



Canadian Nuclear  
Safety Commission

Commission canadienne  
de sûreté nucléaire

UNPROTECTED/NON PROTÉGÉ

SUPPLEMENTAL/COMPLÉMENTAIRE

CMD : 20-M24.B

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Commission Request for Information

Demande d'information de la Commission

***Regulatory Oversight  
Report for Canadian  
Nuclear Power  
Generating Sites: 2019***

***Rapport de surveillance  
réglementaire des sites de  
centrales nucléaires au  
Canada : 2019***

Public Meeting

Réunion publique

Scheduled for :

9 December 2020

Prévue pour :

9 décembre 2020

Submitted by:

CNSC Staff

Soumise par :

Le personnel de la CCSN

e-Doc 6397125 (WORD)

e-Doc 6435132 (PDF)

## Summary

The purpose of this supplemental Commission Member Document (CMD) is to provide additional information to what is presented in CMD 20-M24, including:

- CNSC staff responses to comments received from interventions on the current report
- Updates on topics requested by the Commission and CNSC staff recommendations to close the requests
- Errata to CMD 20-M24

This CMD is for information, but also includes requests for the Commission to close actions assigned to CNSC staff for specific updates.

## Résumé

L'objectif de ce CMD supplémentaire est d'apporter des informations supplémentaires à ce qui est présente dans CMD 20-M24, comprenant :

- Les réponses du personnel de la CCSN aux commentaires reçus à travers les interventions pour le présent Rapport
- Les mises à jour demandées par la Commission et les recommandations du personnel de la CCSN pour clore les demandes
- Les Errata au CMD 20-M24

Ce CMD est fourni à titre d'information, mais comprend aussi les demandes de la Commission pour fermer les actions assignés au personnel de la CCSN pour des mises à jour spécifiques.

**Signed/signé le**  
2 December 2020

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## EXECUTIVE SUMMARY

CMD 20-M24.B is a supplemental CMD to the *Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2019* (hereinafter referred to as the 2019 NPGS ROR). This CMD provides CNSC staff's responses to interventions received on the 2019 NPGS ROR. It also provides information requested by the Commission during previous Commission Hearings and Meetings. CNSC staff recommend that the Commission close three (3) of the eleven (11) requests. Finally, this CMD outlines some errata that were identified during the public review of the 2019 NPGS ROR that will be corrected prior to its publication.

## 1. OVERVIEW

This CMD 20-M24.B is a supplemental CMD to the *Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2019*, CMD 20-M24 (hereinafter referred to as the 2019 NPGS ROR [5]). The main purpose of this supplemental CMD is to:

- provide CNSC staff clarifications and/or responses to key topics received from interventions on 2019 NPGS ROR;
- describe how requests from the Commission for specific information have been addressed, and recommend closure for 3 of the 11 associated action items on CNSC staff; and
- identify errors in the 2019 NPGS ROR to be corrected before publication.

Documents referenced in this CMD are listed at the end of this CMD and are available to the public upon request.

One of the major changes that occurred during the production of the 2019 NPGS ROR CMD was the extraction of the information that was static in nature and repeated year over year in the NPGS RORs, and posting it on the external CNSC website. This document, called *General description of regulatory Framework for Nuclear Power Generating Sites* [13], complements the 2019 NPGS ROR and should be read alongside the CMD. The document can be found at:

<https://www.nuclearsafety.gc.ca/eng/resources/publications/reports/regulatory-oversight-reports/general-description-of-regulatory-framework-for-NPGS.cfm>

Also note that CNSC intends to publish “The Canadian Nuclear Safety Commission: Regulatory Oversight Report Review - Discussion paper DIS-20-01” in the first quarter of 2021 for a 60-day public comment period. It will present information on regulatory oversight reports and solicit feedback on possible improvements. CNSC staff will present “what we heard from the public consultation” to the Commission in the second half of 2021.

## 2. RESPONSES TO INTERVENTIONS ON 2019 NPGS ROR

The CNSC received seven interventions from the public, Indigenous groups and civil society organizations concerning the 2019 NPGS ROR. CNSC staff reviewed all the interventions carefully; clarifications and responses for key topics identified in the interventions, and within the scope of the 2019 NPGS ROR, are provided in the following table.

Comment	CNSC Staff Response
Curve Lake First Nation	CNSC staff are committed to continuing to work with Curve Lake First Nation and all interested Indigenous communities on their areas of interest and addressing any concerns they

Comment	CNSC Staff Response
<p>[CMD 20-M24.3]</p> <p>Topic: Adequacy of Indigenous groups' consultation and engagement</p>	<p>may have and which are related to CNSC regulated facilities and activities. CNSC staff met with member nations of the Williams Treaties First Nations in 2018, 2019 and 2020 to provide updates on a number of CNSC regulated facilities and activities in their traditional territories, including discussions on the Darlington Nuclear Generating Station (DNGS) and the Pickering Nuclear Generating Station (PNGS).</p> <p>CNSC staff are committed to seeking further feedback from Curve Lake First Nation to better understand what changes could be made to the NPGS ROR to reflect these recommendations.</p> <p>CNSC staff will continue to engage with Curve Lake First Nation on an ongoing basis. CNSC staff will discuss with Curve Lake First Nation its priorities for dialogue during the next year. CNSC staff will also discuss this feedback with Curve Lake First Nation in the collaborative development of a long term engagement Terms of Reference.</p> <p>In addition, CNSC staff evaluated how licensees communicate with Indigenous communities and organizations under the public information and disclosure program as reported in their Annual Compliance Reports and report the evaluation through the ROR. CNSC staff encourages OPG to continue working with Curve Lake to develop an appropriate and mutually acceptable engagement strategy, including updates on the DNGS and PNGS.</p> <p>CNSC staff intend to update REGDOC-3.2.2: <i>Indigenous Engagement</i>. Prior to recommending revisions to REGDOC-3.2.2 to the Commission, CNSC staff will make the updated REGDOC available for public comment. CNSC staff will ensure that Curve Lake and other interested Indigenous groups are provided the opportunity to provide input and recommendations to the CNSC on potential updates to this REGDOC.</p> <p>CNSC staff will also work toward establishing long-term engagement terms of reference, where appropriate.</p>
<p>Canadian Environmental Law Association</p> <p>[CMD 20-M24.4]</p> <p>Topic: Covid-19 response and the</p>	<p>During the COVID-19 pandemic, the CNSC continued to participate in emergency exercises in addition to conducting compliance inspections. In addition, planning for the upcoming national priority nuclear exercise in fall 2021 at Point Lepreau is continuing during the pandemic.</p> <p>Emergency exercises provide opportunities for stakeholders to evaluate the effectiveness of both licensee and Provincial</p>



Comment	CNSC Staff Response
emergency planning	<p>nuclear emergency response plans, and make adjustments, as required. The licensees, Province of Ontario, and Province of New Brunswick demonstrated effective preparedness and response during these exercises while incorporating COVID-19 protocols. Provincial nuclear emergency response plans for public protective actions, including those which address public health issues, are typically led by the Local Public Health Units and Chief Medical Officers of Health in conjunction with Local Health Integration Networks and the Provincial Health Authority. Given this, the review of these public health plans, in particular with regards to COVID-19 and public protective actions taken would remain within Provincial jurisdictions.</p>
<p>Canadian Environmental Law Association [CMD 20-M24.4] and Gordon Dalzell [CMD 20-M24.6] Topic: Tritium emissions to the environment</p>	<p>Tritium is generated in the fuel of all reactors, however, CANDU reactors also generate tritium as a result of neutron capture by deuterium in the heavy water coolant and moderator. Releases of tritium from all of the nuclear power plants (NPPs) have and continue to be well below both their licence limits and respective action levels. In addition, the environmental monitoring data (including measuring tritium concentrations in air, drinking water, local foodstuffs, etc.) and the associated public dose calculations indicate that resulting exposures are well below the public dose limit, thus confirming that public health and the environment are protected.</p> <p>Actual releases will vary from site to site specifically due to differences in facility design and operational activities. Pickering being the oldest operating NPP in Canada has been working to reduce tritium releases as part of its continuous improvement plans. These activities have resulted in decreases in tritium releases to air in 2018 and 2019. Tritium releases to water have remained relatively stable over this time period. At Point Lepreau, tritium emissions were slightly higher than those from previous years due to maintenance activities. However, these releases, either to the atmosphere or to surface water, were 10,000 times smaller than their respective licence limits. Correspondingly the public dose estimate of 0.0012 mSv/yr is well below the 1 mSv/yr public dose limit. With the shut down of the Gentilly-2 reactor, tritium is no longer being generated by this facility, however, maintenance and decommissioning activities still produce controlled monitored releases. The 2019 emissions are primarily as a result of activities related to the barrelling of heavy water as well as treatment of contaminated waste</p>

Comment	CNSC Staff Response
	<p>materials. These were scheduled short-term activities therefore tritium emissions are expected to return to previous reduced levels upon their completion. While representing an increase relative to previous years, the 2019 Gentilly-2 releases represent only 0.007% of the licence limit for liquid effluents and 0.04% of the limit for gaseous effluents.</p>
<p>Lake Ontario Waterkeeper [CMD 20-M24.5] Topic: Fish impingement at Pickering site</p>	<p>In 2009, OPG installed a barrier net, (referred to as fish diversion system (FDS), to address fish impingement at the PNGS. The FDS is in place from May 1 to November 1 each year, and has mitigated fish impingement. The FDS cannot remain in place in the winter months due to high winds and ice conditions.</p> <p>Fisheries and Oceans Canada issued a <i>Fisheries Act</i> Authorization (FAA) to OPG in 2018 which authorizes the death of fish due to impingement and entrainment (eggs and larvae in the cooling water) and OPG offsets this loss through the construction and enhancement of fish habitat and stocking of Atlantic Salmon in Lake Ontario. Conditions of the FAA include the installation and maintenance of the FDS from May 1 to November 1 and the requirement to engage in discussions with DFO if the annual average biomass of fish impinged during two consecutive years is greater than 3,619 kg. The biomass of fish impinged in 2018 and 2019 was 5,616 kg and 15,114.5 kg respectively. Therefore, OPG engaged in discussions with Fisheries and Oceans Canada as required by the FAA. To support these discussions, OPG submitted a technical report to Fisheries and Oceans Canada and the CNSC.</p> <p>The technical report investigated sporadic large fish impingement events, which often occurred between November 1 and May 1, when the FDS was not in place. OPG concluded that the events were not caused by spills or waterborne releases from PNGS operations; rather, they were attributed to many factors, including changes in total fish biomass in Lake Ontario, weather (high winds), and sudden water temperature decreases. The main fish species impinged were those known to be particularly sensitive to sudden declines in water temperature (no observed impingement in 2019 of species listed in Schedule 1 of the <i>Species at Risk Act</i>). Discussions between Fisheries and Oceans Canada and OPG are on-going.</p>
<p>Gordon Dalzell [CMD 20-M24.6]</p>	<p>In general, the level of detail presented in the NPGS ROR reflects the level of regulatory oversight and licensee attention</p>

Comment	CNSC Staff Response
<p>Topic: Assessment of radiation protection at DNGS</p>	<p>devoted to radiation protection at the DNGS in 2019.</p> <p>Under the specific area of worker dose control, the NPGS ROR does identify events and non-compliant findings throughout 2019, such as specific instances when OPG failed to meet its program governance requirements and/or CNSC staff's expectations. None of the events or non-compliances were associated with an exceedance of an OPG-established radiological exposure control level or a CNSC regulatory dose limit. CNSC staff were satisfied with actions taken by OPG to correct the identified findings and in some cases, CNSC staff continue to monitor OPG's implementation of these corrective actions.</p> <p>The ROR provides a short summary of relevant non-compliances that staff identified in 2019, but does not describe the corrective or improvement actions taken by OPG when these findings were identified. As an example, "inadequate planning of radioactive work" is a categorisation of a finding by CNSC staff that "the planning of certain radioactive work did not fully include characterisation data, and as such, dose rates experienced were higher than expected." CNSC staff verified that OPG workers followed existing procedures when encountering dose rates that were higher than expected.</p> <p>In the context of all inspection findings and other observations, CNSC staff concluded that OPG met regulatory expectations in the specific area of worker dose control.</p>
<p>Gordon Dalzell [CMD 20-M24.6]</p> <p>Topic: Inability to assign Fully Satisfactory (FS) ratings for 2019 due to pandemic in 2020</p>	<p>Although the execution of the 2019 regulatory oversight activities were not impacted by the pandemic, the required CNSC staff activities to analyze the data gathered in 2019 and write the report occurred at the onset of the pandemic and as a result, were affected. The assessment of the information as a whole, and the cross-comparison of SCAs, was mostly done after the pandemic began in North America. CNSC staff's decision to eliminate the step of determining FS ratings at the SCA level, which focuses on assessing licensee performance and initiatives that go above and beyond the regulatory requirements, was to save time and effort to compensate for the reduced capacity at the time.</p>

### 3. FOLLOW UP ON SPECIFIC REQUESTS FOR INFORMATION FROM THE COMMISSION

As a result of the licensing hearings in 2018 for Pickering and Bruce NGS, as well as presentations at other Commission meetings, the Commission has requested specific information to be presented in the 2019 NPGS ROR. Important requests for such information are captured in the Regulatory Information Bank (RIB) used by CNSC staff. The RIB numbers in this supplemental CMD refer to specific entries in this database, which CNSC staff track to closure.

The following table describes how specific requests for information from the Commission have been addressed. Where appropriate, the table indicates the requests for which CNSC staff believe the action has been completed. That is, for those requests, CNSC staff are of the opinion that the information provided has addressed the underlying issue. CNSC staff intend to continue addressing the remaining open items in future RORs.

Action	CNSC staff response
<p>[RIB 17560]</p> <p>Following the Nov 8, 2018 Commission Meeting to discuss the 2017 NPGS ROR [6], the Commission requested CNSC staff to report total recordable injury frequency (TRIF) at the NPPs, including data for third-party contractors, in future RORs (assuming that TRIF data are available from the licensees) [7].</p> <p>At the May 15<sup>th</sup> 2019 Commission Meeting, CNSC staff followed up on that request [3]. The meeting minutes included further direction from the Commission:</p> <p>“Therefore, the Commission directs CNSC staff to carry out a cost-benefit review, including consultation with industry, on the issue of amending REGDOC-3.1.1 to require NGS licensees to report TRIF data for all workers, including third-party contractors.” [4]</p>	<p>In 2019, CNSC staff consulted with licensees on the possible inclusion of TRIF in REGDOC-3.1.1, <i>Reporting Requirements for Nuclear Power Plants</i>, as well as the cost-benefit review. Although some licensees were open to providing TRIF data going forward, starting with either the 2019 or 2020 calendar year, they requested that CNSC staff clarify potential reporting requirements for various injury categories. Noting that OPG and NB Power were members of the Canadian Electricity Association (CEA), which collects TRIF data from its members, CNSC staff met with CEA staff in January 2020. CEA indicated that it could not share its TRIF calculation and associated definitions with non-members.</p> <p>CNSC staff also reviewed the existing safety performance indicator SPI-21, Conventional Health and Safety, as defined in REGDOC-3.1.1. CNSC staff concluded that SPI-21 provides sufficient information on the three main injury categories: fatalities, lost time and medically treated injuries. The performance can be benchmarked with</p>

	<p>Canadian industries and internationally with members of World Association of Nuclear Operators. Also, data for third party contractors for these three main injury categories are available for at least the last five years for all NPP licensees. CNSC staff maintain that that data would be sufficient for the purposes of effective oversight of conventional health and safety at the NPPs.</p> <p>CNSC staff's response to the RIB action was presented in a memo to the Secretariat on March 11, 2020 [8]. CNSC staff's current plan is to include the existing definition of SPI-21 in the future revision of REGDOC-3.1.1 and to add a requirement for licensees to provide the data for employees, contractors and third-party contractors.</p> <p><b>CNSC staff recommend that the Commission close this request.</b></p>
<p>[RIB 17557].</p> <p>Following the 2018 PNGS licence renewal hearing, the Commission requested CNSC staff to provide annual updates regarding several additional matters of interest pertaining to the Pickering site [1]:</p> <ul style="list-style-type: none"> <li>(i) CNSC staff's regulatory oversight of OPG's progress and performance with respect to the PNGS integrated implementation plan (IIP) activities</li> <li>(ii) whole-site PSA methodology and progress for the PNGS site</li> <li>(iii) joint fuel machine reliability project</li> <li>(iv) decision made by ECCC on the nomination to include radionuclides as chemicals of mutual concern (COMCs) (via</li> </ul>	<p>As a follow-up to the licence renewal for Pickering NGS (PNGS), the 2019 NPGS ROR:</p> <ul style="list-style-type: none"> <li>(i) provided an update of the status of the IIP in section 3.3.0</li> <li>(ii) described the methodology and progress for whole site probabilistic safety assessment (PSA) in section 2.4</li> <li>(iii) provided an update on the joint fuel machine reliability project in section 2.6</li> </ul> <p>CNSC staff consider item (ii) to be closed.</p> <p>CNSC staff proposed to address item (iv) outside of the NPGS ROR, and submitted a memo to the Secretariat [9]. This item is now tracked under RIB 19575. CNSC staff consider item (iv) to be closed from the perspective of ongoing reporting in the NPGS ROR.</p>

memo)	Due to the ongoing effort to resolve items (i) and (iii), <b>CNSC staff recommend that this request remain open.</b>
<p>[RIB 17522]</p> <p>Following the 2018 PNGS licence renewal hearing, the Commission requested CNSC staff to provide annual updates related to emergency management and emergency preparedness at the PNGS [1]:</p> <ul style="list-style-type: none"> <li>(i) 2017 Ontario Provincial Nuclear Emergency Response Plan (PNERP)</li> <li>(ii) implementation plan for PNGS for 2017 PNERP</li> <li>(iii) results from the technical study for 2017 PNERP</li> <li>(iv) Ontario's unified transport management plan</li> <li>(v) revision of public information and disclosure program for PNGS in regard to emergency preparedness and provision of information to populations beyond the detailed planning zone.</li> </ul>	<p><b>The Commission had previously closed items (i), (ii), and (iv) of this request.</b></p> <p>For the remaining items of this request, the 2019 NPGS ROR addressed:</p> <ul style="list-style-type: none"> <li>(iii) results from the technical study for 2017 PNERP in section 2.10.</li> <li>(v) revision of the public information and disclosure program for PNGS with regards to emergency preparedness and provision of information to the population beyond the detailed planning zone is in section 2.10.</li> </ul> <p>Due to the ongoing effort to resolve items (iii) and (v) of this request, <b>CNSC staff recommend that this request remain open.</b></p>
<p>[RIB 16516]</p> <p>Following the 2018 PNGS licence renewal hearing, the Commission requested CNSC staff to provide annual updates related to fish and fisheries in the vicinity of Pickering [1]:</p> <ul style="list-style-type: none"> <li>(i) improvements and resulting fish impingement rate</li> <li>(ii) results of Ontario Power Generation's (OPG's) thermal plume monitoring</li> <li>(iii) a) OPG's compliance with its <i>Fisheries Act</i> authorization and b) involvement of Indigenous groups</li> </ul>	<p>The 2019 NPGS ROR described:</p> <ul style="list-style-type: none"> <li>(i) improvements and resulting fish impingement rate in section 3.3.0</li> <li>(ii) results of OPG's thermal plume monitoring in section 3.3.9</li> <li>(iii) a) OPG's compliance with its <i>Fisheries Act</i> authorization in section 3.3.0 and b) involvement of Indigenous groups in activities related to the authorization in section 2.15</li> </ul> <p>CNSC staff consider all items to be open. <b>CNSC staff recommend that this request remain open.</b></p>

in activities related to the authorization	
<p>[RIB 14761]</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission requested CNSC staff to monitor Bruce Power's continual enhancements to bring internal fire risk to below the safety goal target for the Bruce A units ([10], paragraph 146).</p>	<p>The ongoing enhancements to reduce the risk due to internal fire is addressed in section 3.5.4 of the 2019 NPGS ROR. CNSC staff intends to continue to update the Commission in future RORs on the progress of the enhancements to bring internal fire risk to below the safety goal target for the Bruce A Units.</p> <p><b>CNSC staff recommend that this request remain open.</b></p>
<p>[RIB 14760]</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission directed Bruce Power to continue to develop a site-wide probabilistic safety assessment (PSA) methodology for the Bruce NGS site and include it in the PSA, before the next expected licence renewal application in 2028. It further requested CNSC staff to monitor Bruce Power's progress ([10], paragraphs 145 and 163).</p>	<p>Bruce Power's development of a site-wide PSA is addressed in section 3.5.4 of the 2019 NPGS ROR. CNSC staff intend on providing updates to the Commission on the PSA, including site-wide PSA, as part of routine reporting in future NPGS RORs.</p> <p><b>CNSC staff recommend that the Commission close this request.</b></p>
<p>[RIB 14759]</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission directed CNSC staff to report on Bruce Power's progress on providing aggregate risk values for the next licence renewal.</p>	<p>Bruce Power's progress on the aggregate risk values for whole-site PSA for Bruce A and B is addressed in section 3.5.4 of 2019 NPGS ROR.</p> <p>Upon the establishment of a proposed regulatory position on risk aggregation [RIB 8504], the aggregate risk values could be compared to safety goals and targets.</p> <p><b>CNSC staff recommend that the Commission close this request.</b></p>
<p>[RIB 14757].</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission directed CNSC staff to describe developments related to pressure tube</p>	<p>(i) The work on developing new models for pressure tube fracture toughness and the hydrogen equivalent (<math>H_{eq}</math>) content in pressure tubes at Bruce A and B is addressed in sections 2.6 and 3.5.6 of the 2019 NPGS</p>

<p>fracture toughness for Bruce A and B, including:</p> <p>i) fracture toughness modelling</p> <p>ii) estimates of the maximum amount of equivalent hydrogen</p> <p>([10], paragraphs 216, 231, and 449).</p>	<p>ROR.</p> <p>(ii) The estimates of the maximum amount of equivalent hydrogen are provided in Appendix C of the 2019 NPGS ROR.</p> <p>CNSC staff intend to continue updating the Commission on these topics in future RORs.</p> <p><b>CNSC staff recommend that both parts of this request remain open.</b></p>
<p>[RIB 14755]</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission directed CNSC staff to report annually on the implementation of electronic data transfer without human intervention (transition to the fully automated DLAN system) from Bruce NGS to the CNSC emergency operations centre ([10], paragraphs 331 to 334).</p>	<p>Bruce Power's ongoing work to implement fully-automated data transfer to the CNSC is addressed in section 3.5.10 of the 2019 NPGS ROR. CNSC staff intend to continue updating the Commission in future RORs.</p> <p><b>CNSC staff recommend that this request remain open.</b></p>
<p>[RIB 14753]</p> <p>Following the 2018 Bruce A and B licence renewal hearing, the Commission requested updates from CNSC staff on the status of the major component replacement (MCR) in NPP Status Reports, as well as the NPGS ROR. In addition, the Commission requested to be informed of any significant changes to the plans, schedules, or any other work related to the MCR - should it occur before or after October 31, 2019 ([10], paragraphs 43, 50, and 454).</p>	<p>Progress toward the MCR is addressed in section 3.5.0 of the 2019 NPGS ROR.</p> <p><b>CNSC staff recommend that this request remain open</b></p>
<p>[RIB 8504]</p> <p>As a result of a presentation by NPP licensees on PSA, the Commission expects CNSC staff to establish a proposed regulatory position on risk aggregation ([11], paragraph 49).</p>	<p>Work toward a regulatory position on risk aggregation is addressed in section 2.4 of the 2019 NPGS ROR. CNSC staff intend to continue updating the Commission in future NPGS RORs.</p> <p><b>CNSC staff recommend that this request remain open</b></p>



#### 4. ERRATA

Some minor errors in the 2019 NPGS ROR were identified through reviews by CNSC staff, licensees and intervenors. Prior to publication, the following errors will be corrected in the report:

- Table 1 in section 1.1, did not accurately reflect the nature of the Commission's request for information on Bruce Power's submission of aggregate risk values (RIB 14759); it instead requested information on aggregate safety goals and targets. The text in the Request column of the table will be replaced by the following.

*"Following the 2018 Bruce A and B licence renewal hearing, the Commission directed CNSC staff to report on Bruce Power's progress on providing aggregate risk values for the next licence renewal."*

- In section 1.4.5 of the ROR report mentions *"In generating the ratings, CNSC staff considered 1,475 findings for NPPs and WMFs <waste management facilities>."* In 2019 there were 1475 findings for NPPs and 145 for WMFs. So the text in the ROR should read:

*"In generating the ratings, CNSC staff considered 1,475 findings for NPPs and 145 for WMFs."*

- Section 2.8 did not include text that definitively addresses the Commission's request for information on the performance indicator "total recordable injury frequency (RIB 17560). The following text will be inserted after the first paragraph under "Performance".

*"Note that REGDOC-3.1.1 requires NPP licensees to report these data for their workers and for contractors, but not for third-party contractors (i.e., sub-contractors). In 2019, the Commission noted the importance of injury data for third-party contractors and it also noted the value of obtaining more complete data (specifically, total recordable injury frequency) [6]. Recognizing that the collection of such data was not required by REGDOC-3.1.1; the Commission instructed CNSC staff to compare the costs and benefits of adding that requirement to REGDOC-3.1.1. At the end of 2019, CNSC staff were considering that analysis as part of a planned revision of REGDOC-3.1.1 [RIB 17560]."*

- In Table 2 in Section 1.3.3, the row for RWOS-1 contains incorrect information. The WFOL was amended in 2019 to have a standard 10 year licence cycle. The expiry date should read October 31, 2029.
- In Table 16 in Section 3.3.0, the row for PRPD-2019-FIR-05647 should be removed and, in the following row, PRPD-2019-FIR-05646 should be replaced by PRPD-2020-FIR-05646.  
In Section 3.3.12, PRPD-2019-FIR-05647 should be replaced by PRPD-2020-FIR-05646.

- In Section 3.4.0 under “Licensing”, the date of renewal of the WFOL for WWMF should be February 2018.
- In Section 3.3.4, under “Probabilistic Safety Assessment”, the text suggests that OPG’s implementation of REGDOC-2.4.2, *Probabilistic Safety Assessment (PSA) for Nuclear Power Plants*, would not be complete until 2023. In fact, OPG’s implementation plan was to be completed by 2020. The updates of the PSAs, in accordance with REGDOC-2.4.2, for PNGS Units 5 to 8 and Units 1 and 4 were to be completed by 2022 and 2023, respectively, after the implementation of this REGDOC (note also that the CMD erroneously stated the date for Units 5 to 8 as 2020).
- In Section 3.1.0 under “Station Improvement Opportunities”, the description of OPG’s revision of the IIP for DNGS did not accurately reflect the design alternative. The following will replace the last two sentences of the second paragraph.  
*“Based on the Commission’s decision [8], the SIO will rely on emergency mitigating equipment and on existing Group 2 equipment and components to provide make-up water, as opposed to new diesel driven, fire-water pumps as originally proposed.”*
- The second paragraph in Section 3.3.5 under “System Design” was included in error – the transients described actually occurred at PNGS in 2018. The paragraph will be deleted.
- The update in Section 3.7.1 on configuration management (fire equipment) stated that CNSC staff were reviewing NB Power’s corrective action as of May 2020. The update will be modified to state that CNSC were satisfied with NB Power’s corrective action, as of April 2020.

## 5. CONCLUSION

This CMD provides CNSC staff responses to interventions received on the 2019 NPGS ROR, as well as identifies errata in the 2019 NPGS ROR which will be corrected before the ROR is published.

Further, this CMD summarizes the status of the Commission information requests to CNSC staff that were addressed through the 2019 NPGS ROR and CNSC staff’s presentation at the December 2020 Commission Meeting. CNSC staff have provided responses to eleven actions, of which CNSC staff recommend the closure of three Action Items [RIB 14759, 14760 and 17560]. CNSC staff will provide updates on the remaining Action Items in future RORs.

## REFERENCES

1. Record of Decision on Application by OPG to Renew the Nuclear Power Reactor Operating License for the Pickering Nuclear Generating Station, April 4, 2018 and June 24-29, 2018, e-Doc 5718117.
2. Record of Decision on Application by OPG for Renewal of Licence for Pickering Waste Management Facility, February 6, 2018, e-Doc 5345395
3. Response to RIB action 17560 to include contactor data as part of the TRIFR in 2018 NPGS ROR, CMD 19-M15, e-Doc 5864115.
4. Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on May 15, 2019, e-Doc 5910107.
5. Submission from CNSC staff on Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2019, CMD 20-M24, e-Doc 6362481.
6. CMD 18-M39, "Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2017", e-Doc 5628442
7. Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on Nov 8, 2018, e-Doc 5718133.
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