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**Written submission from the
Three Fires Group, on behalf
of the Chippewas of Kettle and
Stony Point First Nation**

**Mémoire du Groupe Trois
Feux au nom des Premières
Nations Chippewas de Kettle
et Stony Point**

**Regulatory Oversight Report
for Canadian Nuclear Power
Generating Sites for 2023**

**Rapport de surveillance
réglementaire des sites
nucléaires pour 2023**

Commission Meeting

Réunion de la Commission

February 25, 2025

Le 25 février 2025

Project Title: Regulatory Oversight Report for Canadian Nuclear Generating Sites: 2023

Form Number: 24-CNL ROR

Reference number: 24-CNL ROR CKSPFN

Re: Consultant review of the ROR with specific focus on the Bruce Nuclear Generating Station and surrounding area

Through collaboration between the Three Fires Group (TFG) and their technical expert, the Chippewas of Kettle and Stony Point First Nation (CKSPFN) wish to provide the following comments, questions and concerns to the CNSC as part of the hearing process for the Regulatory Oversight Report for Canadian Nuclear Generating Sites: 2023. Based on the location of the reserve lands along Lake Huron and the traditional territory of CKSPFN, we have a specific interest in the Bruce Nuclear Generating Stations A and D (BNGS), the Western Waste Management Facility (WWMF), and the Radioactive Waste Operations Site-1 (RWOS-1).

The following comments, concerns and questions are a result of fulsome review of the ROR and internal discussions related to initial priorities around nuclear energy and waste in the territory. These discussions focused on the preservation of water systems, protection of remaining, undisturbed natural areas and community-led approaches to more detailed assessment of cumulative effects in the territory.

At a high level we are seeking additional information or greater clarity on the following:

- Additional information is required in the ROR to provide assurances that the CNSC is taking appropriate steps to maintain regulatory oversight at BNGS, WWMF, and RWOS-1. This includes:
 - More detailed event descriptions for reportable events and notices of non-compliance (i.e., the nature, time, and location of the event); and
 - Descriptions of corrective actions undertaken by Bruce Power/OPG to address reportable events and notices of non-compliance.
- More clarity from the CNSC/OPG is required regarding the end state for the nuclear waste stored at the WWMF and RWOS-1.
 - The CNSC should indicate if the waste will be transferred to the NWMO Deep Geological Repository or the Near Surface Disposal Facility at the Chalk River Laboratories.
- Additional information is required regarding the Environmental Protection SCA, including:

- How the radiation dose to the public is calculated;
- How future climate change projections, including increased frequency of extreme weather events, are incorporated into safety analyses and planning; and
- The cumulative effects of activities at the Bruce site on the environment and the Aboriginal and treaty rights of Indigenous nations.

Detailed comments are presented below:

Reference	Issue	Comment/Request for Proponent
1.7 Highlights from 2023 Regulatory Oversight Activities p. 11	According to the ROR, there were no inspections by the CNSC at the RWOS-1 in 2023. While we understand that the RWOS-1 is no longer receiving waste and is in a state of storage, the CNSC should provide oversight by conducting regular inspections. This is important to help ensure nuclear waste is stored safely.	CNSC should provide rationale for why RWOS-1 was not inspected in 2023.
2.5 Bruce Nuclear Generating Station p. 70	Bruce Power has a Fisheries Act Authorization for operations at the Bruce site, which expires in 2028. We understand that this authorization was required by Fisheries and Oceans Canada due to the potential impacts on fish and fish habitat from the taking of water from Lake Huron for the cooling system. Impacts on fish may include impingement and entrainment. Healthy fish and fish habitat in Lake Huron are important for CKSPFN members to exercise their Aboriginal and treaty rights. If impacts to fish and fish habitat are expected to occur past 2028, avoidance, mitigation, and offsetting measures pertaining to fish and fish habitat should be developed with input from CKSPFN for any future Fisheries Act Authorizations.	CKSPFN is interested in learning more and potentially being involved in the oversight of fish and fish habitat offsetting measures and monitoring associated with the current Fisheries Act Authorization.
2.5.1 Management System p. 74 2.5.2 Human Performance Management, 2.5.3 Operating Performance, and 2.5.5 Physical Design pp. 76– 77	In 2023, there were 74 inspections completed at BNGS by the CNSC. These inspections resulted in 57 findings of non-compliance. These included: <ul style="list-style-type: none"> • Seven findings pertaining to the Management System SCA (e.g., near misses related to lifting and rigging); • Eight findings pertaining to the Human Performance Management SCA (e.g., training qualification non-compliance, hours of work non-compliance); 	The CNSC should provide more information in the ROR on the instances of non-compliance observed by the CNSC, including the date and nature of the non-compliance. The CNSC should also elaborate upon the corrective actions taken to address these events. This will provide CKSPFN with the information needed to help determine whether the

<p>2.5.6 Fitness for Service, 2.5.7 Radiation Protection, 2.5.8 Conventional Health and Safety, 2.5.10 Emergency Management and Fire Protection pp. 84–86</p> <p>2.5.12 Security p. 89</p>	<ul style="list-style-type: none"> • Three findings pertaining to the Operating Performance SCA (e.g., forced reactor shutdowns due to equipment troubles); • Three findings pertaining to the Physical Design SCA (e.g., unsecured equipment/materials not meeting earthquake safety standards); • Three findings pertaining to the Fitness for Service SCA (e.g., non-compliance document control of the Lifecycle Management Plan); • Seven findings pertaining to the Radiation Protection SCA (e.g., one instance where nuclear contamination was detected prior to exit from the Bruce site at the vehicle portal monitor); • 12 findings pertaining to the Conventional Health and Safety SCA (e.g., worker injury); • Two findings pertaining to the Emergency Management and Fire Protection SCA (e.g., availability of fire protection response equipment and egress requirements); • Two findings pertaining to the Security SCA; and • One finding pertaining to the Waste Management SCA (e.g., waste management procedural non-compliance). <p>All of these notices of non-compliance were deemed to be of low/negligible safety significance and CNSC was satisfied with the corrective actions taken. However, the descriptions in the ROR of the instances of non-compliance and corrective actions taken are vague; more information is needed to provide assurance that the corrective actions are sufficient to prevent another occurrence and that operations at BNGS are protective of CKSPFN members’ safety, rights, and interests.</p>	<p>corrective actions are sufficient to protect CKSPFN members’ safety, rights, and interests.</p>
<p>2.5 Bruce Nuclear Generating Station p. 71</p> <p>2.5.14 Packing and Transport p. 90</p>	<p>There were no inspections completed in 2023 at BNGS or WWMF that pertained to the Packaging and Transport SCA. Without an inspection, it is unclear how it was concluded that these facilities meet the applicable regulatory requirements in 2023. Furthermore, there was one reportable event related to this SCA at BNGS, which the CNSC has determined</p>	<p>The CNSC should provide additional information to explain what data was used to determine a rating of “Satisfactory” for the Packaging and Transport SCA. Further, the CNSC should provide a more detailed description of the</p>

<p>2.6.14 Packaging and Transport p. 101</p>	<p>to be not safety significant. The nature of this reportable event is not disclosed in Section 2.5.14.</p>	<p>reportable event (i.e., the nature, time, and location of the event). This information is important to provide transparency in communication with Indigenous nations.</p>
<p>2.5 Bruce Nuclear Generating Station p. 72</p> <p>2.5.1 Management System p. 74</p>	<p>The ROR states that “<i>CNSC staff conducted inspections on MCR [Major Component Replacement] activities, as well as contractor management, radiation protection, training, fire protection and engineering change control... Findings were either compliant or had negligible safety significance</i>”. However, the ROR subsequently reports that “<i>CNSC staff observed a trend of events in the area of contractor safety performance, specifically with issues related to conventional safety, fire protection, and rigging and lifting. While Bruce Power implemented appropriate corrective actions for each event individually, CNSC staff raised Action Item 2023-07-30964 which required Bruce Power to develop a more holistic corrective action plan to address the trend</i>”. These statements appear to contradict one another. This is especially concerning as in 2023 BNGS accident severity rate, accident frequency, and industrial safety accident rate were above the industry average.</p> <p>A trend in events related to issues such as fire protection do not provide assurance that these events have negligible safety significance.</p>	<p>The CNSC should provide more information on the events observed by the CNSC. The CNSC should also elaborate upon the holistic corrective action plan to address these events. This will help to provide CKSPFN with the information needed to help determine whether the corrective actions are sufficient to protect CKSPFN members’ health and safety.</p>
<p>2.5 Event Initial Reports p. 73</p>	<p>Two Event Initial Reports from the BNGS were submitted to the CNSC in 2023. These reports pertain to:</p> <ul style="list-style-type: none"> • A heat transport purification system heavy water leak in Bruce A Unit 4; and • Improper disposal of tritium-contaminated waste. <p>There is no additional information provided on the nature of these events and the corrective actions taken by Bruce Power. Without additional information regarding the location and extent of these issues and the corrective actions taken, CKSPFN cannot be assured that these events did not pose a risk to CKSPFN members.</p>	<p>The CNSC should provide more information on the location and extent of the events reported to the CNSC. The CNSC should also elaborate upon the corrective actions taken to address these events. This will provide CKSPFN the information needed to help determine whether the corrective actions are sufficient and protective of CKSPFN members’ health, wellbeing, and treaty rights.</p>

<p>2.5 Lutetium-177 Project</p> <p>p. 74</p>	<p>As of 2022, Unit 7 of Bruce B has been commercially producing Lu-177, an isotope used in radionuclide therapy to treat neuroendocrine tumours and prostate cancer. According to the ROR, <i>“Bruce Power and the SON [Saugeen Ojibway Nation] have entered a partnership to jointly market new isotopes produced at Bruce Power, creating new economic opportunities within SON territory”</i>. Plans to increase production of Lu-177 were under review with the CNSC as of 2023.</p>	<p>CKSPFN is interested in engaging with Bruce Power to discuss socio-economic opportunities.</p>
<p>2.5.4 Safety Analysis</p> <p>p. 80</p>	<p>Bruce Power would like to operate Bruce A and B units at 100% power and has submitted documentation to CNSC to plan for “Project 2030”. This project will involve the installation of new components that incorporate design and nuclear safety improvements and will be supported by other initiatives at Bruce Power such as refined safety analysis, core conversion, refurbishment of Units 1 and 2, Major Component Replacement, and a Lifetime Asset Management Plan. Currently the reactors are operating at 92–93% of full power. As per the ROR, the Safety Analysis review work is expected to take two years to complete.</p>	<p>CKSPFN is interested in being engaged on this work. CKSPFN key areas of interest include potential safety, human health and well-being, and environmental concerns. CKSPFN is interested in reviewing relevant documents pertaining to Project 2030.</p>
<p>Sec. 2.5.4 Safety Analysis</p> <p>p. 81</p>	<p>According to the ROR, in November 2023 Bruce Power submitted the Level 1 at-power internal events Probabilistic Safety Assessment to the CNSC for review. Subsequently, the external hazards assessment and Level 2 At-Power Internal Events and Internal Flood Probabilistic Safety Assessment were submitted in March 2024. We understand that the CNSC is currently reviewing those assessments. These safety assessments must consider projected future climate scenarios and include potential impacts from climate change, including increased frequency of extreme weather events.</p>	<p>The CNSC should confirm that these safety analyses consider future climate scenarios, the impacts of climate change, and the expected increase in extreme weather events.</p>
<p>Sec. 2.5.7 Radiation Protection</p> <p>p. 85</p>	<p>According to the ROR, issues relating to Radiation Protection in 2023 included:</p> <ul style="list-style-type: none"> • A primary heat transport leak event at Unit 4 in April 2023; and • An action level exceedance where contamination by a nuclear substance was detected prior to exit from the Bruce site at the vehicle portal monitor. <p>However, the CNSC determined that there was no dose consequence to plant personnel or members of</p>	<p>The CNSC should elaborate upon these events and the corrective actions taken by Bruce Power to address them. This will provide CKSPFN with information needed to help determine whether the corrective actions are sufficient to mitigate concerns about potential impacts on CKSPFN members’ rights and practices.</p>

	<p>the public, and no release to the environment. The CNSC was satisfied with Bruce Power’s investigation and corrective actions. However, more information is needed to provide assurance that the corrective actions taken are sufficient to prevent another occurrence.</p>	
<p>2.5.9 Environmental Protection p. 87</p> <p>2.6.9 Environmental Protection p. 98</p>	<p>The ROR states that at the BNGS “<i>dose to the public from the Bruce site remained below the regulatory limit of 1 mSv/yr</i>”. At the WWMF “<i>dose to the public remained low (1.4 uSv), and in a similar range to the previous years, which shows that radionuclide concentrations measured in the environment remain low</i>”. No further detail is provided describing how the dose to the public is estimated.</p>	<p>The CNSC should:</p> <ul style="list-style-type: none"> • Report the radiation dose to the public in 2023 and compare it to the regulatory requirements; • Describe how the dose is measured/estimated; and • Clarify if this radiation dose includes potential radiation from the entire Bruce site, or from BNGS A and B only.
<p>2.5.9 Environmental Protection p. 87</p> <p>2.6.9 Environmental Protection p. 98</p>	<p>The ROR states that there were no radiological or hazardous releases to the environment from the BNGS or WWMF that exceeded regulatory limits, nor were there action levels triggered for airborne or waterborne releases in 2023. Further, the CNSC reviewed Bruce Power’s 2022 Environmental Risk Assessment and determined that “<i>meaningful human health or ecological risks attributable to current BNGS operations are unlikely</i>”. However, there are important details missing from the ROR to provide assurance that health or ecological impacts are unlikely. For example:</p> <ul style="list-style-type: none"> • There are no details provided on the methods or timing of environmental monitoring occurring on site; • There are no details provided about the Environmental Risk Assessment; and • It is unclear whether the results of the environmental monitoring program are considered within a cumulative effects context. <p>CKSPFN may use lands and waters near the Bruce site for traditional land uses, including hunting and fishing, and these areas represent some of the most functionally intact areas on the landscape. It is of</p>	<p>The CNSC should:</p> <ul style="list-style-type: none"> • Summarize the methodology and results of the Environmental Risk Assessment; • Summarize the methodology and results of environmental monitoring at BNGS; • Provide the Environmental Risk Assessment for CKSPFN to have the opportunity review and comment on; • Provide CKPSFN with the Bruce Power environmental monitoring program for review and comment, and potentially the opportunity to participate in monitoring on and off-site; and

	<p>utmost importance for the health and safety of CKSPFN members that risks to human and wildlife health are reported and communicated to build trust and assure CKSPFN members that they are safe while carrying out cultural practices on the lands surrounding the BNGS. Further, impacts from airborne and liquid releases should be considered cumulatively at the Bruce Power site and the surrounding landscape to the extent possible (e.g., these should be inclusive of the Douglas Point Waste Facility, WWMF, and RWOS-1). This is important to monitor and mitigate potential environmental impacts of CKSPFN-identified cultural values. CKSPFN should be provided details of the Bruce Power environmental monitoring program to ensure that impacts from the entire site are managed and mitigated appropriately and is protective of CKSPFN members’ health, wellbeing, and livelihoods.</p>	<ul style="list-style-type: none"> Clarify whether the cumulative impact of the BNGS, WWMF, and the rest of the Bruce Power site are considered in the performance rating for the Environmental Protection SCA.
<p>2.5.10 Emergency Management and Fire Protection p. 87</p>	<p>In 2023, Bruce Power conducted a comprehensive two day full-scale, live and simulated on and off-site response emergency exercise with multiple jurisdictions, including the CNSC. This is important for emergency preparedness; however, it is unclear how the CNSC and licensees have prepared Indigenous nations for emergency events.</p>	<p>CNSC/Bruce Power/OPG should clarify:</p> <ul style="list-style-type: none"> How and when emergencies will be communicated to Indigenous nations; and Whether there is safety training and/or education in emergency preparedness available for communities in proximity to nuclear facilities.
<p>2.5.11 Waste Management p. 88</p>	<p>According to the ROR, there was one event reported in 2023 where 84 drums containing 4,073 kg of charcoal filter media were incorrectly identified as hazardous waste instead of radioactive waste; therefore, they were shipped to a waste management vendor licensed to receive hazardous waste only. CNSC staff reviewed the event report and found that Bruce Power took appropriate corrective and preventive actions to resolve the issue and to prevent its recurrence. It is unclear in the ROR the corrective actions taken by Bruce Power to prevent the recurrence of improper transport of nuclear waste.</p>	<p>The CNSC should elaborate upon the corrective actions taken by Bruce Power. This will provide CKSPFN the information needed to help determine whether the corrective actions are protective of CKSPFN members and the environment.</p>
<p>Sec 2.6 Western Waste Management Facility</p>	<p>There were four Type II inspections and one desktop inspection completed in 2023 at the WWMF resulting in a “Satisfactory” rating for all SCAs. Of the 109</p>	<p>The CNSC should elaborate upon the instances of non-compliances, reportable events, and corrective actions</p>

<p>p. 93</p>	<p>findings from the inspections, 13 were instances of non-compliance. These include:</p> <ul style="list-style-type: none"> • Four non-compliances relating to the Management System SCA (e.g., discrepancies in documentation); • One non-compliance relating to the Operating Performance SCA (i.e., an accessible notice was not provided in the facility to tell readers how they may access records referenced in the license); • Two non-compliances relating to the Radiation Protection SCA (i.e., inappropriate posting of radiation warning signs at access points across the facility); and • Four non-compliances relating to the Emergency Management and Fire Protection SCA (i.e., storage of combustible material in unacceptable areas, an exit sign illumination issue, improper storage of compressed gas cylinders, and blocked access to a sprinkler control valve). <p>Furthermore, OPG reported three events in 2023:</p> <ul style="list-style-type: none"> • One event was related to the Security SCA (no further detail provided); • One event was related to the painting of a safeguards seal; and • One event was related to OPG’s late notification of a change to a person authorized to report to the CNSC. <p>In all instances, CNSC staff were satisfied with the corrective actions taken. However, the ROR provides very limited (and in some cases no) detail about the instances of non-compliance and reported events. It is also unclear the corrective actions taken by Bruce Power to address these issues. It is important that the risks of non-compliance are taken very seriously and communicated clearly in the ROR to assure CKSPFN that members were not put at risk.</p>	<p>in the ROR. This will help provide CKSPFN with the information needed to determine whether the corrective actions are sufficient to protect CKSPFN members’ health, safety, and wellbeing.</p>
<p>Sec. 2.6 Western Waste Management Facility p. 93</p>	<p>The ROR states that “a 2023 desktop review of OPG’s Public Information Disclosure Program resulted in 5 compliant findings, 1 notice of non-compliance, and 1 negligible finding that are attributable to the Public Information Disclosure Program itself and not to any particular SCA”. However, no detail is provided as to</p>	<p>The CNSC should elaborate upon the instances of non-compliances and any corrective actions in the ROR. This will help provide CKSPFN with assurance that the OPG is</p>

	the nature of the instances of non-compliance. Transparency in public disclosure is very important to build trust and open communication.	upholding its regulatory requirements for public disclosure.
Sec 2.6.9 Environmental Protection p. 98	The ROR states that OPG is planning to discontinue particulate emissions monitoring from the Dry Storage Container processing building. The monitoring results, previously reported quarterly to the CNSC, have consistently demonstrated that particulate emissions from the stack exhausts are less than 0.05% of the Derived Release Limits. However, the CNSC does not provide additional rationale to support this change. Past performance history is not sufficient indication of current performance.	CNSC should provide additional rationale to support the discontinuance of particulate emissions monitoring.
2.6.11 Waste Management p. 100	The ROR states that “OPG continued to maintain an effective Waste Management program and preliminary decommissioning plan”. More detail about waste management is warranted in the ROR since the WWMF and RWOS-1 store spent nuclear fuel and low- and intermediate-level waste.	The CNSC should provide a brief summary in the ROR that includes: <ul style="list-style-type: none"> • The amount of waste and storage location/condition; and • Plans for the transportation and long-term storage of nuclear waste.
3.1.2 CNSC Communications with Indigenous Nations and Communities p. 132	<i>“In 2023, CNSC staff followed up with each Indigenous Nation and community who intervened with regards to the 2022 NPGS [Nuclear Power Generating Sites] ROR and offered to have specific meetings and discussions to address their concerns, comments and recommendations.”</i>	We recommend that the CNSC continue this practice with CKSPFN for the 2023 ROR. If not already in place, the CNSC should share a comment tracking table with CKSPFN for validation and discussion to make progress on addressing requests and concerns collaboratively.
3.1.6 Licensee Disclosure of Reportable Events to Indigenous Nations and Communities p. 136	<i>“CNSC encourages licensees and license applicants to discuss reportable events with Indigenous Nations and communities that have an interest in their NPGS [Nuclear Power Generating Sites] sites and ensure that the information being disclosed is relevant to the specific areas of interest the Indigenous Nations and communities have expressed.”</i> While we understand that a Public Information Program is a regulatory requirement, it is unclear whether/how reportable events are communicated to Indigenous Nations and the public. CKSPFN should be given the opportunity to express specific areas of	CKSPFN and the CNSC/Bruce Power/OPG could co-develop clear communication procedures and protocols on items important to CKSPFN. This could include notification of reportable events and notices of non-compliance.

	interest to help ensure that reportable events and other pertinent information is being disclosed to CKSPFN.	
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We are appreciative of the opportunity to provide written comment as part of the hearing process for the Regulatory Oversight Report for Nuclear Generating Sites in Canada: 2023. CKSPFN and TFG look forward to ongoing discussion and collaboration with the CNSC, Bruce Power and OPG.

Sincerely,



Jessica Wakefield, Executive Director, Major Projects and IBAs

Three Fires Group