CMD 26-M5.A - CNSC Staff Submission

Supplemental Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024

Classification	UNCLASSIFIED
Type of CMD	Supplemental
CMD Number	26-M5.A
Reference CMD(s)	26-M5
Type of report	Information
Public meeting date	March 24, 25, 26, 2026
SharePoint ID (PDF)	RASJ7EL4WOMU-339498047-202 – EN RASJ7EL4WOMU-339498047-204 – FR
Summary	The purpose of this supplemental Commission Member Document (CMD) is to provide additional information to what is presented in CMD 26-M5, Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024 including addressing key intervention themes, updating on requests from the Commission and correcting errors.
Actions required	There are no actions requested of the Commission. This CMD is for information only.

Supplemental Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024

Signed by:

x Viktorov, Alexandre

Digitally signed by Viktorov, Alexandre
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Viktorov, Alexandre"
Reason: I am the author of this document
Location:
Date: 2026.03.06 14:12:13-05'00'
Foxit PDF Editor Version: 13.1.5

Alexandre Viktorov, PhD

Director General

Directorate of Power Reactor Regulation

Directeur général

Direction de la réglementation des centrales nucléaires

Supplemental Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024

Canadian Nuclear Safety Commission

TABLE OF CONTENTS

1 PLAIN LANGUAGE SUMMARY

CMD 26-M5.A is a supplemental CMD to the Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024 (hereafter referred to as the 2024 NPGS ROR).

This CMD provides CNSC staff responses to key themes identified from interventions received on the 2024 NPGS ROR. It also provides information requested by the Commission during previous Commission Proceedings. CNSC staff recommend that the two action items outlined in Section 4 remain open.

Finally, section 5 of this CMD provides the errata that were identified in the 2024 NPGS ROR and which will be corrected prior to its posting. Referenced documents in this CMD are available on the CNSC website.

2 OVERVIEW

The main purpose of this supplemental CMD is to:

- Address key themes from interventions on the 2024 NPGS ROR
- Describe how requests from the Commission for specific information are being addressed
- Identify errors in the 2024 NPGS ROR to be corrected before its posting

Documents referenced in this CMD are hyperlinked and are available on the CNSC website.

3 RESPONSES TO INTERVENTIONS ON 2024 NPGS ROR

The CNSC received 19 interventions from the public, Indigenous Nations and communities, and non-governmental organizations concerning the 2024 NPGS ROR. CNSC staff reviewed all the interventions carefully. Clarifications and responses for key themes identified in interventions and within the scope of the 2024 NPGS ROR, are provided in the following table.

Intervenor/Theme	CNSC Staff Response
Alderville First Nation CMD 26-M5.7 Theme: Indigenous Consultation and Engagement	Alderville First Nation raised that "The MNO, a corporation without any s. 35 rights, have no treaty rights in this territory and should not be consulted in regard to harvesting and land rights. Doing so directly undermines existing First Nation treaties." Response: The CNSC appreciates the concerns raised by Alderville First Nation with respect to engagement with the Metis Nation of Ontario. The CNSC is not a rights-determining body and does not have the authority to confirm, establish or deny the existence of Indigenous and/or treaty rights as claimed or asserted by Indigenous Nations and communities. The CNSC engages with Indigenous Nations, communities and their representative organizations to understand their asserted or established Indigenous and/or Treaty rights and works collaboratively with Nations to understand the potential for a project or activity to impact any potential or established rights and how to mitigate or accommodate any identified impacts, where possible, in collaboration with the affected Indigenous Nation or community.
Hiawatha First Nation CMD 26-M5.12 Theme: Risk-informed approach	Hiawatha First Nation observed that the CMD indicates the CNSC applies a risk-informed approach to compliance and enforcement. They requested additional information on how the CNSC assesses cumulative risk rather than considering each non-compliance in isolation. They also asked at what point repeated low significance findings indicate a systemic issue, and how consistency in risk-informed judgment is maintained across sites. Response: Prior to the conduct of inspection activities, CNSC staff review past inspection reports and their findings and any relevant domestic or international operating experience so that inspection teams are aware of potential repeat non-

Intervenor/Theme	CNSC Staff Response
	compliances or systemic issues during the conduct of an inspection. CNSC staff produce Integrated Assessments of each Safety and Control Area (SCA) for each operating Nuclear Power Plant (NPP) to provide a holistic situational awareness of the licensees' safety performance. This includes tracking low-significance findings identified by CNSC staff through inspections. Systemic trends or repeat non-compliances can thus be identified for escalated enforcement if necessary. Integrated Assessments are updated and reviewed regularly, which helps confirm that consistency in risk-informed judgment is maintained across sites. CNSC staff review overall compliance trends on a quarterly basis to identify potential systemic issues and to assess the consistency of regulatory judgments and enforcement actions across all sites, supporting a coherent and risk-informed compliance program. CNSC staff also consider comprehensive assessments of safety and risk, as produced by the licensee. Specifically, Environmental Risk Assessments (ERA) and Probabilistic Safety Assessments (PSA) are updated every 5 years by licensees and reviewed by the CNSC. These updates provide cumulative risk results and allow staff to compare results with previous submissions and assess whether risks are increasing or decreasing over time. CNSC subject matter experts review these reports for all NPPs, which helps maintain consistency in risk-informed judgement across sites. In addition, the 10-year Periodic Safety Review (PSR) process provides a broader confirmation of overall plant safety. This process helps identify areas where risk may be changing and ensures these are addressed through improvement actions documented in the resulting Integrated Implementation Plan (IIP).
Kebaowek First Nation (KFN) CMD 26-M.15 Theme: Indigenous Consultation and Engagement/ UNDRIP, UNDA and FPIP	Kebaowek First Nation inquires how the CNSC applies its obligations under UNDRIP, UNDA, section 35, and the honour of the Crown in its regulatory decisions—particularly regarding FPIC and disputed consultation. How will the CNSC address Kebaowek First Nation's request for recognition as a rights-holding Nation, including its past exclusion from the Darlington New Nuclear Project, whether and how licensees were informed of this exclusion, and KFN's inclusion in future nuclear regulatory processes?

Intervenor/Theme	CNSC Staff Response
	Response: The CNSC ensures that its approach to consultation is aligned and consistent with the *United Nations Declaration on the Rights of Indigenous Peoples* (UN Declaration) and *United Nations Declaration on the Rights of Indigenous Peoples Act* (UNDA). The UN Declaration and UNDA must be considered when the Commission is assessing the duty to consult and accommodate, as the UN Declaration is an added contextual layer that informs the scope and content of the duty to consult and accommodate. Further information about the CNSC's application of the UN Declaration is available on the CNSC website. The CNSC strives to do this in a way that allows for open dialogue and provides opportunities to understand, document, and address the concerns of Indigenous Nations and communities, including measures to minimize or avoid potential impacts to their rights and interests, to the extent possible, and accommodate, where appropriate. The CNSC will: When the duty to consult is triggered and where appropriate: • Seek the Free, Prior and Informed Consent (FPIC) of Indigenous Nations whose rights and interests are potentially impacted by new nuclear projects. • Work with potentially impacted Indigenous Nations and communities to understand and collaborate on the implementation of their process to arrive at and communicate their FPIC position on a particular proposed project. The CNSC will offer funding to support the co-development and implementation of these processes, where appropriate. • Collaborate with potentially impacted Indigenous Nations and communities in the development and implementation of mitigation and/or accommodation measures, where appropriate to address impact on rights identified by Indigenous Nations and communities as part of the consultation process. • Ensure that proponents/licensees have clear updated guidance and are collaborating with potentially impacted Nations and communities on addressing their concerns and working to secure the

Intervenor/Theme	CNSC Staff Response
	Nation's/community's FPIC in relation to their projects. Further information about the CNSC's application of the UN Declaration is available on the CNSC website. CNSC staff have and will continue to respond to questions and concerns with respect to nuclear projects that Kebaowek First Nation expresses interest in and include project specific discussions during regular meetings with Kebaowek First Nation. Staff will respond to questions or provide clarification as requested, including on the Darlington New Nuclear Project (DNNP) and other projects. To date, CNSC staff have not been provided specific information with regards to how the DNNP relates to or could directly impact KFN's rights and traditional territory. CNSC remains open to receiving this information from KFN.
Canadian Environmental Law Association (CELA) CMD 26-M5.10 Theme: Fitness for Duty: Managing Alcohol and Drug Use	CELA requests an update on how OPG is managing the Fitness-For-Duty: Managing Alcohol and Drug Use programs at Pickering. Response: OPG implemented REGDOC-2.2.4, *Fitness for Duty Vol. II: Managing Alcohol and Drug Use*, Version 3 as planned by July 2021, except for random and pre-placement testing because these provisions were before the Courts at the time. An OPG fleet-wide Type I inspection was conducted by CNSC staff in May 2024, which resulted in the identification of several non-compliances. These non-compliances were related to gaps in documentation, insufficient training for some roles, the incomplete implementation of post-incident alcohol and drug testing, and issues with securing collection sites. OPG has since submitted several updates related to their corrective actions and has requested closure of all CNSC enforcement actions. These submissions are currently under review. CNSC staff are satisfied with OPG's progress to date.

Intervenor/Theme	CNSC Staff Response
	In 2025, the Supreme Court of Canada dismissed the Applicants' (6 nuclear workers and their Unions) application ending the legal case related to random and pre-placement testing. OPG committed to implement these two forms of testing for safety-critical positions by January 1, 2026. CNSC staff are currently planning compliance activities to verify the implementation of these two provisions. A summary of the results of all alcohol and drug testing conducted in 2025 is required to be submitted to the CNSC as part of each licensee Report on Nuclear Power Plant Personnel required under REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*.
Canadian Environmental Law Association (CELA) CMD 26-M5.10 Theme: Fitness for Duty: Managing Alcohol and Drug Use	CELA requested CNSC and OPG to provide an update on compliance with the Fitness for Duty: Managing Worker Fatigue programs at Darlington and Pickering. Response: In 2024, CNSC staff conducted an OPG fleet-wide Type II Fitness for Duty: Managing Worker Fatigue – Hours of Work and Minimum Shift Complement reactive inspection at the Pickering and Darlington Nuclear Generating Stations, with a specific focus on Security and Fire Protection. This was a reactive inspection to follow up on the development and implementation of OPG's corrective actions following a finding from a 2024 planned field inspection. Prior to the inspection, OPG had already implemented a process to manage worker fatigue which included reviewing crew planned absences and training and reviewing resourcing plans. During the Type II inspection, a non-compliance was identified for not ensuring that safety-sensitive Security and Fire Protection workers are trained with respect to managing worker fatigue. OPG implemented corrective actions whereby training related to managing worker fatigue for Security and Fire Protection personnel was developed and implemented. This training included awareness sessions, dedicated fitness for duty training, hours of work guides, etc. CNSC staff confirmed that the additional hours of work training and other tools have been implemented for Security and Fire Protection. During the same inspection, OPG was also found to be non-compliant for not effectively implementing a process to

Intervenor/Theme	CNSC Staff Response
	manage worker fatigue. Subsequently, through compliance activities, CNSC staff noted that OPG has hired additional Security and Fire Protection personnel which has significantly reduced hours of work violations to near 0 for these 2 work groups. Through a variety of compliance activities, CNSC staff also evaluated all work groups at Pickering and Darlington that have safety-sensitive workers and have noted that there are very few hours of work violations. The hours of work violations are incurred on rare occasions to maintain minimum shift complement and are short in duration.

Note: Some interventions were received after the intervention deadline and therefore CNSC staff did not have the opportunity to provide a response to their comments in this CMD but will be able to do so as part of the Commission meeting for the ROR should the Commission have questions.

4 FOLLOW UP ON SPECIFIC INFORMATION REQUESTS FROM COMMISSION

The Commission has previously requested specific information to be presented in future NPGS RORs. The following table describes how specific requests for information from the Commission are being addressed*.

Action	CNSC staff response
[RIB 14757] Inform the Commission of updates relating to: (i) Bruce Power's pressure tube fracture toughness model, and (ii) Report on the maximum [Heq] of the pressure tubes as part of the NPP ROR.	The reporting on the maximum Hydrogen Equivalent Concentration [Heq] is provided in Appendix G of the 2024 NPGS ROR. Item (i) was closed in 2023. Regular updates on the status of industry's research and development program on elevated [Heq] have been provided to the Commission through the Status Report on Power Reactors. Item (ii) remains open at the moment. CNSC staff will provide an update on the [Heq] R&D in an upcoming Commission meeting in March 2026.
[RIB 14761] Monitor Bruce Power's continuing efforts to bring internal fire risk to below the safety goal target for the Bruce A Units, and report on Bruce Power's progress regarding internal fire risk improvements at the Bruce A station in the Annual NPGS ROR.	An update related to the efforts to reduce internal fire risk for the Bruce A Units is provided in section 2.5.4 of the 2024 NPGS ROR. Bruce Power submitted their updated 2024 Fire Probabilistic Safety Assessment (PSA) in April 2024. This submission is currently under review by CNSC staff. CNSC staff recommend that this request remain open until the 2024 Fire PSA update is reviewed by CNSC staff.

* CNSC staff capture such important requests and ensuing actions in the Regulatory Information Bank (RIB). The RIB numbers in this supplemental CMD refer to specific entries in this database, which CNSC staff track to closure.

5 ERRATA

Some errors in the 2024 NPGS ROR were identified through reviews by CNSC staff after the report was posted on our website. Prior to publication, the following errors will be corrected in the report:

- In section 1.7.1 (p.17), the first bullet has an incorrect number of hours. It should state: Total hours working on activities related to compliance verification in 2024: 154,446 hours instead of 154,0446 hours.
- Section 2.1.7 (p.29) of CMD 26-M5 incorrectly states that there was only 1 exceedance of an RP Action Level (AL) at DNGS in 2024, when in fact OPG reported 2 exceedances in accordance with REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*.

In the 2nd event, a Nuclear Energy Worker was expected to receive 1 mSv of internal dose while performing planned radiological work; however, due to incorrect selection of respiratory protective equipment, they received 4.45 mSv of dose from tritium uptake. The dose in excess of the planned value was 3.45 mSv, which exceeded OPG's action level of 2 mSv of unplanned dose. CNSC staff confirmed that OPG determined the cause of the overexposure and implemented suitable corrective actions to prevent recurrence. CNSC staff are satisfied that OPG managed the worker's exposure for the remainder of the year to ensure they did not exceed the regulatory dose limit of 50 mSv/y for Nuclear Energy Workers.

- In table A7 (p.161) some inspection reports were incorrectly classified under a different SCA, the updated table is given below.

SCA	Report Number	Type of inspection	Report Issue Date
Management Systems	PLRPD-2024-19354 - Supply Management	Type II	May 14, 2024
Human Performance Management	PLRPD-2024-19577 - Implementation of REGDOC 2.2.4-Managing Alcohol and Drug Use	Type I	May 24, 2024
	PLRPD-2024-20756 - Conduct of Simulator-based initial Certification Examination	Type II	December 2, 2024
Operating Performance	PLRPD-2024-19559 - Quarterly Field Inspection Report - Q4 FY 23/24	Type II	June 21, 2024

	PLRPD-2024-21656 - Quarterly Field Inspection Report - Q2 FY 24/25	Type II	December 20, 2024
	PLRPD-2024-18804 - Quarterly Field Inspection Report Q3 FY 23/25	Type II	March 22, 2024
	PLRPD-2024-20993 - Quarterly Field Inspection Report - Q1 FY 24/25	Type II	October 11, 2024
	PLRPD-2024-22275 - Quarterly Field Inspection Report - Q3 - FY24/25	Type II	March 14, 2025
	PLRPD-2024-20591 - Planned Outage	Type II	February 27, 2025
Fitness for Service	PLRPD-2024-19178 - System Inspection - Shutdown Cooling	Type II	April 17, 2024
	PLRPD-2024-21546 - Reliability	Type II	December 20, 2024
	PLRPD-2024-20735 - Pressure Boundary	DTI	September 25, 2024
	PLRPD-2024-20712 - Use of Tape for Leak Mitigation	Field	May 8, 2024
Conventional Health and Safety	PLRPD-2024-20423 - Fire Resistant Fluid (FRF) Dry Air Purges	Field	March 21, 2024
Emergency Management & Fire Protection	PLRPD-2024-21768 - Emergency Exercise – Synergy Challenge 2024	Type II	January 13, 2025
Security	PLRPD-2024 -21023 Security (Vital Areas)	Field	July 8, 2024

- The above update also changes the number of inspections per SCA in Table 21 (p. 104). The updated table 21 is given below.

Table 21: Number of Inspections by Primary Focus SCA (provided in parentheses) and Total Inspections with Findings per SCA.

Inspections generally focus on a specific area or program associated with a particular SCA, known as the primary focus SCA (number in parentheses). However, inspections may also assess additional criteria that fall under other SCAs. As a result, findings can occur in SCAs that were not the primary focus of the inspection.

SCA	Rating	Number of Type 1 inspections	Number of Type 2 inspections	Number of Desktop inspections
Management System	Satisfactory	1	11(1)	1
Human Performance	Satisfactory	1(1)	11(1)	1
Operating Performance	Satisfactory		11(6)	1
Safety Analysis	Satisfactory		2	
Physical Design	Satisfactory		5	1
Fitness for Service	Satisfactory		8(2)	1(1)
Radiation Protection	Satisfactory		6	
Conventional Health and Safety	Satisfactory		6	
Environmental Protection	Satisfactory		3	
Emergency Preparedness and Fire Protection	Satisfactory		6(1)	

Waste Management	Satisfactory		2	
Security	Satisfactory		2	
Safeguards and Non-Proliferation	Satisfactory		3	
Packaging and Transport	Satisfactory		1	

- Bruce Power submitted an amendment to their 2024 Q2 SPI report in September 2025, updating their number of special safety system tests. Bruce A had a missed Safety-Related System Test. Bruce B reported a missed Special Safety Process System Test. The updated Table 32 (p.190) is given below.

Table 32: Safety system test performance for 2024

Nuclear power plant	Number of annual planned tests	Not completed: Special safety systems	Not completed: Standby safety systems	Not completed: Safety related process systems	Not completed: Total	Percent not completed
DNGS	6,284	0	0	1	1	**0.02%**
PNGS	13,138	0	0	0	0	**0.00%**
BNGS A	3,883	0	0	1	1	**0.03%**
BNGS B	5,576	1	0	0	1	**0.02%**
PLNGS	2,667	0	1	0	1	**0.04%**
Industry total	**31,548**	**1**	**1**	**2**	**4**	**0.01%**

Note: The missed tests were of low safety significance and did not compromise safety margins. Nuclear power plants have multiple layers of redundancy to ensure continuous availability of safety systems; the risk associated with the additional missed special safety test was negligible. Safety system tests must be completed before a unit is returned to service, and licensees are required to maintain safety margins at all times. If a margin cannot be assured, the fail-safe response is an immediate shutdown. The revised number for Bruce B does not change CNSC staff's conclusion that all plants were operated safely throughout 2024.

6 GLOSSARY

For definitions of terms used in this document, see REGDOC-3.6, Glossary of CNSC Terminology, which includes terms and definitions used in the *Nuclear Safety and Control Act* and the Regulations made under it, and in CNSC regulatory documents and other publications.