



Directorate of Power Reactor Regulation

13 June 2024

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Mr. Allan Grace
Senior Vice President
Darlington Nuclear
Ontario Power Generation Inc.
Box 4000 – Holt Road South
Bowmanville, ON L1C 3Z8

Mr. Richard Geofroy
Senior Vice President (acting) and
Deputy Chief Nuclear Officer
Pickering Nuclear
Ontario Power Generation Inc.
1675 Montgomery Park Road, P41,
3G-4
Pickering, ON L1V 2R5

Mr. Kapil Aggarwal
Vice President Nuclear Sustainability Services
Ontario Power Generation Inc.
889 Brock Rd, 4th floor
Pickering, ON L1W 3J2

Subject: Request pursuant to Subsection 12(2) of the *General Nuclear Safety and Control Regulations*: Potential Neutron Exposure of Workers

Dear Messrs. Grace, Geofroy and Aggarwal:

This letter is a request pursuant to subsection 12(2) of the *General Nuclear Safety and Control Regulations*.

Following the recent discovery of neutron radiation from refurbishment waste containers at Waste Facilities at the Canadian NPP sites, it was determined that some unaccounted worker exposure due to neutron radiation associated with the refurbishment waste containers may have occurred. The contents of the containers include irradiated reactor components, such as pressure tubes, calandria tubes, or calandria tube inserts, removed from reactors during refurbishments.

I request, pursuant to my authority as a person authorized by the Commission for the purposes of subsection 12(2) of the *General Nuclear Safety and Control Regulations* that Ontario Power Generation Inc. conduct and submit to the CNSC an analysis, by no later than July 15th, 2024, which includes the following items:

- A summary of the work activities with the most potential for unaccounted dose and an associated conservative estimate of the magnitude of that dose;
- Assessment of whether the unaccounted dose has caused any worker to exceed the effective dose limit for the current one year dosimetry period, as well as the current and previous five-year dosimetry periods;
- Methods, models and modeling assumptions used to ascertain worker neutron doses;

- A characterization of the neutron source term;
- Confirmation whether Ontario Power Generation Inc. included a neutron source term in their original source term characterization of reactor component waste;
- Additional work controls implemented to mitigate future exposures; and
- Confirmation that affected parties have been informed.

Please note that in accordance with subsection 12(2) of the *General Nuclear Safety and Control Regulations*, Ontario Power Generation Inc. is also required to file a report by June 24, 2024, with the Commission that contains the following information:

- a) confirmation that the request will or will not be carried out or will be carried out in part;*
- b) any action that Ontario Power Generation Inc. has taken to carry out the request or any part of it;*
- c) any reasons why the request or any part of it will not be carried out;*
- d) any proposed alternative means to achieve the objectives of the request; and*
- e) any proposed alternative period within which Ontario Power Generation Inc. proposes to carry out the request.*

If you have any questions related to this matter, please do not hesitate to contact Director, Pickering Regulatory Program Division, Ross Richardson at ross.richardson@cnsccsn.gc.ca or the Director, Darlington Regulatory Program Division, Arslan Baig at arslan.baig@cnsccsn.gc.ca

Sincerely,



Alexandre Viktorov
Director General
Directorate of Power Reactor Regulation

Digitally signed by Viktorov, Alexandre
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Alexandre"
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c.c. A. Bulkan, L. Sigouin, C. Purvis, A. Baig, R. Richardson, K. Campbell, D. Beaton,
K. Owen-Whitred, B. Torrie, H. Davis (CNSC)

S. Irvine (OPG).