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Update from Bruce Power

Mise à jour de Bruce Power

Updates on items from previous Commission Meetings

Mise à jour des points abordés lors des réunions précédentes de la Commission

Commission Meeting

Réunion de la Commission

November 7, 2024

7 novembre 2024

October 11, 2024

BP-CORR-00531-05750

Ms. Candace Salmon
Commission Registrar
Canadian Nuclear Safety Commission
P.O. Box 1046
280 Slater Street
Ottawa, Ontario
K1P 5S9

Dear Ms. Salmon:

Bruce A and B: Response to Nuclear Transparency Project Recommendations

The purpose of this letter is to inform the Commission of Bruce Power's response to the Nuclear Transparency Project (NTP) recommendations submitted to the Commission as part of the 2023 mid-term update held on September 20, 2023 (Reference 1).

Following the Commission meeting in September 2023, Bruce Power reached out to NTP to arrange a discussion of NTP's recommendations. NTP submitted additional information to Bruce Power on October 6, 2023 (Reference 2). This subsequent submission by NTP was intended to provide additional context to NTP's recommendations, and also included additional information requests regarding interactions between Bruce Power's operations and activities and the environment.

Bruce Power and NTP met on October 24, 2023, to discuss Bruce Power's environmental protection programs, NTP's recommendations to the Commission, and the additional information requested by NTP.

Bruce Power provided two separate written responses to NTP, including a response to NTP's recommendations (Reference 3) and a separate response to NTP's additional information request (Reference 4). Confirmation of the receipt has been received from NTP, and NTP has made no further requests from Bruce Power at this time.

Attachment A provides a summary of Bruce Power's responses to NTP regarding the recommendations made to the Commission in Reference 1.

Bruce Power values its social licence to operate and prioritizes information sharing to improve public understanding of Bruce Power operations and interactions with the environment. The Commission proceedings provide an important venue for public engagement, and Bruce Power appreciates NTP's comments and feedback on data transparency.

Ms. Salmon

October 11, 2024

Additionally, Bruce Power has committed to supplement the Environmental Protection Reports and Environmental Risk Assessments with detailed effluent monitoring locations and mapping, data visualization tools and/or electronic data files, where appropriate. While the scope and schedule are subject to change, Bruce Power plans to make incremental enhancements through 2027 for the Environmental Protection Report, and to enhance the next Environmental Risk Assessment which is to be submitted in 2027.

If you require further information or have any questions regarding this submission, please contact Ms. Danielle La Croix, Senior Director, Environment, Sustainability & Net Zero, at 226-930-0769, or danielle.lacroix@brucepower.com.

Yours truly,



Digitally signed by
Maury Burton
Date: 2024.10.11
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Maury Burton
Senior Director, Regulatory Affairs
Bruce Power

cc: Anupama Bulkan - Ottawa
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Attach.

References:

1. CMD 23-M2729, Written submission from the Nuclear Transparency Project, BP-CORR-00531-04431.
2. Email, Nuclear Transparency Project to Bruce Power, "Re: Information request from the Nuclear Transparency project to better understand operations at the Bruce Nuclear site", October 6, 2023, BP-CORR-00531-05873.
3. Letter, D. La Croix to Nuclear Transparency Project, "Written Response to Submission from the Nuclear Transparency Project CMD 23-M27.29 for the Bruce Power 2023 Mid-Term Report on Licensed Activities", June 6, 2024, BP-CORR-00531-05874.
4. Letter, D. La Croix to Nuclear Transparency Project, "Written Response to Information Request Submitted October 6, 2023", June 28, 2024, BP-CORR-00531-05875.

Attachment A

Summary of Responses to Nuclear Transparency Project Recommendations

**Attachment A:
Summary of Responses to Nuclear Transparency Project Recommendations**

#	NTP recommendation	Summary of response
1	That CNSC consider an impact-based approach to licensee disclosure requirements rather than a risk-based approach.	n/a (applicable to CNSC)
2	That Bruce Nuclear amend their target audiences to broaden the term “charities” either by using the term “civil society organizations” instead or else the phrase “charities and non-profit organizations”.	<p>Bruce Power and NTP discussed this recommendation, and Bruce Power plans to replace the term “charities” with the phrase “charities and non-profit organizations” which more accurately describes the intended audience.</p> <p>Additionally, NTP noted that education of youth must remain impartial; Bruce Power agrees. Where Bruce Power participates in school programs, Bruce Power endeavours to present both the pros and cons of all energy sources—including nuclear power—in order to allow young people to make their own decisions.</p>
3	That CNSC staff ensure communications to students and schools concern the science of nuclear energy generation rather than arguments relating to its necessity or desirability.	n/a (applicable to CNSC)
4	That Bruce Nuclear include on its webpage how often its public -information is revised and how public inquiries will be responded to and recorded.	Bruce Power discussed with NTP the process used to ensure that public inquiries are received, logged, and responded to in a timely fashion. While Bruce Power generally aims to respond within 5 business days, additional time may be required depending on the nature of the request.
5	That Bruce Nuclear include a commitment to publicly disclose machine-readable disaggregated data and monitoring locations in its Public Disclosure Protocol.	<p>Bruce Power and NTP discussed recent efforts to enhance data availability through the creation of online data sharing tools to facilitate discussion of the 2022 Environmental Risk Assessment with interested parties (e.g., Environmental Data Quality Tables for Preliminary Screening and Maximum Water Temperature and HQ Exceedance Data).</p> <p>Additionally, Bruce Power and NTP discussed the status of a multi-year project to provide effluent and environmental monitoring data into an electronic format (such as Excel, CVS, PowerApp, etc.) that could be shared with interested parties when appropriate. While the scope and schedule are subject to change, Bruce Power plans to make incremental enhancements through 2027 for the Environmental Protection Report, and to enhance the next Environmental Risk Assessment which is to be submitted in 2027.</p>

#	NTP recommendation	Summary of response
		<p>Additionally, in 2025, Bruce Power will submit radiological effluent data to the CNSC in an electronic format (Excel), as required by the revised REGDOC-3.1.1, Version 3, Reporting Requirements for Nuclear Power Plants.</p> <p>Bruce Power continues to be available to discuss potential opportunities for data sharing with NTP and any other interested parties.</p>
6	<p>That Bruce Nuclear disclose the criteria it uses for determining when information or reports are published online.</p>	<p>Bruce Power and NTP discussed Bruce Power's Public Disclosure Protocol, for which an overview is provided on the Bruce Power website: Commitment to Openness and Transparency. Inputs to the public disclosure protocol include community polling, anecdotes, and feedback received via the public inquiry process. As a result, Bruce Power is confident that the information and reports published online are suitable for communications with interested parties.</p> <p>Additionally, Bruce Power and NTP discussed REGDOC-3.2.1, Public Information and Disclosure, which provides regulatory requirements for public information and disclosure. Bruce Power understands that the CNSC intends to revise REGDOC-3.2.1, and that the CNSC will prepare a discussion paper for public consultation.</p> <p>Additionally, NTP recommended that Bruce Power notify the public, via social media, of event reports when posted to the Bruce Power website. Bruce Power and NTP discussed unscheduled event reports, which are reported to the CNSC in accordance with REGDOC-3.1.1, Reporting Requirements for Nuclear Power Plants. While titles of event reports are provided on Bruce Power's website on a quarterly basis, Bruce Power has not received sufficient public interest in event reports to warrant sharing of event reports via website or social media. Nonetheless, Bruce Power remains available to discuss event reports with interested parties should requests be received via the public inquiry process.</p>
7	<p>That Bruce Nuclear explicitly commit in its Public Disclosure Protocol to notify members of the public via social media whenever an event report is posted to its website.</p>	<p>As discussed for Recommendation #6, Bruce Power is confident that the information and reports published online are suitable to meet the needs of interested parties.</p>
8	<p>That Bruce Nuclear release disaggregated data with annual Environmental Protection Reports.</p>	<p>Bruce Power and NTP discussed that the annual Environmental Protection Reports are prepared and assembled to meet the CNSC requirements defined in REGDOC-3.1.1, Reporting Requirements for Nuclear Power Plants. The Environmental Protection Reports are publicly-available via the Bruce Power website and present environmental data and trends with appropriate context.</p> <p>As discussed in response to Recommendation #5, Bruce Power plans to make incremental enhancements through 2027 for the Environmental Protection Report.</p>
9	<p>That Bruce Nuclear release disaggregated data in machine readable formats along with its EPRs.</p>	<p>As noted in the response to Recommendation #8, Bruce Power and NTP discussed that the annual Environmental Protection Reports are prepared and assembled to meet the CNSC requirements</p>

#	NTP recommendation	Summary of response
		<p>defined in REGDOC-3.1.1, Reporting Requirements for Nuclear Power Plants. The Environmental Protection Reports are publicly available via the Bruce Power website and present environmental data and trends with appropriate context.</p> <p>As noted in response to Recommendation #5, Bruce Power is engaged in a multi-year project to provide data to an electronic format that could be shared with interested parties when appropriate.</p>
10	That Bruce Nuclear release detailed monitoring locations along with any raw data released (preferably as geographical coordinates, if available).	<p>Bruce Power and NTP discussed that the annual Environmental Protection Report will be enhanced for the 2024 reporting year to include more detailed effluent and emission monitoring locations and mapping.</p> <p>However, it will not be possible to share personal information from private supporters of the Radiological Environmental Monitoring Program.</p>
11	That Bruce Nuclear provide diagrams of groundwater flow as well as the currents and flow directions of monitored surface water.	Diagrams of groundwater flow and currents were provided to NTP.
12	That Bruce Nuclear and CNSC staff consider releasing radiological data with Sievert or Gray units so that the public may better assess the significance of reported values for ecological and human receptors.	<p>Bruce Power and NTP discussed that the annual Environmental Protection Reports are prepared and assembled to meet the CNSC requirements defined in REGDOC-3.1.1, Reporting Requirements for Nuclear Power Plants. REGDOC-3.1.1 requires that nuclear substances measured in the environment are to be provided in SI units.</p> <p>Specifically, for radionuclide concentrations in environmental media, the appropriate units are Becquerels (Bq) or Becquerels per litre (Bq/L). To provide meaningful context for interested parties, Bruce Power compares the measured concentrations with CNSC reference levels (which approximately correspond to 10% of the regulatory limit for public radiation dose under conservative assumptions).</p> <p>Bruce Power and NTP discussed that it is not practical to present radionuclide concentrations (measured in Bq or Bq/L) in terms of radiation dose (measured in Sieverts). However, a public dose calculation is performed for the Environmental Protection Report using average environmental monitoring values. Public dose calculations are complex and depend on the specific radionuclides as well as models for transport and subsequent exposure. Additionally, a dose calculation is performed for both human and ecological receptors for the Environmental Risk Assessment, using the upper ranges of the measured concentrations for the previous five years.</p> <p>It is important to note that the public dose calculations are very low (with the conservative maximum public dose being substantially less than 1% of the regulatory dose limit), and therefore the radionuclide concentrations in environmental media may also be considered to be very low, with no impact to human health.</p>

#	NTP recommendation	Summary of response
13	That Bruce Nuclear provide mass and concentration values for measured released contaminants.	<p>Bruce Power and NTP discussed that radiological parameters are measured and reported in mass and/or concentration, depending on what is being measured and for what purpose.</p> <p>Radiological emissions are reported quarterly to the CNSC in Bq/week (airborne) or Bq/month (waterborne), and are reported annually to the CNSC in Bq/year via the annual Environmental Protection Report. To provide context, radiological emissions are compared with regulatory limits (Derived Release Limits) and action levels (Environmental Action Levels). Radiological measurements of environmental media are reported as concentrations (Bq/kg, Bq/L, etc.). Finally, conventional water effluent data are reported to the Ministry of Environment, Conservation, and Parks on a quarterly basis; this data (in .xml format) includes both concentration and loading.</p>
14	That Bruce Nuclear consider providing raw machine-readable monitoring data and geographic coordinates for monitoring locations featured in its ERAs so that data can be analyzed alongside the data available in annual EPRs.	<p>Bruce Power and NTP discussed that the Environmental Risk Assessment is produced once every five years. Data sets that support the Environmental Risk assessment have been included as appendices. As discussed in response to Recommendation #5, online data sharing tools were piloted to enhance data visualization and to support communication with interested parties. As discussed in response to Recommendation #10, Bruce Power plans to enhance the annual Environmental Protection Report with more detailed data regarding monitoring locations.</p>
15	That Bruce data apps clearly define the scope (and any limitations or boundaries) of their data.	<p>Bruce Power appreciates NTP's feedback with respect to the new online applications that provide environmental monitoring data (see response to Recommendation #5). This feedback will be helpful for Bruce Power to provide appropriate context when developing future online applications.</p>
16	That CNSC staff consult with members of the public, civil society organizations, and Indigenous Nations, communities and organizations about how to regulate new online apps developed by licensees to communicate environmental data.	n/a (applicable to CNSC)
17	That Bruce Nuclear consider publicly disclosing further (preferably raw and machine-readable) data relating to impingement and entrainment monitoring results as they are collected.	<p>Bruce Power and NTP discussed that annual impingement and entrainment losses are reported as part of the Environmental Protection Report, and are also reported annual to Fisheries and Oceans Canada. Bruce Power is able to provide annual data sets upon request (in Excel format).</p> <p>Additionally, Bruce Power and NTP discussed the basis for determining the amount of offsets related to impingement and entrainment.</p>
18	That Bruce Nuclear consider publicly disclosing more information relating to its "green bonds", including exactly how proceeds are allocated according to Bruce's Green Financing Framework.	<p>Bruce Power and NTP discussed financial disclosures and green bonds. Note that Bruce Power is a privately-held limited partnership and does not disclose financial information to the public (although certain financial disclosures are made to Bruce Power's bondholders).</p> <p>Additionally, Bruce Power and NTP discussed that information related to green bonds are available on the Bruce Power website (e.g., 2023 Green Bond Report and 2023 Schedule of Use of Green Bonds</p>

#	NTP recommendation	Summary of response
		<p>Proceeds). Proceeds from the issuance of green bonds must be used in accordance with the eligibility criteria described in the financing reports available on Bruce Power's website (e.g., 2023 Green Financing Framework).</p>
19	<p>That Bruce Nuclear provide more information on the progress of its Carbon Offset Accelerator Fund as it continues, including any data relating its outcomes and predicted success.</p>	<p>Bruce Power and NTP discussed the Carbon Offset Accelerator Fund. The fund has been fully allocated, primarily to the ALUS New Acre Project. The ALUS New Acre Project is a local carbon-offset project that supports carbon sequestration, as well as the protection and enhancement of local ecosystems. Support is provided to local farmers to establish and maintain locally-led nature-based projects on hundreds of acres of marginal or ecologically-sensitive land each year. Annual progress reports are available online (e.g., ALUS Year 2 Progress Report).</p>
20	<p>That future mid-term licence update meetings provide six months to a year for intervention processes.</p>	<p>n/a (applicable to CNSC)</p>