

RNAO's submission to the Canadian Nuclear Safety Commission

On the Draft Terms of Reference for
the CNSC Potassium Iodide Pill Working Group

Feb. 14, 2019

Introduction

The Registered Nurses' Association of Ontario (RNAO) is the professional association representing registered nurses (RN), nurse practitioners (NP) and nursing students in all settings and roles across Ontario. It is the strong, credible voice leading the nursing profession to influence and promote healthy public policy.

RNAO is pleased to respond to the consultation by the Canadian Nuclear Safety Commission (CNSC) on the draft terms of reference of its Potassium Iodide (KI) Pill Working Group. RNAO welcomes the commitment to form a working group to “provide clarity on the existing plans and associated responsible authorities to distribute KI Pills (in the Ingestion Planning Zone, within a 50-km radius) in the event of an emergency at the Pickering Nuclear Generating Station.”¹

To be clear, RNAO opposed keeping the Pickering plant open on health and cost grounds.² But so long as the plant remains open, Ontario Power Generation (OPG) must prepare against the possibility of a disaster similar to the one that happened at Fukushima in Japan. The CNSC has identified distribution of KI pills within a 50-km radius as one such prudent measure in its written decision on the Pickering nuclear licence renewal application: “The Commission directs that a KI working group between CNSC staff, OPG, the OFMEM [Ontario Officer of the Fire Marshal and Emergency Management], the MOHLTC [Ontario Ministry of Health and Long-Term Care], other stakeholders, and which would allow for the participation of intervenors in these proceedings, be established as soon as practicable. The Commission is of the view that this working group should establish clear and detailed plans for the distribution of KI pills throughout the IPZ [Ingestion Planning Zone – a 50-km radius around the plant] in the event of an emergency at the PNGS [Pickering Nuclear Generating Station].”³

While KI pills only protect the thyroid gland against radioactive iodine releases (and not against other radioactive isotopes), this is still an important precaution to take. The pills must be taken before or soon after exposure to offer protection, so they must be pre-distributed within the Ingestion Planning Zone.^{4 5} Particular attention must be paid to ensuring access for the most vulnerable populations, including children, youth and pregnant women.

The language on the need to adequately prepare in the event of a nuclear emergency is appropriately very strong in the CNSC Record of Decision on the Pickering Nuclear licence renewal application.⁶ RNAO believes that the terms of reference for the KI Pill Working Group must be strengthened to reflect that unambiguous language.

Recommendations

Mandate

First, the terms of reference read in part, “The mandate ... is to provide clarity on the existing plans and associated responsible authorities for distributing KI pills in the Ingestion Planning Zone in the event of an emergency at the Pickering Nuclear Generating Station.”⁷ This is insufficiently direct and understates the urgency for effective action.

Recommendation 1:

Rewrite the first sentence of the mandate to mirror the language in the CNSC Record of Decision:

“The mandate of the CNSC Potassium Iodide (KI) Pill Working Group (the Working Group) is to establish clear and detailed plans for the distribution of KI pills throughout the Ingestion Planning Zone.”

Schools

Second, the Record of Decision is very clear on the importance of pre-distribution of KI pills to all schools in the IPZ: “The Commission appreciates the intervention from the TDSB [Toronto District School Board] and the TDCSB [Toronto District Catholic School Board] and has carefully considered the information provided on the record during this hearing about the pre-distribution of KI pills to all schools in the PNGS [Pickering Nuclear Generating Station] IPZ. Following its consideration of this information, the Commission directs that the KI working group examine the feasibility of pre-distribution of KI pills to all schools within the IPZ and strongly encourages the participation of school boards in the IPZ in the KI working group.”⁸

The draft terms of reference lack any reference to the CNSC direction to consider pre-distribution of KI pills to all schools in the IPZ.

Recommendation 2:

Include in the mandate section (1.) and the deliverables section (4.) acknowledgement of the CNSC directive to the KI Working Group to examine the feasibility of pre-distribution of KP pills to all schools within the Ingestion Planning Zone.

Vulnerable populations

Stocking of pills in schools may provide some protection for school-age children, but it does not necessarily address access for pre-school children and pregnant mothers.

Recommendation 3:

Include in the mandate section (1.) and deliverables section (4.) the expectation that the KI Working Group develop credible plans on how KI pills are to be delivered in a timely way to all vulnerable communities, including pre-school children and pregnant women.

Public awareness

The Record of Decision noted that there was room for improvement in public awareness, particularly beyond the ten-kilometre Detailed Planning Zone (DPZ).⁹

Recommendation 4:

Include in the mandate section (1.) and deliverables section (4.) acknowledgement of the CNSC advice to the KI Working Group to expand nuclear emergency awareness activities throughout the IPZ.

Participation of Nurses and other stakeholders in the KI Working Group

Health services are central to disaster mitigation and emergency response, and RNs and NPs are in the front lines when any disaster does strike. RNs and NPs play key roles in responses to nuclear incidents including: radiation exposure screening; triage; decontamination; treatment for radiation; treatment for exacerbations of existing medical conditions; assistance with evacuation; and attending to the health and psychological needs of evacuees. Problems during the Fukushima nuclear disaster demonstrated the need for authorities to ensure adequate supports are in place for nurses in the event of emergencies. That includes ongoing work to provide RNs and NPs with the necessary training and materials.¹⁰ Inadequate preparation at Fukushima also contributed to: deaths of vulnerable people due to rapid evacuation; deaths due to displacement of elderly people requiring nursing care; and adverse impacts on affected individuals' lifestyle and mental health.¹¹ This is reminiscent of how the 2003 SARS outbreak revealed Ontario's lack of preparation for public health emergencies.¹²

It is crucial to have comprehensive planning so that RNs and NPs can be ready for all the above roles. Furthermore, they must be involved in the detailed planning processes. Planning must identify and commit all necessary resources, including: key hospitals and other health facilities; decontamination centres; equipment; materials; and personnel. And RNs and NPs must be involved in planning for KI pill distribution.

It is important to note that the CNSC Record of Decision is more inclusive than the four organizations listed in the draft terms of reference for the KI Working Group: "The Commission directs that a

KI working group between CNSC staff, OPG, the OFMEM, the MOHLTC, *other stakeholders* (emphasis added), and which would allow for the participation of intervenors in these proceedings, be established as soon as practicable.”¹³

Recommendation 5:

Modify the terms of reference to allow representatives from health and civil society groups (including nurses) to make submissions and to participate in the KI Working Group.

Transparency and accountability

As with any public activity of importance, the deliberations of the KI Working Group ought to be subject to normal measures to encourage transparency and accountability.

Recommendation 6:

Include in the terms of reference a paragraph on transparency and accountability. The minutes of the KI Working Group must be publicly available, as must any submissions received and any analysis or studies the Working Group relies on.

Summary

Ontario is proceeding to allow the Pickering nuclear plant to continue to operate for a number of years. It is just five km east of Toronto – a heavily populated area. The province owes world-class preparedness to all those people living in the shadow of a potential nuclear plume. That includes serious and credible preparation to protect all vulnerable populations from radioactive iodine releases. To do that, the right people must be at the table, and all processes and decisions must be fully transparent. RNs and NPs have a strong interest in ensuring that those processes and decisions are sound, and will be ready to participate in both.

References

- ¹ Canadian Nuclear Safety Commission. (2018). *Canadian Nuclear Safety Commission Potassium Iodide (KI) Pill Working Group: Draft Terms of Reference*. December. <http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/ki-pill/draft-terms-of-reference-potassium-iodide-pill-working-group-eng.pdf>.
- ²Registered Nurses' Association of Ontario. (2018). *RNAO Submission to the Canadian Nuclear Safety Commission on the Application to Renew the License of the Pickering Nuclear Generating Station*. May 7. https://rnao.ca/sites/rnao-ca/files/RNAO_submission_to_CNSC_on_Pickering_Nuclear_Licence_Renewal_2018.pdf.
- ³Canadian Nuclear Safety Commission. (2019). *Record of Decision: Application to Renew the Nuclear Power Reactor Operating Licence for the Pickering Nuclear Generating Station*. P. 112.
- ⁴ Centers for Disease Control and Prevention. (2018). *Potassium Iodide (KI)*. August 10. <https://emergency.cdc.gov/radiation/ki.asp>
- ⁵ Canadian Nuclear Safety Commission. (2016). *Potassium iodide (KI) pills*. July 11. <https://nuclearsafety.gc.ca/eng/resources/educational-resources/feature-articles/potassium-iodide-KI-pills.cfm>.
- ⁶Canadian Nuclear Safety Commission. (2019). Op. Cit.
- ⁷ Canadian Nuclear Safety Commission. (2018). *Canadian Nuclear Safety Commission Potassium Iodide (KI) Pill Working Group: Draft Terms of Reference*. December. <http://nuclearsafety.gc.ca/eng/acts-and-regulations/consultation/ki-pill/draft-terms-of-reference-potassium-iodide-pill-working-group-eng.pdf>.
- ⁸ Canadian Nuclear Safety Commission. (2019). Op. Cit. Pp. 112-113.
- ⁹ Canadian Nuclear Safety Commission. (2019). Op. Cit. P. 104..
- ¹⁰ Yoshida, K., Orita, M., Goto, A., Kumagai, A., Yasui, K. et al. (2016). Radiation-related anxiety among public health nurses in the Fukushima Prefecture after the accident at the Fukushima Daiichi Nuclear Power Station: a cross-sectional study. *BMJ Open* 2016;6: e013564. doi:10.1136/bmjopen-2016-013564.
- ¹¹ Hasegawa, A., Ohira, T., Maeda, M., Yasumura, S, and Tanigawa, K. (2016). Emergency Responses and Health Consequences after the Fukushima Accident; Evacuation and Relocation. *Clinical Oncology*. 28 (2016), pp. 237-244. <http://www.sciencedirect.com/science/article/pii/S0936655516000054>.
- ¹² Registered Nurses' Association of Ontario. (2003). *SARS Unmasked: A Report on the Nursing Experience with SARS in Ontario*. September 29. http://rnao.ca/sites/rnao-ca/files/SARS_Unmasked.pdf.
- ¹³ Canadian Nuclear Safety Commission. (2019). Op. Cit. P. 104.

Cover image: <https://upload.wikimedia.org/wikipedia/commons/a/a0/Pickering-nuclear-generating-station-001-2.jpg>