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CMD 24-H101-Q.A

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**Questions from Commission
Panel Members**

**Questions des membres de
la formation de la Commission**

In the Matter of

À l'égard d'

Ontario Power Generation

Ontario Power Generation

**Ontario Power Generation – Licence
amendment application for the
Darlington Nuclear Generating Station
regarding the commercial production of
Cobalt-60**

**Ontario Power Generation – Demande
concernant la modification de son
permis pour la centrale nucléaire de
Darlington en vue de produire
commercialement du Cobalt-60**

Hearing in writing based on written
submissions

Audience par écrit fondée sur des
mémoires

Spring 2024

Printemps 2024



INTRODUCTION

Questions from Commission	Questions de la Commission
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The Commission, in conducting a Hearing in Writing¹ to consider Ontario Power Generation’s application to amend the Darlington NGS Power Reactor Operating Licence to authorize the production of Cobalt-60, has reviewed the written submissions provided by CNSC staff in Commission Member Document (CMD) [CMD 24-H101](#), and OPG in its application and supporting submissions, [CMD 24-H101.1](#), [CMD 24-H101.1A](#), [CMD 24-H101.1B](#), [CMD 24-H101.1C](#). The Commission also reviewed written submissions from 11 intervenors.

After considering the material, the Commission sent questions to OPG and CNSC staff on April 22, 2024 ([CMD 24-H101-Q](#)). OPG and CNSC Staff provided responses to the Commission’s questions CMDs [CMD 24-H101.1D](#) and [CMD 24-H101.A](#), respectively.

On April 26, 2024, the Saugeen Ojibway Nation (SON) submitted a late intervention on this matter (CMD 24-H101.14). Per Rule 3 of the [CNSC Rules of Procedure](#), the Commission accepted the intervention.

After reviewing SON’s submission and the supplemental submissions from OPG and CNSC staff, the Commission requires further information with respect to the questions set out below.

QUESTIONS

The Commission’s questions for OPG are set out in Table 1 and the Commission’s questions for CNSC staff are set out in Table 2.

Table 1: CMD 24-H101-Q.A Questions for OPG

#	Commission Questions
1.	In its response to a Commission question in CMD 24-H101.1D, OPG submit that “industry recycling efforts maximize the useful life of the cobalt sources before they are placed in interim storage. Currently, 99.5% of cobalt sources are recycled, resulting in no shipments of spent sources from the third party to Bruce B NGS since early 2020.” Describe the lifecycle and commercial lifespan of a Co-60 source, including processing, recycling, interim storage, disposal and the end-state of a decayed Co-60 source.
2.	In section 3.11.3 of CMD 24-H101.1A Attachment 3, OPG has submitted that that cobalt sources that have reached commercial end of life will be stored for 25-30 years in the Bruce B Irradiated Fuel Bay (IFB). Following this period of cooling, the waste will be transferred to dry storage and managed at an OPG waste management facility for additional cooling and interim storage before final long-term waste management. OPG also reported that “The production scrap and the spent cobalt (once received back from Bruce ‘B’ IFB) will be managed under

¹ Notice of Hearing in Writing 2024 H-101, August 14, 2023 and Revised Notice of Hearing in Writing 2024 H-101, January 8, 2024



#	Commission Questions
	<p>OPG’s waste management program for all nuclear substances.”</p> <p>In its response to a Commission question in CMD 24-H101.1D, OPG submit that “the spent cobalt sources will be received at the Bruce B NGS irradiated fuel bay for interim storage. This will facilitate consolidation with existing spent cobalt, and leverage the existing procedures, training, expertise, equipment and tools available at Bruce B NGS to store spent cobalt sources on an interim basis. This arrangement is consistent with the current practice of receiving spent cobalt from the same third party.”</p> <p>In CMD 24-H101.D, CNSC staff note that “in the coming years, before the cobalt sources produced at Darlington NGS have reached the commercial-end-of-life, CNSC staff, Nordion, OPG, and Bruce Power will engage with potentially interested Indigenous Nations and Communities regarding their proposed plans for the transportation, management, and interim storage of the spent Co-60. [Emphasis added.]” In CMD 24-H101.14, SON submit that “OPG has arranged to have the spent Cobalt-60 from Darlington NGS stored at Bruce Power’s Irradiated Fuel Bay and eventually the Western Waste Management Facility (WWMF), barring a long-term disposal solution.”</p> <p>Confirm OPG’s detailed plans for managing cobalt sources from the time they reach end of commercial life until disposal, including interim storage.</p>
3.	<p>In CMD 24-H101.14, SON indicate that OPG has not engaged with SON with respect to the licence amendment application and the Co-60 Project. Describe OPG’s engagement activities with SON regarding the proposed licensed activities as well as the transportation, interim storage, and potential final disposal of cobalt-60 sources on SON territory.</p>


Table 2: CMD 24-H101-Q.A Questions for CNSC staff

#	Commission Questions
1.	<p>In CMD 24-H101.D, CNSC staff note that “in the coming years, before the cobalt sources produced at Darlington NGS have reached the commercial-end-of-life, CNSC staff, Nordion, OPG, and Bruce Power will engage with potentially interested Indigenous Nations and Communities regarding their proposed plans for the transportation, management, and interim storage of the spent Co-60. CNSC staff expect this engagement will include the Saugeen Ojibway Nation, the Historic Saugeen Métis, and the Métis Nation of Ontario.”</p> <p>Describe CNSC staff’s consultation activities with SON, the Historic Saugeen Métis, and the Métis Nation of Ontario regarding the proposed licensed activities as well as the transportation, interim storage, and potential final disposal of cobalt-60 sources.</p>



REQUEST

OPG and CNSC staff shall submit a response by way of supplementary CMD as soon as possible, but no later than **2024-05-22**. OPG and CNSC staff are expected to inform the Registry of any concerns respecting this deadline within five working days of receiving this CMD-Q.

Name: Candace Salmon, Commission Registrar <i>On behalf of the Commission</i>	Date: 2024-05-09
Signature: Salmon, Candace	 <small>Digitally signed by Salmon, Candace DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Salmon, Candace" Reason: I am the author of this document Location: Date: 2024.05.09 12:15:53-03'00" Foxit PDF Editor Version: 13.0.1</small>