulation of many values that require a multi- or trans-disciplinary approach to assess and understand, including both qualitative and quantitative assessment. Their collective consideration should focus on how they collectively affect SON's way of life. This requires an understanding of the individual well-being of each VC as well as a focus on the strength of relationships between each VC. Socio-ecological systems thinking offers a framework for these considerations. This analysis requires direct collaboration and validation from SON to ensure that relationships are properly understood and that valuations on the state of health of each VC and the strength/importance of the relationships are properly weighted.</p> <p>Spatial and temporal boundaries must be valued-centric and not project-centric. This distinction makes a significant difference on how meaningful and impactful the IA assessment is. A valued-centric approach correctly positions baseline conditions and potential project-effects in the context of the health and sustainability of each valued component. By contrast, the project-centric approach limits the scope of assessment to more immediate interactions between the VC and project-components. The former are more accurate metrics of how VCs will be affected by the project while the latter provides a more straightforward approach focusing on the project. The choice between valued- or project-centric has a significant impact on the cumulative effects assessment (CEA). A valued-centric approach will result in a CEA that gives greater consideration to indirect and incidental impacts on a VCs health. By contrast, a project-centric approach will arbitrarily limit the scope of assessment to an area around the project and typically fails to consider incidental effects, making it easier to discount residual and significant effects.</p> <p>The impact statement shall include three-dimensional boundaries (surface &amp; depth/air column) where relevant.</p> <p>The impact statement shall include GIS layer submission and open-data access.</p> <p>The impact statement shall include an iterative boundary review after baseline-data collection.</p> <p>Bruce Power shall co-develop study area boundaries with SON and document sign-off or dissent.</p>
7.4.1 Spatial boundaries	<p>Baseline and spatial and temporal boundaries must be approved by SON.</p> <p>PA, LSA and RSA should be established by SON.</p> <p>Impacts and effects must not be limited to the forecasted development envelope. It must be understood and accepted that the proposed Bruce C will rely significantly upon the existing infrastructure of the Bruce Nuclear Generating Station and that to appropriately conduct the impact assessment, the necessary studies and process must include consideration and analysis of the historic impacts of the existing nuclear facility. This is critical across disciplines, but of particular importance for Archaeology and Cultural Heritage.</p> <p>The proponent must establish appropriate Spatial boundaries and conduct the necessary studies identified by SON.</p> <p>Bruce Power must explicitly acknowledge (as per the TISG), that the Project Area (PA) is the footprint, including laydown areas, etc. (including alternative options); Local Study Area (LSA) is the area where effects may extend; Regional Study Area (RSA) is "delineated by ecological, social, economic or other appropriate boundaries," and that spatial boundaries of each VC should be defined by a biophysical, ecosystem-centred approach, and for species should consider a buffer area to reduce habitat effects, changes to connectivity, alterations to predator-prey dynamics, mortality, sensory disturbances, pollution, etc. As such, the TISG provides an excellent list of considerations including Indigenous rights and uses of the lands and waters, and "size, nature, location and known effects of past, present and foreseeable projects and activities, particularly for the RSA." Appendix 1 states that RSA includes the "geographic extent of local and regional services."</p>
7.4.2 Temporal boundaries	<p>The impact statement must describe seasonal sub-boundaries for ecologically and culturally sensitive periods.</p> <p>Bruce Power shall consider seven-generations thinking, SON's expectation for temporal boundaries are 7 generations back, and 7 generations into the future.</p> <p>Bruce Power must include climate-projection time slices and should include 2050 &amp; 2100.</p> <p>Timeline graphic &amp; machine-readable schedule should be available in GIS/CSV format.</p> <p>Bruce Power must commit to adaptive review trigger every decade or when major new info arises.</p> <p>Temporal boundaries must be determined by SON.</p> <p>Temporal boundaries should be selected relative to each VC and should represent a point in time where the health of that VC is understood to be "good". This provides a frame of reference for current/existing conditions, which in turn provide context for considering cumulative effects and how far the project will move the health of the VC away from that "good" condition. It is important to note that project effects can be beneficial to a VC, in which case it would move the condition closer towards that "good" spot. This is also the goal of mitigation measures - to restore well-being and resiliency of affected VCs.</p>
7.4.3 Social Area of Influence	<p>The Impact Statement must describe the socio-ecological boundaries of each VC and provide a rationale for each boundary. The Impact Statement should include a section (under 7.4) on Social Areas of Influence.</p> <p>The Impact Statement must define socio-ecological boundaries by taking into account: direct, indirect, induced, and incidental impacts; impact pathways; and information received from SON.</p>
7.5 Effects assessment methodology	<p>The proponent should refrain from making determinations on the significance of impacts to SON rights and interests, including those to identified SON VCs. Those determinations should be made by, or in collaboration with, SON. Information and conclusions used in the assessment of the Project on SON VCs should be validated by SON for accuracy and to ensure appropriate context.</p> <p>The impact assessment shall include a significance framework with explicit thresholds.</p> <p>The impact assessment shall include quantitative uncertainty measurements and disclosure.</p> <p>The impact assessment shall include mitigation hierarchy and adaptive-management triggers.</p> <p>The impact assessment shall include mid- and late-century climate scenario.</p> <p>The impact assessment shall include independent peer review of key models.</p> <p>The impact assessment shall include an equal-standing clause for SONK vs Western science.</p> <p>The impact assessment shall identify and describe mitigation measures that are possible with economic, ecological and cultural feasibility.</p> <p>Baseline data must contrast existing/current conditions relative to a point in time where the health of each VC is understood to be good. This is necessary to understand how close to a significance threshold the VC is, or its relative resilience to further stress.</p> <p>The description and identification of residual effects should be valued-centric and represent the impact on affected VCs (for example, if a local fishery may be affected, residual effects should identify a serious impact to the local fishery and not an insignificant impact to the broader fishery in Ontario, or in Lake Huron).</p> <p>Information related to climate change should use the precautionary approach and err on the side of caution. In this context, it means assuming that the effects of climate change will continue to exceed or match the worst case scenarios with respect to global warming and the frequency and severity of climate-related weather events. The proponent should be very clear in articulating the assumptions used behind its climate change scenarios and rely on official sources of information (i.e., from the International Panel on Climate Change or from sources approved by Environment and Climate Change Canada) when considering climate scenarios.</p> <p>The Impact Statement must meaningfully discuss and consider identified interactions of the Project with SON rights or interests. The Proponent will work with SON on appropriate indicators and methodologies to assess these interactions, and potential impacts to SON rights and interests. The Proponent will not make determinations on behalf of SON with regards to the severity or importance of an impact, and will allow SON to validate any use of SON-knowledge prior to finalizing its conclusions.</p>
7.6 Mitigation and enhancement measures	<p>For the project to proceed SON must be able to determine that there is a net benefit for SON and the environment.</p> <p>In the impact assessment Bruce Power will document specific suggestions raised by SON for avoiding, mitigating or otherwise accommodating the Project's environmental, health, social and economic effects, including potential effects and impacts on SON and describe whether, why, and how these measures will be incorporated in the project design.</p> <p>In the impact assessment Bruce Power will include adaptive-management triggers, climate-robustness tests, secured financial assurance, independent peer review and explicit data-governance safeguards.</p> <p>Bruce Power must consider impacts of ongoing operations and opportunities for restitution to SON. Enhancements must consider restitution for very real impacts of ongoing operations and events that have and continue to have impacts on SON's Aboriginal and Treaty Rights (e.g. Gizzard Shad Kill Crisis).</p> <p>Mitigation measures related to SON VCs should be developed in collaboration with SON and empower SON with decision-making capacity in the design and implementation of the mitigation measures, including monitoring and follow-up programming.</p>
7.7 Cumulative effects assessment	<p>In the impact assessment the proponent will include the cumulative effect of more people and infrastructure to support them on the SON Territory (e.g., infrastructure, shoreline development, increased recreational fishing, increased conflict between more anglers and SON fishers).</p> <p>In the impact assessment Bruce Power will make all data open source aside from SON knowledge.</p> <p>Assessment of current conditions must encompass legacy stressors and demonstrate how these shape current VC.</p> <p>The Impact Statement must include both quantitative and narrative criteria for VC significance thresholds.</p> <p>The impact assessment must include climate change projections for water temperature, ice cover and extreme events effects pathway models.</p> <p>The impact assessment must include a methods appendix explicitly describing methods, models, assumptions, uncertainty treatment and peer review process.</p> <p>The impact assessment must include rights-based metrics from SON to measure how cumulative effects erode or enhance the practical exercise of Aboriginal and Treaty rights.</p> <p>The Impact Assessment must stipulate that if cumulative effects worsen, a binding response plan with enforceable thresholds, explicit responsibilities (Bruce Power, CNSC, MECP, SON), and guaranteed funding commitments is triggered.</p> <p>This section should also explicitly include cultural heritage and archaeology, but presumably cultural heritage and archaeology has been lumped in under "cultural".</p> <p>The Impact Statement must ensure that the Cumulative effects assessment includes broader study areas, appropriate spatial and temporal scale, additional studies and fulsome consideration of the impacts on and off site (eg. Sphere of influence) [re. The Impact Statement Must] This section contains reference only to an umbrella VC "Indigenous physical and cultural heritage, and structures, sites or things of significance". There seems to be some helpful language in the TISG regarding spatial and temporal boundaries, however, defining the parameters of the cumulative effects component and study is absolutely critical to SON and Bruce Power must work closely with SON in determining how cumulative effects will be assessed and addressed.</p> <p>[Re. section headed "identify the sources of potential cumulative effects"] - The forecasted influx of workers for the construction and operations of the new facility would add to significant regional impacts to cultural heritage. In particular due to reckless issuance of municipal building permits without archaeological assessment, housing pressures, etc. that are already significant.</p> <p>[Re. the analysis must include...masking effects] - This should include the existing infrastructure within and around the fenced perimeter that Bruce C would depend upon and otherwise have required. The Impact Statement must ensure that the existing infrastructure is not decoupled from the proposed Bruce C project, which cannot exist without it.</p> <p>[Re. the cumulative effects assessment must include...] - This will be critical for Cultural Heritage, Archaeology and ensuring appropriate design and conduct of the necessary studies.</p> <p>Bruce Power must explicitly acknowledge that (as per the TISG) "cumulative effects" includes the following consideration in relation to VCs: "has been or can be affected by other past, existing or future projects or physical activities..." and "cumulative effects on an environmental...component or on Indigenous Peoples and their rights might be important even if the Project's [residual effects combined with the effects of other past, existing and reasonably foreseeable future projects] incremental effects to these components by themselves are minor."</p> <p>Bruce Power must therefore clearly and unequivocally acknowledge that sources of potential cumulative effects include effects throughout the Regional Study Area (i.e., Zone of Influence) relating to supplies, services, staffing and economic and other activities directly or indirectly resulting from the project and/or past, existing and foreseeable future nuclear development at the Bruce Power site, and must undertake cumulative effects assessment (for the entire RSA/ZoI) accordingly.</p> <p>The Impact Statement must assess the historic, existing, and reasonably foreseeable future sufficiency of resources for the exercise of Aboriginal Rights and Treaty Rights, especially in light of recent jurisprudence, including <i>Yahey v. BC</i>, 2021.</p> <p>Any potential residual effect, and all Indigenous-identified VCs should be subject to the cumulative effects assessment (CEA). The CEA must contrast existing + planned + project-related conditions against a "healthy" VC (whether actual or perceived). This is necessary to properly assess how close to a significance threshold the VC is and its relative resilience against new stressors. It is also important in selecting appropriate mitigation measures to manage residual effects.</p> <p>As discussed in section 7.3 and 7.4 regarding temporal and spatial scales, the cumulative effects must be valued-centric and consider the effects on locally affected values as well as the overall integrity of that VC. For Indigenous VCs, understanding how overall cumulative effects impact SON's way of life and future aspirations is an important lens to apply.</p> <p>Project activities for consideration in the cumulative effects assessment should also identify major development or infrastructure plans identified in formal municipal, provincial, or federal strategic development plans. The proponent should consider a future date scenario, for example 2035 or 2050, to extrapolate how the regional landscape is expected to change and develop as a result of these external strategic plans with and without the Project. The Project does not exist in a vacuum, and the Cumulative Effects Assessment should meaningfully consider how future conditions will be with and without the Project.</p> <p>For the assessment of human health conditions, cumulative effects must also consider the psychosocial impacts associated with past activities associated with the nuclear industry and consider how past psychosocial impacts (PSIs) may interact with project effects and with existing trends and conditions affecting social determinants of health.</p> <p>In relation to the proponent documenting the lived and told experience of changes in relation to SON's ability to exercise its rights (e.g., page 51, second last paragraph of s.7.7), the proponent will consider the role of recreancy and how poor experiences with government and nuclear industry actors has affected trust and perspective of SON and its members. These factors play an important role in understanding the current landscape and should inform both engagement processes and the development of appropriate mitigation measures for managing residual effects.</p>
7.8 Extent to which adverse federal effects are significant	<p>In the impact assessment, Bruce Power must use the precautionary principle in judging significance. When uncertainty is High and consequence could be High, default rating = "Potentially Significant" unless strong mitigation is in place.</p> <p>The Impact Statement must also incorporate future climate scenario outputs into magnitude/duration ratings; if climate change increases duration or extent, adjust significance.</p> <p>In the impact assessment Bruce Power must test additive, synergistic, and threshold scenarios in cumulative effects assessment</p> <p>In the impact assessment Bruce Power will include risk-based significance where Significance = Consequence x Probability</p> <p>In the impact assessment Bruce Power will include a VC-specific significance matrix (e.g., magnitude x duration) with clearly defined break-points (High/Moderate/Low), co-developed with regulators and SON.</p> <p>In the impact assessment significance determinations must be peer-reviewed by independent experts and validated with SON; dissenting views logged and shared.</p> <p>The concept of "tolerance levels" of Indigenous Nations and communities needs further elaboration to contextualize. The Proponent will consult with SON to identify an appropriate interpretation for how SON has tolerated adverse federal effects, and how resilient SON's continued tolerance levels are.</p> <p>Significance determinations on SON-identified Valued Components must be made, at minimum, in collaboration with SON to ensure the valuation and seriousness of effects and their consequences on SON way of life are properly considered and contextualized.</p> <p>Variances in SON's assessment and the proponents must be clearly identified in the Impact Statement, with supporting rationale for the difference in perspective/determination.</p>
7.9 General criteria for site evaluation	<p>Comments are contained in subsections.</p>
7.9.1 Requirements for site evaluation	<p>The proponent must use SON's criteria for siting e.g. cultural, harvesting, etc.</p> <p>Siting and establishment of the emergency planning zone, and relative assessments under this section must take into account the direct physical connection between environmental health and the human health of SON members. This is especially relevant in the context of subsistence activities and spiritual well-being, which plays a direct role on mental and cultural well-being.</p> <p>Site evaluation must take into account all phases of the facility lifecycle, from site preparation to abandonment and remediation.</p>
7.9.3 Consideration of the evolution of natural and human-induced factors	<p>Consideration of human-induced factors in the environment and their bearing on safety and security of SON members must include psychosocial impacts arising from past and project-induced effects. The Impact Statement will describe changes related to the feeling of safety, health, agency, or related psychological stressors resulting from real or perceived changes to the environment. The Impact Statement will also discuss psychosocial impacts related to climate change and how the combined human- and natural-induced factors affect the lifestyle, lifescape, and lifestrain of SON members.</p>
7.9.5 Determining the potential effect of the site on the environment	<p>Mandate independent peer review of model selection, input data, and parameterisation.</p>
7.9.6 Population and emergency planning	<p>Require dose models with SON dietary intake parameters including fish.</p> <p>Mandate re-analysis under mid- and late-century climate scenarios for flooding, runoff, thermal stratification.</p> <p>The proponent will add SON to the list of emergency planning agencies and work with SON to establish appropriate communication and response action thresholds to meaningfully protect SON members and SON interests.</p> <p>Bruce Power must clarify and justify emergency notification processes and emergency preparedness for surrounding communities in the Bruce Power Ingestion Planning zone</p>
8. Biophysical Environment	<p>Comments are contained in subsections.</p>
8.1 Meteorological environment	<p>The impact assessment shall use 30 years as the primary baseline (the climatology standard), and—given this site's long operational history—add a 50-year context for trends and extremes. Five years is too short to smooth interannual and decadal variability, 30 years captures "normal" climate, while 50 years helps test robustness and detect shifts that matter for fish, ice, and thermal regimes.</p> <p>The impact assessment must include the use of SON knowledge into baseline conditions.</p> <p>Bruce Power is to carry out a transient groundwater/ surface water model reflected existing and future conditions to the site and surrounding larger scale subwatersheds. The meteorological database include 20 years or more of data where it is available.</p>
8.2 Geology, geochemistry and geological hazards	<p>Bruce Power will update the 3-dimensional geological model with all existing data and additional data collected to fulfil the requirements of the TISG or SON recognized datagaps. The updated 3-dimensional geological model will form the basis of the hydrostratigraphic model utilized in the groundwater/surface water model.</p>
8.3 Topography, soil and sediment	<p>The impact assessment shall describe the sediment characteristics around the proposed intake or discharge area. Understanding substrate, benthic invertebrates, bacteria present is important for food web interactions.</p> <p>The impact assessment shall describe how the sediment in impacted and unimpacted sites around the plant shall be tested to help us understand the differences in sediment characteristics. Focusing on substrate type, benthics present, turbidity, macrophytes, bacterial and invertebrate community present</p> <p>In the impact assessment the proponent will create a model to help us understand the impact of a third thermal plume &amp; intake on the aquatic sediment, aquatic life and benthic environment.</p>
8.4 Ambient radioactivity	<p>The SON community has a general concern about releases of man-made radioactive materials and the potential for transport and accumulation in the environment. Specifically, there is a concern regarding whether fish and other food sources may be contaminated by man-made radionuclides. Bruce Power must include in the Impact Assessment a review of the conceptual environmental transfer model (CSA 288.1) and include site specific information informed by SON Knowledge.</p> <p>Bruce Power must describe in the Impact Assessment information for characterizing effects of the project from the release of radionuclides to the environment, including: assumptions regarding diet, food sources, ingestion rates and parameters related to estimating individual and population doses relevant to the SON community.</p>

8.5 Electromagnetism and corona discharge	No Comments to date.
8.6 Atmospheric, acoustic and visual environment	<p>The impact assessment must study the effect of acoustic barriers on the fish community found around the plant. (Could use BsM data for understanding the fish community and research the effect of sound is on the fish present)</p> <p>The impact assessment must study emissions to the aquatic environment eg. thermal plume, and the effect of a warmer environment on the aquatic ecosystem. SILAS sound system &amp; its effect on the aquatic environment</p> <p>The impact assessment must study how atmospheric pollutants are affecting the aquatic environment</p> <p>The impact assessment must study how facility lighting, noise and vibration affects migratory birds, breeding amphibians, and other wildlife populations (including invertebrates)</p> <p>The impact assessment must study how lighting and acoustic impacts throughout RSA that are associated with staffing and servicing increases at the site</p> <p>The impact assessment must study Mitigation &amp; Enhancement Measures: include SON values and input for both mitigation and enhancement measures</p>
8.7 Groundwater and surface water	<p>The SON community is concerned with tritium in groundwater as described in the Bruce Power 2024 Environmental Monitoring Report Section 7.0 Groundwater Protection Program. The 2013 BP - EPR indicates a historic spill and reports elevated tritium in well BA 4-2, which appears to have decayed to half the concentration as measured in 2024; EPRs report a mean + 3 standard deviations (upper control limit) that is exceeded during 2021 through 2024 in 7 of 10 samples from well BATR-1-14B and exceeded in 7 of 9 samples from well BBTR-7-12, both unusual frequencies for an upper control limit. Bruce Power must include in the Impact Assessment the history of leaks and spills containing tritium, the basis for any monitoring control limits, the aquifers affected and the flow paths leading to discharges from the facilities.</p> <p>Bruce Power must include water quality parameters and expectations specific to SON concerns.</p>
8.7.1 Baseline Conditions	<p>Bruce Power will carry out an overall water balance including groundwater for the site and adjacent subwatersheds detailing existing conditions.</p> <p>Bruce Power will run a transient groundwater/surface water numerical model of the hydrogeological environment and groundwater flow system which is built and calibrated on the baseline conditions described in Section 8.7.1 of the TSIG including historical groundwater levels and groundwater chemistry as well as the hydrostratigraphic unit specific characteristics. The groundwater model must also be built on and calibrated to quantifiable linkages to streams, creeks, lakes and wetlands.</p>
8.7.2 Effects to Groundwater and Surface Water	<p>Bruce Power must utilize the numerical groundwater model to assess impacts to the groundwater flow system direction and quantity, on a local and regional scale, from all phases of development which may result from, but are not limited to changes in groundwater recharge, groundwater withdrawal and the installation of subsurface infrastructure. The model must also quantify the impacts to the linkages of the water table and groundwater discharge to the terrestrial and aquatic features.</p> <p>Bruce Power must describe in the Impact Assessment the interaction of the proposed Bruce C cooling system with existing once-through cooling discharges and thermal plumes from Bruce A and Bruce B.</p>
8.7.3 Mitigation, Monitoring and Enhancement Measures	<p>Bruce Power must provide in the the Impact Assessment the basis (including both technical and legal) for the current Thermal maximum limits for existing operations at Bruce A and B and how the Bruce C facility will affect compliance with the thermal limits.</p> <p>Bruce Power must carry out groundwater and surface water monitoring for all phases of the project and this monitoring must include water quality, water quantity and water level monitoring.</p> <p>The methodology for monitoring locations, monitoring frequency, and monitoring parameters must be provided and represent the various groundwater and surface water flow pathways, the groundwater/surface water connection and the ecological function these pathways support.</p> <p>Bruce Power must provide mitigation options where any phase of the project causes effects on groundwater and surface water quantity and quality. These mitigation options must also take into account the potential effects on the ecological system supported by the groundwater and surface water flow systems</p> <p>Bruce Power must document onsite and offsite contamination from past practices, how it has been addressed and how any future phases for Bruce C may be effected by existing contamination.</p>
8.8 Vegetation, riparian and wetland environments	<p>The significant limitations of existing data sets (notably those listed in SON comments the "Uncertainty and bias" section, above) on baseline conditions (pre-Treaty 45-1/2; 1960; current) need to be explicitly stated by Bruce Power as baseline conditions are characterized.</p> <p>Bruce Power must explicitly recognize that wetlands and riparian areas are important to many terrestrial species during parts of their life cycles, and access to specific terrestrial habitats (e.g., turtle egg laying sites) may be critical for certain wetland species. Also, many species (invertebrates, amphibians) are aquatic during portions of their life cycle and terrestrial at others, meaning that configuration, extent, condition and connectivity of specific aquatic / wetland / riparian / terrestrial habitats may be critical to the viability of some species populations. Such integrated multi-habitat functions need to be understood, especially for rare, sensitive and culturally-important species that may be (or have already been) impacted by nuclear development at the site, the LSA and the ZoI/RSA, with the precautionary principle being paramount given the limitations of existing data sets and inherent in short-term project-specific data collection.</p> <p>Bruce Power must include species of significant cultural interest to SON found in wetlands and riparian environments in the IA.</p> <p>Floristic Quality Assessment (FQA) / Floristic Quality Index (FQI) is an excellent, widely-used measure of vegetation community (habitat) quality. It can generally be assumed that during baseline conditions (i.e., 1836 or 1960), FQI values would have indicated very high habitat quality, with relatively high populations and diversity of "conservative" plant species present. Bruce Power must explicitly acknowledge that this is not the case under "current conditions" due to the high to extreme levels of disturbance due to nuclear development and ongoing operations at the site. It should be noted that FQA would be a valuable measure for the site-level and LSA assessments, but would be a challenge for the RSA.</p> <p>The TISG refers to vegetation species and communities of importance for "economic and recreational uses" for baseline conditions; species and communities of importance for SON fishing/use must also be included.</p> <p>Wetlands are very important for maintaining water quality, and fish habitat. Degradation of wetlands could lead to food insecurity for SON, and a loss of their commercial fishery.</p> <p>Wetlands are also important spawning areas for various fish species in Lake Huron.</p> <p>Bruce Power must assess these wetlands under the Ontario Wetland Evaluation System if this has not already been done.</p> <p>SON knowledge must be used in determining baseline levels</p> <p>Provide Feature Based Water Balances for wetland features and integrate with the groundwater and surface water assessments provided in previous sections.</p> <p>Bruce Power must provide details of the assumptions and modeling used to estimate dose to specific populations and including non-human biota.</p> <p>Bruce Power creates a refuge for the invasive grass carp over winter. Grass carp have been documented to consume up to 40 percent of their body weight in a day of macrophytes. This is a serious risk to wetlands on Lake Huron if a resident population becomes established here. We need to consider the impacts of a grass carp or other carp invasion and figure out mitigation strategies that Bruce Power can adopt immediately so that we do not lose our coastal wetlands on Lake Huron.</p>
8.9 Terrestrial wildlife and wildlife habitat	<p>In the assessment of terrestrial wildlife baseline conditions, Bruce Power must include terrestrial invertebrates, some of which (e.g., moth diversity) may be useful indicators of environmental health and habitat quality (measurable at relatively low cost).</p> <p>Bruce Power must recognize that "birds" are addressed separately from other terrestrial wildlife in the TISG, with reference to relevant section(s).</p> <p>Bruce Power must give particular focus to wide-ranging "umbrella" species in the assessment of (cumulative, residual and potential direct) impacts. Umbrella species may include clan animals such as Black Bear and turtles, which require multiple ecologically-connected habitat types during their annual life cycles, as well as keystone species, if present.</p> <p>TISG recommends identification of "wildlife species of ecological importance" but provides no criteria on how "ecological importance" is determined. Bruce Power must work with SON to develop such criteria. For example, some rare/vulnerable orchid species are entirely dependent on certain invertebrate taxa for pollination – such an invertebrate species, if found on site, may be considered "ecologically important" to the conservation of the orchid species. Bruce Power must acknowledge that such species – both the orchids and the invertebrates – cannot realistically be identified prior to completion of field studies, as EIA associated fieldwork may result in discoveries of species not previously known to occur in the study area(s) (not to mention the fact that many such species and their ecological relationships will likely remain undocumented by project specific studies). These comments are made in the context of SON's responsibility for all living relations in Sauking Anishnaabeking, not just federally and provincially designated "at risk" species, clan animals, species that are harvested, used for ceremony, etc., which Bruce Power must acknowledge.</p> <p>Bruce Power must provide details of the assumptions and modeling used to estimate dose to specific populations and including non-human biota</p> <p>Bruce Power must acknowledge that thermal plume of cooling system discharge has impacts on terrestrial wildlife and bird populations (e.g., food web alterations, increased disease exposure due to high concentrations of birds, potential exposure to botulism for shoreline-feeding species), not just aquatic species.</p> <p>Bruce Power's sources of information on "appropriate methodologies to predict impacts on wildlife" should include SON, academic researchers and federal government (e.g., SAR recovery strategies), i.e., not be limited to "the Ontario government".</p>
8.10 Species at risk and their habitat	<p>See subsections, below</p>
8.10.1 Baseline Conditions	<p>Bruce Power must acknowledge the limitations of existing data (i.e., existing SAR data for a study area and vicinity are often limited to incidental or citizen science observations).</p>
8.10.2 Effects to species at risk and their habitat	<p>The impact assessment shall consider aquatic connectivity (e.g., between streams, wetlands, lakes, or groundwater-surface water interactions) and the role of water quality (e.g. temperature, dissolved oxygen, turbidity, contaminants) on species survival and reproduction. The assessment will require site-specific water quality parameters tied to aquatic SAR ecological thresholds. Habitat descriptions will include substrate type, flow regime, depth profiles, seasonal variability, aquatic vegetation presence, etc. The assessment will inventory and assessment of barriers affecting aquatic SAR movement.</p> <p>Bruce Power's evaluations of effects on SAR should include effects on SAR throughout the LSA and RSA associated with (short- and long-term) project-related off-site development and other activities.</p> <p>Bruce Power must acknowledge that changes to Endangered Species Act, 2007, of Ontario (in the recently-passed Bill 5) may have implications re: permitting and other SAR protections, but that SON may be strongly opposed to such changes.</p> <p>Sources of information on "appropriate methodologies to predict impacts on wildlife species at risk" must include SON, academic researchers and federal government (e.g., SAR recovery strategies), i.e., not be limited to "the Ontario government".</p> <p>Bruce Power must acknowledge that species at risk (SAR) are not limited to what is typically understood as "wildlife" (i.e., there are designated SAR vascular plants, mosses, lichens, etc.).</p> <p>While dose calculations are required, aquatic species may experience different exposure pathways (e.g. waterborne uptake, sediment contact). Bruce Power must work with SON on expectations for including sediment-water partitioning and bioaccumulation models relevant to aquatic species.</p> <p>Bruce Power must assess cumulative or synergistic contaminant exposure in aquatic food webs. Bruce Power will evaluate combined thermal, chemical, and radiological stressors in aquatic environments.</p> <p>In addition to light and vibration, other stressors (e.g., sedimentation, scour, flow turbulence) must be considered. Bruce Power must also consider indirect aquatic habitat effects from construction (e.g., trenching, cofferdams, pile driving).</p> <p>The TISG provides no guidance on how to handle SAR dependent on benthic or sediment zones (e.g. mussels). Bruce Power must assess risks to benthic-dependent SAR as the accumulation of radiation is usually high in those species.</p>
8.10.3 Mitigation and enhancement measures	<p>Fish-friendly infrastructure and mitigation must be integrated into the project design. Given the history of Gizzard Shad mortality and the frequent occurrence of species becoming trapped at the forebay, the design should be revised, or entirely reimagined, to allow for safe passage and escape, even in cases where fish become entrained or impinged.</p> <p>Timing restrictions are well-defined for bats but not for aquatic SAR (e.g., spawning windows). Require species-specific in-water work timing windows, e.g., "no in-water works during peak spawning period"</p> <p>Bruce Power must explicitly consider and propose habitat offsetting/restoration strategies if unavoidable habitat loss may be anticipated to occur with proposed development or operational activities.</p> <p>Bruce Power shall conduct post-construction monitoring of aquatic SAR.</p>
8.11 Fish and fish habitat	<p>We need to understand the effect that another water intake would have on biota, with a special focus on larval fish, and planktons.</p> <p>We need to understand fish movement around the site &amp; how they interact with the power plant.</p> <p>Bruce Power will assess how altering this habitat will affect the fish community. le warm water discharge acting as an attractant to warm adapted species/enabling the establishment of invasive species in the lake such as grass carp.</p> <p>Bruce Power will describe existing physically altered or contaminated habitats that were changed by past operations (REGDOC-1.1.1 Appendix C.7.1)</p> <p>Bruce Power will create a plan to deal with fish carcasses.</p> <p>Bruce Power will describe changes in benthic habitat and its effect it has on fish. Does high &amp; warm discharge result with sediment transfer &amp; biofouling of benthic environment? Does this effect fish communities or food web interactions? Planktons, benthic invertebrate species composition, fishes. The proponent will assess potential effects on fish behaviour, distribution, abundance, and migration patterns.</p> <p>This should be expanded to include modelling how another reactor and thermal plume might impact on invasions for: bighead, silver, black, grass carps, tench, snakehead, tench etc.</p> <p>Accessing the discharge channel in the winter by boat could be key to capture invasives using the warm water discharge as refuge from the cold water. Engineering a boat launch out of the flow of water would enable various organizations to launch a boat to try and sample fish found in the discharge channel.</p>
8.12 Birds and their habitat	<p>Bruce Power must explicitly acknowledge that the TISG statement "should there be anticipated displacement of nesting birds, baseline habitat data should provide evidence that there is enough equivalent habitat for birds to be displaced to and that the habitat being removed is not unique to the project study area or region" (and related text lower in the section) would generally only apply to situations where a species has very specific, "replaceable" or replicable nesting requirements (e.g., natural cliff ledges =&gt; built ledges; tree cavities =&gt; nest boxes), or a species is so rare that its numbers are below the carrying capacity of available habitat (which likely applies only to a small minority of bird species). In general, since habitat availability (extent) typically strongly correlates to species population size, when habitat is lost, the species' population declines. Bruce Power must explicitly acknowledge that it is a common misconception that birds "displaced" by habitat loss are able to find "equivalent habitat" elsewhere without impacting the overall local/regional population. Impact assessment, mitigations and offsetting need to be considered in this context.</p> <p>Bruce Power must explicitly acknowledge that although it presently has no "official" recognition (e.g., as an Important Bird Area), the Huron Fringe (the coastal zone and adjacent terrestrial environments along the west coast of Lake Huron in Ontario) within which the Bruce Power study area is centrally situated, is widely known as an important migratory bird corridor due to its geographic position along the Lake Huron coast and its north-south configuration (the annual Huron Fringe Birding Festival each May-June is one of Canada's largest and most popular nature-viewing events).</p> <p>Bruce Power must consider the impacts of cooling systems and associated thermal plumes on bird populations (numbers and composition, seasonality), bird-related food web changes, potential increased exposure to pathogens (e.g., avian influenza, botulism), behavioural changes, etc.</p> <p>Bruce Power must consider the impacts of inadvertent creation of artificial bird nesting habitat (e.g., flat rooftops for nesting gulls) and the associated food web impacts and other ecological implications.</p> <p>Bruce Power must explicitly consider habitat changes that may result in increases in generalist, nest-predating and/or parasitic-nesting bird species (e.g., Wild Turkeys, American Crows, Common Grackles, Brown-headed Cowbirds) and impacts they may have on vulnerable bird species and other wildlife (e.g., herpetofauna) in the assessment of impacts (cumulative / past / present / potential future).</p> <p>Bruce Power must include road mortality as a potential effect on bird populations (throughout the ZoI/RSA).</p> <p>The TISG's mitigations and enhancement measures section includes a reference to "eskers" (but to our knowledge there are no eskers anywhere near the Bruce Power site). However the accompanying statement relating to eskers "is of great value to forest birds during migration and reproduction" would apply to forest and other natural cover along and near the Lake Huron coast (i.e., the Huron Fringe, noted above). Bruce Power must acknowledge this error in the TISG and adapt its own wording accordingly to apply to the Huron Fringe in the IA.</p>
9. Health, Social and Economic Conditions	<p>The Impact Statement must describe current and reasonably foreseeable future health conditions in the context of SON's historic baseline conditions, current conditions, and trends, as well as legacy issues from past adverse industrial and sociodemographic impacts.</p> <p>The Impact Statement must include community health profiles for each Chippewas of Sauguen First Nation and Chippewas of Nawash Unceded First Nation embedded within each Nation's context-specific definitions of health, well-being, and wellness.</p> <p>The Impact Statement must include a comparison of data over time, including the period before the construction and operation of Bruce A, during the operation of Bruce A, during the operation of Bruce B, and at present time.</p> <p>The Impact Statement must incorporate details on SON membership no longer residing within the LSA, RSA, or ZoI due to known or perceived impacts from the Bruce A or Bruce B Nuclear Generating Stations</p> <p>The impact statement must acknowledge SON's unceded fishing rights &amp; waters. This project will have impacts on them and has the potential to destroy them.</p> <p>Use SON knowledge to understand the impact of Bruce Nuclear on the fishery, and on safety of consuming these fishes.</p> <p>Include an educational aspect presenting the test results to the community that communicates the findings in a digestible way to membership. Important to consider there is a certain degree of scepticism with the safety of the consumption of fish by the Bruce Power plant. SON involvement is imperative for meaningful understanding of results.</p> <p>Must understand the history of SON fishing in the area, and how the targeted species has changed over time, and the demand for fishes caught around the Bruce Power site.</p> <p>The Impact Statement must acknowledge the relationship between health and impacts to cultural heritage (eg. The Upper Mackenzie (BbHj-6), Jibegmeoogong (BbHj-12), and other sites throughout the Territory outside the fenced perimeter of the site) and the necessary assessments must be undertaken to determine those impacts and better document ancestral sites and landscapes.</p> <p>The Impact Statement must describe and characterize the social, cultural, and economic extent of SON fisheries at local, regional, and national scales.</p> <p>The proponent must work with SON to come to agreement on a definition of health that is aligned with the SON understanding of health.</p> <p>Historical impacts on health must consider psychosocial impacts from past activities associated with the nuclear industry and how individual psychological impacts have interacted at the individual, family, and community level to affect both physical health, social- and community well-being.</p> <p>Pathways of effect on determinants of health must also consider experiences of SON members arising from changes in their relationship or interaction with the environment and SON VCs as a result of the project.</p>

	<p>When describing relevant protection factors contributing to community well-being and resilience, the Impact Statement will identify and discuss project interactions to those factors, in conjunction with a qualitative discussion on the implications of those project effects on community well-being and resilience.</p> <p>As discussed elsewhere, baseline conditions must be referenced against a healthy baseline or standard. Where a point in time or standard is not identified as a reference point, affected peoples should be consulted on what a healthy or resilient and functional condition looks like.</p> <p>Appendix 2 - Human health - this reference list is missing the latest Health Canada guidance document on completing health impact assessments under the federal impact assessment process. Include the following document to the list: <a href="#">Health Canada, 2024, Interim Guidance: Health Impact Assessment of Designated Projects under the Impact Assessment Act, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</a></p> <p>Biophysical Health: Country Foods and Human Exposure</p> <p>The current requirements for the Impact Statement does not include the measurement of health outcomes for individuals consuming fish from waters near the proposed nuclear plant. This is a critical gap. Measuring only environmental parameters (e.g., contaminant concentrations in water or general air quality) is insufficient without a clear understanding of how these contaminants may be entering human bodies—particularly through fish consumption, which remains a major source of nutrition and cultural identity for SON.</p> <p>Measuring contaminant levels in fish species found near the plant, and in individuals who consume those fish, is essential to understanding biophysical risks to health. This monitoring must be conducted through a multimedia Human Health Risk Assessment (HHRA) that includes ingestion pathways and bioaccumulation over time.</p>
<p><b>9.1 Effects to human health, social and economic conditions</b></p>	<p><b>Food Security and Fish Baselines</b></p> <p>Food security is a major determinant of both physical and mental health. Fish stocks are central to our food systems and must be explicitly addressed in this section of the Impact Statement. The establishment of rigorous baseline population data for fish in the area around the plant is essential to any effort to monitor and protect this food source over time.</p> <p>This baseline must not be limited to commercial or sport species. SON have harvested and targeted a wide variety of fish species historically. These practices are integral to community wellness and cultural continuity. Monitoring efforts must reflect this by including culturally important species and by being co-designed and governed by SON knowledge holders.</p> <p>In addition, the potential for contaminant uptake in fish—including radiological (e.g., tritium, cesium-137), chemical (e.g., mercury, PCBs), and thermal stressors—should be assessed and monitored long-term.</p> <p><b>Socioeconomic Impact – Fisheries and Employment</b></p> <p>An indirect but serious potential effect of this project is the degradation of the SON fishery, both in environmental quality and in public perception. If waters or fish are seen as unsafe, community members may avoid these resources out of fear or caution, which would have direct health, cultural, and economic consequences.</p> <p>This also has real impacts on employment. Fishing is not only a cultural right but a source of income and livelihood for many SON members. Degradation of fish stocks, fishing areas, or community trust in food safety would cause economic harm, including the potential loss of fishing-related jobs. These effects must be acknowledged explicitly in the Impact Statement.</p> <p>There must also be guarantees or compensation mechanisms in place to support fishers and community members if degradation occurs. This includes both direct and indirect losses, and it must reflect the true value of the fishery—not only in economic terms, but in terms of cultural importance and rights.</p>
	<p>SON requires the following:</p> <ul style="list-style-type: none"> <li>Inclusion of fish contaminant testing, including both chemical and radiological contaminants, in culturally relevant species.</li> <li>Inclusion of human biomonitoring for community members who consume fish from the area.</li> <li>Development of a baseline fish population and health dataset with the involvement of SON knowledge holders.</li> <li>A commitment to transparent, long-term fish and human health monitoring, jointly governed with the community.</li> <li>Acknowledgement of potential economic and cultural loss tied to fishery degradation, with clear mechanisms for compensation.</li> </ul> <p>Bruce Power must acknowledge that the TISG Section "9.2.3 Effects on community well-being" needs to include impacts on well-being (spiritual, cultural, social, mental, physical) associated with (potentially permanent) loss of access to natural environments (and significant qualitative changes to those environments) – applies to both Indigenous and non-Indigenous communities throughout the Zol/RSA.</p> <p>9.2.3 - Ancestors and ancestral sites / cultural heritage play a role and have effects on community well-being. Until the necessary archaeological investigations have been completed as outlined by SON there will continue to be negative impacts on SON community and their spiritual well-being. The appropriate studies must be undertaken in consultation with SON, and appropriate mitigations must be established and implemented by the proponent.</p> <p>The Impact Statement should consider a Health Impact Assessment (HIA) over a stand-alone Human Health Risk Assessment (HHRA). A HHRA model prediction is required that will determine whether a HHRA is required. The HHRA would look at risks associated with toxicity and exposure to contaminants. A more broad look at social, economic, and health determinants affecting health is appropriate given both the history of SON with the nuclear industry and the interlinked connection between SON health and well-being and that of the environment and SON culture.</p> <p>The Impact Statement will additionally add as a vulnerable group those who are chronically unemployed or unlikely to benefit from the project but likely to experience undesired changes to their well-being. An impact assessment of this vulnerable group is to be included in the GBA Plus assessment.</p> <p>Discussions on project benefits must include and consider all vulnerable groups and discuss ways of restoring well-being, building resilience, or removing barriers that contribute to individual or group vulnerability.</p> <p>We need to be more specific about ALARA and BATEA. Bruce power and SON should work together to develop reasonable thresholds for these concentrations. It is important to note community specific health vulnerabilities on behalf of SON due to high reliance on fish for sustenance.</p>
<p><b>9.1.3 Mitigation and enhancement measures</b></p>	<p>Mitigation needs to include fish health and safety as monitoring fish populations on its own is insufficient. Mitigation measures must include SON insight, and guidance to protect their food sovereignty. These can include rehabilitation of native species found in the lake and more.</p> <p>In discussion of mitigation, Impact Statement must also discuss restoration and what this means to SON.</p> <p>Mitigation measures must include efforts to study, address, and minimize future negative impacts to SON's cultural heritage on and off site: by conducting the necessary studies on site, and ensuring associated development in the sphere of influence occurs in a responsible manner in consultation with SON.</p> <p>Mitigation measures must discuss issues of trust and confidence between affected Indigenous groups, government agencies, and the proponent. SON members whose health is affected by the project are unlikely to have high levels of trust and confidence with the proponent or government agencies that supported the Project. Mitigation measures must develop ways of building trust and confidence amongst affected populations so that specific mitigation measures can be implemented as intended, and with the anticipated effect. A psychosocial lens is appropriate in designing mitigation measures that interact with issues of mental and physical well-being. It is broadly understood that stressors to health - be they real or perceived - can trigger psychological impacts to mental well-being. Mitigation measures must also, therefore, give meaningful consideration to issues of perception.</p> <p>Mitigation measures must be designed in collaboration with SON when they are intended to address residual effects to SON's social, economic, cultural (including spiritual), community, or physical health and mental well-being. Mitigation measures should adapt to the particular needs and context of the individuals/groups they are targeting. SON and professional care providers who work with SON members are best suited to understand mitigation measures that are likely to succeed versus those that are doomed to failure or trigger further harm.</p>
<p><b>9.2 Biophysical determinants of health</b></p>	<p>Note that any studies engaging SON members for biophysical testing should be carried out in a trauma-informed manner and only with the consent of SON. This type of study has real potential to trigger past traumas and result in psychosocial impacts itself.</p>
<p><b>9.2.2 Effects on Biophysical Determinants of Health</b></p>	<p>The assessment on the potential effects on human health considering current and future availability and quality of traditional/harvested foods and water must also consider existing trends in use and frequency, existing quality and anticipated future conditions under different climate change scenarios.</p> <p>If a determination and rationale are provided to not test for potential contamination of traditional/harvested foods, the Proponent will provide engagement records confirming this approach with SON or identify variances in opinion between SON and the Proponent on this topic.</p> <p>The concept of "tolerance levels" of Indigenous Nations and communities needs further elaboration to contextualize. The Proponent will consult with SON to identify an appropriate interpretation for how SON has tolerated adverse effects on health. Changes related to forced and undesired shifts in food security must also consider potential psychosocial impacts to lifestyle, lifescape, and lifestrain of individuals, families, and communities related to the change.</p>
<p><b>9.3 Social determinants of health and community well-being</b></p>	<p>The consideration of the psychosocial environment must discuss the importance of relationships and interactions at different scales (i.e., individual, family, relational, institutional, community, and society), and how these have been shaped, or are changing due to historical and environmental dimensions.</p> <p>Baseline conditions should be referenced relative to a healthy baseline for land and resource use, established by SON. If no healthy baseline is identified, a clear point in time should be used where Indigenous way of life was considered to be healthy and sustainable (e.g., pre-contact, or a time prior to the nuclear industry).</p>
<p><b>9.3.2 Effects on social and economic determinants of health</b></p>	<p>Mental health is a critical component of overall health. SON members have a complex and stressful history with the nuclear industry. Incidents, experiences, and fear of toxic contamination represent a significant risk and adverse impact on individual lifestyles and lifescape (i.e., how they experience their world) (see for example, Edelstein, M.R. (1988). Contaminated communities: The social and psychological impacts of residential toxic exposure. Westview Press). Psychosocial impacts can manifest when stress results in changes to lifestyle and lifescape, and produces more strain on individuals and their social relations and interactions. Evidence from past SON affidavits and testimonials from members suggests SON's interaction with the nuclear industry has resulted in psychosocial impacts. The legacy of the nuclear industry has directly and indirectly informed SON's current perceptions and stressors (e.g., lifestyle and lifescape). Understanding the extent of past psychosocial impacts and how prevalent they remain amongst SON members is critical to understanding current norms, realities, and mental well-being. SON therefore expects that the Impact Statement's review of potential health effects (based on social determinants of health) arising from changes to social and economic conditions will include an assessment on the psychosocial impacts of the nuclear industry on SON and its members.</p> <p>SON has identified this component of the assessment as a priority that includes sensitive membership data. The proponent must work closely with SON in carrying out all aspects of this analysis. This includes enabling SON to lead and control all or parts of the study related to the assessment of potential psycho-social impacts.</p> <p>The proponent is asked to identify any emotional or social stress factor that may result from the Project. This investigation and discussion must be framed in terms of psychosocial impacts and build off of the existing understanding of a lifestyle and lifescape shaped by the strain of the nuclear industry. This discussion must refer to and extend to the investigation of potential health effects (short- or long-term) resulting from changes on community cohesion and perception of well-being.</p> <p>SON has identified this component of the assessment as a priority that includes sensitive membership data. The proponent must work closely with SON in carrying out all aspects of this analysis. This includes enabling SON to lead and control all or parts of the study related to the assessment of potential psycho-social impacts.</p> <p>The concept of "tolerance thresholds" of Indigenous Peoples needs further elaboration to contextualize. The Proponent will consult with SON to identify an appropriate interpretation for how SON has tolerated adverse effects on social health determinants, and how resilient SON's continued tolerance levels are.</p>
<p><b>9.3.3 Effects on community well-being</b></p>	<p>The concept of "tolerance thresholds" of Indigenous Peoples needs further elaboration to contextualize. The Proponent will consult with SON to identify an appropriate interpretation for how SON has tolerated adverse effects on community well-being and how resilient SON's continued tolerance levels are.</p> <p>When describing the expected interactions between the Project's workforce and local communities, businesses and residents, the Impact Statement will consider and discuss the effect on vulnerable populations exposed to the workforce or to an influx of temporary workers or newcomers.</p>
<p><b>9.4.1 Baseline for services and infrastructure</b></p>	<p>It is insufficient to catalogue existing infrastructure and services. The current capacity and ability of infrastructure and services to meaningfully meet the needs of SON members is the actual topic of interest. How functional are these components? Do they require upgrading or repairs, are they adequately funded and capable of meeting existing demands and anticipated demands from observed trends? The Impact Statement must assess this qualitative investigation of baseline services and infrastructure. Further, the assessment shall rely on interviews with local experts and service providers to ensure local context is captured.</p>
<p><b>9.4.2 Effects on Infrastructure and Services</b></p>	<p>The effects on services and infrastructure must explore the anticipated changes and stresses associated with the in-migration of workers and their families (as discussed above), including any associated strains resulting from an influx in disposable income in the region.</p>
<p><b>9.5.3 Effects on business environment and local economy</b></p>	<p>When describing potential effects on the traditional economy, discussion shall consider if and how work scheduling and rotations affect the ability of prospective SON members employed by the Project to participate in subsistence activities (both positive and negative).</p>
<p><b>10. Indigenous Peoples</b></p>	<p>Comments contained in Subsections.</p>
<p><b>10.1 Indigenous physical and cultural heritage, and structures, sites or things of significance</b></p>	<p>10.1.1 - Bruce Power will work with SON to understand baseline conditions and impacts to SON.</p> <p>Aquatic species (as well as other land species) are central to SON culture. Bruce Power will work with SON to understand how the project (throughout the project cycle) could affect SON's cultural and spiritual connection to the waters.</p> <p>10.1.1 - Baseline conditions must be established in consultation with SON.</p> <p>10.1.1 - Although Jibegmeogong is mentioned several times in the TISG, we see no specific mention of the Upper Mackenzie site (BbHj-6) here or throughout the document, as with the Summary of Issues, despite SON's comments indicating that the status of this disturbed site should be ascertained. Presumably it is included under the blanket 'archaeological sites in the project area', but the known and impacted ancestral site should be explicitly named and identified like Jibegmeogong (these sites also have provincial Borden numbers / identifiers).</p> <p>10.1.2 - The proponent must undertake the necessary terrestrial and marine archaeological studies / provision SON-led studies in order to analyze and respond to the concerns related to SON's cultural heritage. Without the completion of the necessary archaeological studies required by SON - effects to indigenous physical and cultural heritage cannot be addressed.</p> <p>10.1.2 - These studies must not be restricted to the proposed development envelope and must include Culturally Sensitive Areas and areas of archaeological potential as defined by SON within and beyond the fenced perimeter of the existing Nuclear Facility, including the Upper Mackenzie site (BbHj-6).</p> <p>See also reference in section 7.3 related to holistic considerations...</p> <p>The concept of a "holistic Indigenous VC" shall be clarified further or given more context. As written, it appears as though it is sufficient to provide an overall commentary on Indigenous well-being. While SON supports this, it is important that such an analysis be treated with the same rigor and effort as a comprehensive cumulative effects assessment. It also needs to meaningfully support and respect Indigenous values and understanding of SON's worldviews. The notion of a holistic VC is an encapsulation of many values that require a multi- or trans-disciplinary approach to assess and understand, including both qualitative and quantitative assessment. Their collective consideration should focus on how they collectively affect SON's way of life. This requires an understanding of the individual well-being of each VC as well as a focus on the strength of relationships between each VC. Socio-ecological systems thinking offers a framework for these considerations. This analysis requires direct collaboration and validation from SON to ensure that relationships are properly understood and that valuations on the state of health of each VC and the strength/importance of the relationships are properly weighted. Wherever possible, identification of values and concerns, and the valuation or weighting of how serious an effect might be should be made by SON Knowledge Holders or related experts identified by SON.</p> <p>Important note that this section, final paragraph (page 124) seeks information on "past, present and anticipated future use of, and practices within the project area". This broader consideration of SON TLRU activities is supported in the assessment of SON rights and interests. This terminology differs from other references within the TISG, which are specific to "current" use activities.</p> <p>In the description of how historical and current cumulative effects to environmental and socio-cultural conditions have already impacted physical and cultural heritage, the Impact Statement shall consider how any stress-related changes to SON lifestyles and lifescapes (refer to related comments in section 9.3.2 for more detail) have altered cultural heritage, cultural practices, or spiritual well-being.</p>
<p><b>10.2 Current use of lands and resources for traditional purposes</b></p>	<p>The use of SONK, data and studies will be done with consent and according to SON protocols.</p> <p>Include intergenerational knowledge transmission because many traditional activities are cultural learning experiences.</p> <p>Bruce Power must consider seasonal fishing pattern, species of concern, water stewardship and thermal effluent effect</p> <p>Consider changes to water access and navigation due to the project.</p> <p>What consideration has been given to the existing impacts of Bruce A and Bruce B, as well as the current conditions? Establishing a clear reference point is essential for future assessments and could help illustrate the extent of cumulative effects that may arise with the addition of Bruce C.</p> <p>The assessment should address gender roles and responsibilities, particularly when considering baseline community perceptions of the nuclear power project and its potential effects. Understanding how gender influences experiences, concerns, and responsibilities can help ensure a more inclusive and equitable evaluation of the project's social impacts.</p> <p>Knowledge and monitoring from SON must be included meaningfully, not just referenced.</p> <p>Include participatory impact rating systems—minor, moderate, major—using SON-led criteria where possible.</p> <p>Consider intergenerational equity - whether future generations will have the same access and knowledge opportunities.</p> <p>The Impact Statement must take into consideration the realities faced by SON membership in readily accessing the fenced nuclear facility, an inability to harvest medicines, commune with ancestors, fish, etc. There are ancestral fishing sites on an ancient shoreline and an ancestral burial ground - all within the fenced perimeter.</p> <p>Bruce Power must acknowledge and consider the impacts on loss of land-based SON Knowledge due to reduced or limited access to, or qualitative changes to, harvesting, ceremonial and other culturally important sites within the Bruce Power site and throughout the Regional Study Area.</p> <p>In addition to those noted in the TISG, impacts on reptiles, amphibians, birds, mammals, plants and other biota, in particular species considered important by SON must be included in the overall IA.</p>
<p><b>10.2 Current Use</b></p>	<p>Proponent must demonstrate how Indigenous (SON) access to land and resources for traditional purposes has been impacted to date both on site (fenced area, no trespassing), and alienated from access to land in the broader Zol by development related to Douglas Point, Bruce A and B (e.g. subdivision development). The proponent must also demonstrate how the impacts of real and perceived contamination has impacted current use of lands and resources for traditional purposes an rights exercise.</p> <p>SON, as a rights holder, maintains fishing rights which are affected by community concerns regarding radioactivity in fish resulting from effluent discharges (see comments in 8.4). Bruce Power must include in the Impact Assessment an evaluation of the impact of further expansion with Bruce C on socio-economic conditions in the SON community.</p> <p>In the discussion of how historical and current cumulative effects to environmental and socio-cultural conditions have already impacted current use of lands and resources for traditional purposes, specific consideration will be made on how the nuclear industry, from its commencement, has affected SON land and resource use.</p> <p>In the discussion of avoidance of resources due to perceived quality, effort will be taken to understand the reason for, or source of, avoidance (e.g., if due to perceived low quality, is it because it is thought to be contaminated? Contaminated from what?).</p>

	In the assessment of effects identified by Indigenous Nations and communities, consideration to how identified concerns affect the lifestyle and lifescape of SON members and contribute to (positively or negatively) past and potential psychosocial impacts to SON members from the nuclear industry.
	Health must be understood broadly - i.e., as including mental, emotional, spiritual, community and cultural health, not just physical health.
	Strengthen economic participation metrics to include quality of employment (e.g., training, long-term positions), not just numbers or revenue.
10.3 Health, social and economic conditions of Indigenous Peoples	Clarify collaborative socio-economic projections which include methodology, community involvement, and use of traditional economic indicators. Include cultural economy indicators to account for non-monetary economic activity (e.g., subsistence fishing, land-based education, trade). Discuss cumulative social impacts, e.g. crowding from increased workforce, housing pressures, cost of living, policing, and gender-based violence risks. Assess effects on Indigenous-led economic initiatives, such as tourism, fisheries, or renewable energy projects that may be directly or indirectly affected. Analysis of commercial fisheries to include data and future risk projections related to thermal plume, water quality, and industrial traffic. The baseline should be co-developed with SON. Construction of an additional facility will create additional demands for infrastructure and resources in the region given a significant influx of long term workers and their families. The proponent must explain how these pressures and impacts (on medical services, emergency services, schools etc.) will be mitigated to an acceptable degree. Valued components related to SON health, social, or economic issues must consider underlying stressors resulting from external changes to SON's way of life and how these have affected individual, family, and community lifestyle and lifescape. Identified mental stressors shall be considered in a cumulative effects assessment for their synergistic, compensatory, masking or additive effect with other identified psychosocial impacts identified in the Impact Assessment process.
10.4 Rights of Indigenous Peoples	The impact assessment should include examples—such as identifying specific sacred sites, fishing grounds, or stewardship responsibilities that have been affected by past development. "Sharing information" with SON means providing accessible, complete, and timely information in culturally appropriate formats, not just written reports. The severity of impacts on rights should be determined by SON, not by the proponent. SON legal and cultural understandings guide the assessment of significance. 10.4.2 - The Impact Statement must ensure that the Determination of the impacts to SON's rights supports and requires the conduct of necessary archaeological and cultural heritage studies in consultation with SON. Bruce Power must explicitly acknowledge that the final section in the TISG section 10.4 relating to impacts, is missing an important consideration that must also be part of the IA, namely: "impacts on SON's inherent cultural responsibilities as stewards of the land and to all living relations" The description of how historic, existing and reasonably foreseeable future activities have cumulatively affected or could affect the conditions that support or limit SON's meaningful exercise of rights will consider direct and incidental impacts from the nuclear industry, including effects from the Bruce C site and reactors A and B. The proponent shall additionally consider as a factor impacts on occupancy of SON lands and resources appropriated without SON's consent by federal/provincial/municipal governments, industry, or private interests. Consideration of impacts on SON governance shall consider the level of agency SON has over its current lands and resources relative to other interest groups and relative to its Treaty and inherent Indigenous rights. The Impact Statement must meaningfully discuss and consider identified interactions of the Project with SON rights or interests. The Proponent will work with SON on appropriate indicators and methodologies to assess these interactions, and potential impacts to SON rights and interests. The Proponent will not make determinations on behalf of SON with regards to the severity or importance of an impact, and will allow SON to validate any use of SON-knowledge prior to finalizing its conclusions.
10.5 Mitigation and enhancement measures	The requirement to differentiate mitigation and enhancement measures by SON is essential, and the section does well to recognize that a one-size-fits-all approach is inappropriate for rights-based impact mitigation. Mitigation and enhancement measures must be co-developed with SON - not only described in relation to their perspectives but built through their leadership and participation. It is important that the proponent describe not only mitigation plans but also commitments, with clear responsibilities, timelines, and funding mechanisms outlined for each party, especially where third-party or government action is required. The guidance to provide information on the effectiveness of proposed mitigation is useful, but adaptive management plans are required, especially where uncertainty or lack of data exists about mitigation outcomes. The Impact Statement must describe any areas of divergence between the proponent and SON on mitigation and enhancement measures (e.g., any measures that were proposed or preferred by SON that were not incorporated into the project). Mitigation measures shall clearly describe the role and responsibilities of SON, and clearly detail the proponent's obligations to fund and administer the mitigation measure. Each mitigation measure shall be accompanied with a goal or intent statement that clearly summarizes its purpose, and a link to an adaptive management framework that enables flexibility to adjust design if the measure is not working as intended or if undesired impacts are observed despite successful implementation. The Proponent shall commit to having mitigation measures operational prior to the anticipated project-related impact occurring. In the case of an impact benefits agreement, the Proponent will describe how the effects pathway has been altered such that potential adverse effects to that VC have been adequately reduced or eliminated. Mitigation measures to manage residual effects shall follow the established hierarchy of mitigation measures and not rely on alternate means to resolve impacts without first trying to avoid, reduce, or mitigate the effect on the affected VC. Efforts shall also focus on like-for-like mitigations, meaning a cultural impact to land use should be addressed via restoring an aspect of land use, or a psychosocial impact is mitigated via active efforts to restore affected aspects of lifestyle or lifescape. Put differently, it is not acceptable to mitigate one component through support or compensation to a different component.
10.6 Characterization of residual impacts on Indigenous rights and interests	The Impact Statement must document areas of disagreement between SON and the proponent on the significance of impacts, and efforts made to reconcile conflicting views. SON will determine the significance of residual impacts on SON rights and interests. It is not for the proponent to provide any such conclusions. The TISG recommendation that the "proponent should discuss with each Indigenous Nation and community whether it is appropriate for the proponent to provide their views on the conclusions regarding Indigenous rights and interests" is not sufficient. Where the proponent is providing conclusions on SON rights and interests, the Proponent shall comment on how the Project will affect SON's way of life and overall well-being. This discussion shall consider cumulative effects as well as the project's addition to those cumulative effects. As with significance determinations, any adverse affect occurring to a heavily damaged baseline condition exacerbates the health and resilience of that VC and leads that VC further away from an acceptable threshold. Residual effects to SON's way of life shall consider SON's perspective on the status of their baseline condition and how this effect pushes or pulls SON's way of life towards an acceptable level. SON has identified this component of the assessment as a priority that includes sensitive data specific to SON rights and interests. The proponent must work closely with SON in carrying out all aspects of this analysis. This includes enabling SON to lead and control all or parts of the study related to the assessment of SON's rights and interests, and any determinations of significance related to potential effects on SON rights or interests
11. Security Considerations	No comments to date.
11.1 Physical protection	No comments to date.
11.2 Transportation routes	No comments to date.
12. Effects of Potential Accidents or Malfunctions	A potential spill would infringe on the rights of SON fishers access to the fishery. SON must be engaged in each step for developing a plan and mitigation strategies should any type of environmental degradation occur. Modeling is necessary to understand the potential effects of a radiological/chemical spill. Understanding the timeframes for rehabilitation is important too. In this modelling fish movement and spawning must be considered. Culturally sensitive areas, and important fish spawning grounds must be considered for the modelling of a potential environmental catastrophe. Understanding cascading effects to the lake ecosystem, and downstream ecosystems with consideration to climate change is also critical. Funds for remediation and rehabilitation must be securely set aside and remain accessible in the event that Bruce Power is sold, dissolved, or otherwise ceases operations.
12.1 Risk assessment	Bruce Power must provide in the Impact Assessment a level 3 PSA analyses of the distribution of radionuclides in the environment and evaluate the resulting population doses (REGDOC-2.4.2: Probabilistic Safety Assessment) with sufficient documentation to allow independent assessment of the results. Psychosocial impacts can arise from the risk of a nuclear accident or malfunction, be it real or perceived. In describing the potential consequences of accidents and malfunctions in terms of health and social effects, and effects to Indigenous Peoples, the Impact Statement shall consider the psychosocial impacts associated with those accidents or risks and how that can affect the lifestyle, lifescape, or life of SON members. (Lifescape can be understood as a function of how much stress is experienced by an individual relative to the coping resources of the individual and community, with decreasing psychological function creating more life strain (Edelstein, M.. 2004. Contaminated Communities: Coping with residential toxic exposure. New York, Routledge. DOI: <a href="https://doi.org/10.4324/9780429501395">https://doi.org/10.4324/9780429501395</a> ). Temporal boundaries for health-related impacts shall consider the length of time it takes to recover from psychological impacts or psychosocial impacts related to an accident or malfunction. It is understood that the social and psychosocial impacts of technological disasters are more severe than those of natural disasters and can last longer after the event has occurred (e.g., - Freudenburg WR. Contamination, Corrosion and the Social Order: An Overview. Current Sociology. 1997;45(3):19-39. doi:10.1177/00113929704503002; Joshua T. Fergen, Jeffrey B. Jacquet, Ritvik Shukla, 'Doomscrolling' in my backyard: Corrosive online communities and contested wind development in rural Ohio, Energy Research & Social Science, Volume 80, 2021, 102224, ISSN 2214-6296, <a href="https://doi.org/10.1016/j.erss.2021.102224">https://doi.org/10.1016/j.erss.2021.102224</a> .) Temporal boundaries shall therefore encompass the length of time a community is likely to experience changes to their lifestyle, lifescape, or life strain as a direct or incidental result of the accident or malfunction.
12.2 Mitigation and enhancement measures	No comments to date. Long-term monitoring and recovery measures must also give consideration to managing associated psychosocial impacts of affected communities, including SON communities.
12.3 Emergency management	Bruce Power must include in the Impact Assessment an assessment of the suitability of the current emergency response programs in notifying the SON community. The SON community has concerns about adequate development of emergency response plans and procedures for communications in the event of a nuclear emergency, including: 1. Concerns about the adequacy of emergency communications as described in the Provincial Emergency Response Plan - BNGSs (PERP-BNGS). 2. Need for emergency response resources including an Emergency Management Coordinator to develop communications processes for the SON community, interface with the PERP-BNGS, develop and coordinate emergency preparedness plans for the SON community. 3. The role of Indigenous Services Canada in emergency response communications including the infrastructure for notification and communication or agreements regarding notification of SON (who and how to contact, for example). SON must take the lead on communications and emergency response planning with SON members and communities. Emergency response planning, communication, and training activities carried out by the Proponent or other Regulatory Authorities must identify SON as the lead agent for works involving SON members or interests. The proponent, together with Indigenous Services Canada and other involved Regulatory Authorities, will identify the roles and responsibilities anticipated for this work and ensure that SON is provided with adequate capacity and finances to fulfil these obligations.
13. Effects of the Environment on the Project	Given the uncertainties associated with local and regional impacts of climate change, and the rates at which associated local environmental changes might take place, modeling of different short- (e.g., 50-year), mid- (e.g., 100-year) and longer-term (e.g., 200-year?) scenarios must be undertaken by Bruce Power. The adjacency of the nuclear facilities to Lake Huron presents a variety of potential hazards and operational problems, notably in relation to significant increase or reduction of lake levels (i.e., of significantly greater magnitude than during recent centuries). (General comment for this section) SON Knowledge of the area, natural cycles and flows is extensive and extends further than western scientific records. SON are also adept at adaptively managing to changing environmental conditions and hazards. Consideration of environmental effects on the Project must therefore be balanced with SON Knowledge in an effort to improve predictability and appropriate action responses.
13.1 Meteorological hazards	No comments to date.
13.2 Surface water hazards	As part of the Impact Statement and IA, Bruce Power must consider potential surface water impacts (on operations, as well as hazards) in the context of climate change, which introduces higher potential for extreme events (such as local intense precipitation, flooding, infrastructure failure), as well as greater uncertainty with respect to cyclical fluctuations and longer-term trends in Lake Huron water levels (potentially affecting coastal erosion rates, the facility's water intake and discharge and other operational infrastructure, hazardous waste storage sites, as well as natural environment features and functions).
13.3 Groundwater, geotechnical, geological and seismic hazards	Bruce Power must address in the Impact Assessment the impact of elevated tritium concentrations in groundwater on construction activities related to the proposed Bruce C project. The SON community is concerned with tritium in groundwater as described in the Bruce Power 2024 Environmental Monitoring Report Section 7.0 Groundwater Protection Program. If the tritium found in wells BATR-1-14B and BBTR-7-12 are from leaks or spills and remain at the concentrations measured in 2024, how will this effect construction activities if the Bruce C project goes forward? (See also 8.7)
13.4 Biological hazards	Recommend a brief assessment of how intake and outfall structures are designed to avoid attracting or entraining aquatic biota, like approach velocities, screen mesh sizes, location (depth, habitat type), and deterrent technologies. Episodic events like smelt runs are indicated, but seasonal cycles (e.g., spawning periods, die-offs, algal blooms) and cumulative organic loading are underdeveloped. Should expand to include: seasonal biomass cycles (e.g., spring algal blooms, fall plant die-back) and cumulative biological load effects (e.g., repeated fouling of systems over time, reducing capacity). Why is there no explicit mention of the two gizzard shad kills that happened, and lessons learned from it? The TISG mentions degradation from algae and microbial growth, but doesn't link to control measures. A description of biological fouling control strategies like biocides or chlorination, and impacts to receiving waters, mechanical scraping or pigging systems, or thermal cycling or dewatering of structures for control etc. is required. The thermal plume's effect is framed primarily as a water quality degradation issue. Its ecological implications (e.g., promoting harmful algae or disrupting fish behaviour) and then impacting the daily functions are not included and must be considered. Bruce Power will work with SON to determine how data will be structured to enable future comparison (i.e., trend analysis, anomaly detection).
13.5 Fire and explosion hazards	Some biological hazards (e.g., sudden fish impingement - gizzard shad incident) can cause immediate operational failure, but there's no discussion of emergency response or contingency plans. Bruce Power must outline in the Impact Statement the rapid-response protocols for acute biological events affecting critical systems (e.g., cooling water loss due to clogging).
14. Canada's Ability to Meet its Environmental Obligations	Comments contained in Subsections.
14.1 Environmental obligations	Bruce Power must document in the Impact Assessment plans and strategies for characterizing effects of the project related to the release of radionuclides to the environment, including: assumptions regarding diet, food sources, ingestion rates and parameters related to estimating individual and population doses relevant to the SON community. See also related comments in section 8.4. The TISG mentions broad frameworks but doesn't explicitly link project effects to measurable targets or obligations. For eg. 2030 biodiversity strategy includes protection of 30% land and water. Bruce Power must describe how the project will support or hinder progress towards specific targets, and offer to work with SON in this regard. Bruce Power must include a table linking each international/domestic obligation with specific project interactions, risks, and mitigation strategies. Bruce Power should map the project effects to specific environmental goals. Both the positive and adverse aspects of the nuclear industry and this Project shall be factored into the discussion on how the Project meets Federal environmental obligations. For example, under a high-magnitude, high-risk malfunction or accident scenario, the Project is likely to compromise the majority of Federal environmental obligations.
14.2 Climate change commitments	Carbon sinks are mentioned in the TISG, but not in a detailed manner. Bruce Power must describe in its assessment of the effects on carbon sinks the type of carbon sink which may be affected (e.g., wetlands, forests, agricultural soils) and what mitigation measures will be adopted in the event of losses/impacts. In addition to development of framework for net-zero plan, the impact assessment will need to consider how performance will be monitored or verified over time. Should have quantitative comparison, where possible, of project emissions with Canada's targets and international commitment - like Paris agreement. There should be independent peer reviewed tools or frameworks (likely international) to justify conclusions that proponent is putting forward (not only in this section - but where the risk/hazard is significant) Mitigation and enhancement measures should include option of carbon sequestration through strategic restoration of forest, wetland and other natural habitat restoration (potentially as part of an offset/compensation program that addresses habitat- or species-related impacts of the project and overall cumulative impacts of nuclear development at the site).
15. Sustainability	Examples of how each principle might be applied in practice (e.g., scenario planning for intergenerational equity, risk matrices for irreversible harm) would help proponents translate concepts into tangible analysis. SON definitions of sustainability (e.g., water as a living entity) should be included transparently in the framing or weighting of sustainability outcomes. Describe trade-off analyses used to balance competing objectives (e.g., minimized footprint versus optimized performance). Economic sustainability is implicit, but an analysis of long-term economic resilience, including maintenance costs, decommissioning liabilities, and local economic diversification beyond the project's life is required. The temporal scope must extend beyond the project's active life to capture legacy and decommissioning phases with sustainability implications. The Project's contribution to SON's way of life is an appropriate valued component to assess regarding sustainability of the Project. The Impact Statement should consider this VC in addition to the four to six key VCs from section 7.3. SON applies a seven generation temporal boundary for considerations of sustainability. This temporal boundary is appropriate when considering how the Project will contribute to the sustainability of SON way of life.
16. Follow-up Program	The follow-up program must be co-designed with SON, not merely "in consultation," to ensure their priorities shape monitoring and response. Bruce Power must commit that the results of annual report—and any proposed corrective actions—will be made publicly available in an accessible format. Identifying VCs and rationale is essential; SON rights and interests as VCs must be included, not only environmental components.

16.1 Follow-up program framework	<p>Bruce Power must provide a baseline-to-follow-up comparison table.                  Expected outcomes, targets, and indicators must be SMART (Specific, Measurable, Achievable, Relevant, Time-bound).                  Accessibility of data for the general population is good; Bruce Power should consider community training so local participants can interpret and use the data.                  Coordination committee co-chaired by SON and proponent representatives could formalize the collaboration.</p> <p>The follow-up program framework shall clearly describe the role and decision-making capacity of SON in the planning and implementation of follow-up programs intended to address residual effects to SON rights and interests. SON's active participation and equity in decision-making on SON rights and interests are necessary to generate trust and confidence that programming and related initiatives will be meaningful and meet the needs and expectations of SON members. This extends to related adaptive monitoring and other monitoring activities intersecting with SON rights and interests.</p>
16.2 Follow-up program monitoring	<p>The FUMP methodology must be co-developed by SON                  Bruce Power should consider mid-term public webinars or community workshops to enhance transparency and trust.                  Bruce Power must assess data comparability (e.g., methods, frequency) to ensure consistency with follow-up needs.</p>
16.3 Compliance monitoring	<p>Bruce Power must provide a roles and responsibilities matrix that includes external oversight (e.g., joint SON-proponent audits).                  Intervention mechanisms for non-compliance are described; a protocol for escalation (e.g., to regulatory authorities or IAAC) when proponent-level measures fail would close the loop.                  Quality assurance/quality control measures are included; consider requiring third-party data audits or certification (e.g., ISO standards) to ensure integrity.</p>
16.4 Adaptive management framework	<p>Bruce Power must periodically reassess whether adaptive management remains appropriate as uncertainties resolve.                  Integration of risk-based planning should be used, where high-uncertainty VCs get prioritized adaptive measures.                  For adaptive management to be effective it must also be timely. This requires real-time monitoring of observed changes and approval to act on undesired changes. In turn, this requires senior management support from the Proponent to pre-approve necessary actions if response thresholds are triggered. It also requires that monitoring focuses on observing changes in real time and not waiting on the results of longitudinal studies to establish causal effects. The adaptive management framework needs to be adjusted to include these considerations. Further, and as per input on the follow-up program monitoring, any adaptive monitoring that intersects with SON rights and interests must include SON as a decision-maker in the design and implementation of the adaptive management framework.</p>
17. Assessment Summary	<p>The Impact Statement Summary must be co-developed with SON—if SON chooses—to ensure the information is meaningfully accessible, culturally relevant, and responsive to community priorities. The summary must clearly outline how SON's concerns—especially those related to cumulative impacts, cultural use, and rights—have been considered, addressed, and mitigated. This includes the use of appropriate formats (e.g., visual, oral, translated if needed) and the opportunity for SON to validate how their input is reflected in the summary. The process of sharing the Summary must allow for dialogue, not just presentation.</p>