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Response to Commission Request for
Information

Réponse à une demande d'information
de la Commission

**Ontario Power Generation
Inc.**

**Ontario Power Generation
Inc.**

**Darlington Nuclear
Generating Station**

**Centrale nucléaire de
Darlington**

Public Hearing in Writing

Audience publique par écrit

Submitted by:
CNSC Staff

Soumise par :
Le personnel de la CCSN

Signed/signé le

02 May 2024 / 02 mai 2024

Alexandre Viktorov, Ph. D.

Director General

Directorate of Power Reactor Regulation

Directeur général

Direction de la réglementation des centrales nucléaires

TABLE OF CONTENTS

BACKGROUND 1
STAFF RESPONSE.....2
CONCLUSION4
REFERENCES5

Background

Pursuant to paragraphs 24(4)(a) and (b) of the [Nuclear Safety and Control Act](#),¹ a panel of the Commission has been established to consider Ontario Power Generation's (OPG) application for an amendment to the Darlington Power Reactor Operating Licence (PROL) 13.03/2025. Commission Proceeding 24-H101 is being conducted in writing to consider the matter of the commercial production of cobalt-60 (Co-60) radionuclides at the Darlington Nuclear Generating Station (NGS). In this CMD, CNSC staff are providing written responses to one (1) question from the Commission directed to CNSC staff (provided in [CMD 24-H101-Q \[1\]](#)). CNSC staff's current submission does not provide responses to the questions in [CMD 24-H101-Q \[1\]](#) that were directed to the applicant, OPG; nor does it address the interventions beyond the questions raised by the panel of the Commission.

In conducting this hearing, the panel of the Commission has considered the written submissions (Commission Member Documents [CMDs]) provided by:

- ❖ CNSC staff
 - [CMD 24-H101 – Submission from CNSC staff](#)
- ❖ OPG
 - [CMD 24-H101.1 – Submission from Ontario Power Generation](#)
 - [CMD 24-H101.1A – Supplementary submission from Ontario Power Generation](#)
 - [CMD 24-H101.1B – Supplementary submission from Ontario Power Generation](#)
 - [CMD 24-H101.1C – Supplementary submission from Ontario Power Generation](#)
- ❖ 11 Intervenors
 - [CMD 24-H101.3 – Submission from the Canadian Nuclear Isotope Council](#)
 - [CMD 24-H101.4 – Submission from the International Irradiation Association](#)
 - [CMD 24-H101.5 – Submission from Becton, Dickinson and Company](#)
 - [CMD 24-H101.6 – Submission from the Gamma Industry Processing Alliance](#)
 - [CMD 24-H101.7 – Submission from Gammatom s.r.l.](#)
 - [CMD 24-H101.8 – Submission from CANDU Owners Group](#)
 - [CMD 24-H101.9 – Submission from the Regional Municipality of Durham](#)
 - [CMD 24-H101.10 – Submission from Bruce Power](#)
 - [CMD 24-H101.11 – Submission from Nordion \(Canada\) Inc.](#)
 - [CMD 24-H101.12 – Submission from Kinectrics](#)
 - [CMD 24-H101.13 – Submission from the Mississaugas of Scugog Island First Nation](#)

¹ *Nuclear Safety Control Act (NSCA) [S.C. 1997, c. 9]*

STAFF RESPONSE

The Commission's questions, including any quoted text from the original CMD, have been reproduced below in the shaded boxes to provide suitable context for CNSC staff's responses.

#1	Describe the engagement activities that have been or will be conducted with Indigenous Nations and communities along Co-60 transportation routes.
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The safe transportation of nuclear substances, including radioactive materials and medical isotopes, is integral to nuclear safety and is thus subject to regulatory requirements and oversight from the CNSC and Transport Canada. Co-60, which is currently produced and packaged on-site at the Pickering and Bruce Power nuclear generating stations, is transported regularly in Canada. CNSC staff recognize that Indigenous Nations and communities and the public may have interests and concerns related to the transportation of nuclear substances and materials like Co-60. The CNSC proactively engages in open and transparent dialogue with Indigenous Nations and communities to inform them of activities that may be of interest, address their concerns, seek their input, and encourage and support their participation in Commission proceedings. Upon request, and as part of regular meetings with Indigenous Nations and communities, CNSC staff regularly provide information² and answer questions with regards to regulatory requirements and oversight activities pertaining to the transport of nuclear substances in Canada. CNSC licensees are encouraged to provide information and engage potentially interested Indigenous Nations and communities regarding their transportation and emergency management programs. OPG has indicated that they remain open to continuing to engage further with Indigenous Nations and Communities with rights and interests in relation to the Darlington NGS as well as those Nations along the transportation corridor in collaboration with Nordion.

As stated in CNSC staff [CMD 24-H101](#) [2], the activities proposed by OPG associated with the production of Co-60 at the Darlington NGS, including transportation, do not introduce any new potential impacts to Indigenous or Treaty rights and does not formally trigger the Duty to Consult with Indigenous Nations and communities. Specifically, the shipment of Co-60 from an OPG NGS in the greater Toronto area isn't a new activity. The expected shipping routes that will be used by the for-hire freight company *Jade Transport* will likely overlap with those currently used for shipments between OPG's Pickering station in Ajax and Nordion's facility in Kanata. Additionally,

² Transportation information required by REGDOC 2.12.3 version 2.1, *Security of Nuclear Substances: Sealed Sources* is prescribed information in accordance with section 21 of the General Nuclear Safety and Control Regulations (GNSCR; SOR/2000-202), and thus is subject to strict security protections and cannot be shared publicly.

CNSC staff do not anticipate that there will be any perceptible changes in the volume of shipments utilizing public infrastructure, along the public highways between OPG's Darlington station in Clarington and Nordion's Kanata facility.

Section 2.6 of CNSC staff's [CMD 24-H101](#) was based on a comprehensive review of license documentation [3] against expectations in REGDOC-3.2.2 and engagement activities and that were conducted by CNSC staff. Ultimately, to support the Co-60 specific recommendations to the Commission about OPG's requested licence amendment, CNSC staff engagement efforts focused on the Indigenous Nations and communities with rights and interests in the vicinity of the Darlington NGS.

Independently, and prior to the engagement activities conducted for this Darlington NGS amendment application, CNSC staff have engaged with communities along the transportation corridor and proximal to the Darlington and Nordion facilities to provide information and answer questions regarding the CNSC's regulatory framework for the production and transportation of medical radionuclides, as well as safety standards, regulations, and requirements. This included engagement with Indigenous nations and communities such as the Algonquins of Pikwakanagan First Nation, Métis Nation of Ontario, and the Mohawks of Bay of Quinte; amongst others. CNSC staff continue to be committed to providing information and answering any questions with regards to CNSC's regulations and requirements as they relate to the transport of nuclear substances.

Lastly, consistent with the Commission's interest in the interim storage of cobalt wastes at the Bruce B Irradiated Fuel Bay, 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, all with whom the CNSC have [Terms of Reference for Long Term Engagement](#), and the public.

CONCLUSION

CNSC staff's conclusion remains unchanged, and staff conclude, in accordance with [CMD 24-H101](#) that OPG has adequate provisions in place to ensure the safe production, possession, transfer, use, packaging, management and storage of Co-60. The installation and operation of related equipment will not result in significant doses to workers or members of the public, and will not result in significant releases to the environment. In addition, the existing security and safeguards program in place is sufficient for the production of Co-60. Under the amended PROL, OPG will continue to be responsible for protecting the health and safety of the public, as well as the environment. CNSC staff continue to recommend that the Commission amend the Darlington PROL to include a new authorized activity and licence condition related to the commercial production of Co-60 at Darlington NGS.

References

Referenced documents in this CMD are available to the public upon request, subject to confidentiality considerations.

- [1] Commission Panel Questions CMD, "Questions from Commission Panel Members in the Matter of Application for a licence amendment for the Darlington Nuclear Generating Station regarding the commercial production of Cobalt-60," 2024-04-22. [e-Doc 7264474 (Word), 7265061 (PDF)]
- [2] CNSC staff CMD, "Request for licence amendment for the production of Co-60 at the Darlington Nuclear Generating Station," CMD 24-H101, 2024-02. [e-Doc 7076593 (Word), 7076596 (PDF)]
- [3] OPG letter, R. Geofroy to M. Bacon-Dussault "Darlington NGS – Addendum to the Application for Darlington Nuclear Generating Station Power Reactor Operating Licence 13.03/2025 Amendment for Production of the Cobalt-60 Radioisotope," 2023-12-22. [CD# NK38-CORR-00531-25073 P, e-Doc 7194511, 7194514]