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Safety Commission

Commission canadienne
de sûreté nucléaire

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Status Report on Power Reactors

Rapport d'étape sur les centrales
nucléaires

This document summarizes the status of
the Power Reactor facilities as of
June 13, 2022.

Ce rapport résume le rapport d'étape sur
les centrales nucléaires en date du
13 juin 2022.

Signed on / Signé le
2022-06-17

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1. Power Reactors Status as of June 13, 2022

1.1 Bruce A and B

Operational Status
Unit 1 is at Full Power.
Unit 2 is in a planned maintenance outage.
Unit 3 is at Full Power.
Unit 4 is at Full Power.
Unit 5 is at Full Power.
Unit 6 is Shut Down for Major Component Replacement (MCR).
Unit 7 is at Full Power.
Unit 8 is at Full Power.
Licensing
Power Reactor Operating Licence expires on September 30, 2028.
Comments
<p>Unit 2 is in a planned maintenance outage that began May 5, 2022</p> <p>Unit 6 Major Component Replacement (MCR) started in January 2020.</p> <ul style="list-style-type: none"> • Installation of feeders and calandria tubes in progress. • Steam Generator (SG) heavy lifts have been completed; installation of new SGs in progress. • Work on inspection and replacement of the primary heat transport system and electrical equipment has been completed. • Moderator and safety system work in progress. <p>Lutetium-177 Isotope Production System (IPS) has been installed in Unit 7. Hot commissioning test (with fresh targets) of the system is currently under way. Expected completion date is approximately July 7.</p>
Event Notifications and Updates
<p>CNSC staff have received and reviewed Bruce Power and OPG responses to GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes. CNSC staff have requested additional supporting information.</p> <p>CNSC staff will update the Commission on the progress of work in November 2022.</p>
Actions from previous Commission meetings
None.

1.2 Darlington

Operational Status
Unit 1 is Shut Down for Refurbishment
Unit 2 is at Full Power.
Unit 3 is Shut Down for Refurbishment.
Unit 4 is at Full Power.
Licensing
Power Reactor Operating Licence expires on November 30, 2025.
Comments
<p>Unit 1 refurbishment started in February 2022.</p> <ul style="list-style-type: none"> • Bulkhead installation complete • Containment leak testing underway • Turbine/generator disassembly in progress <p>Unit 3 refurbishment started in September 2020.</p> <ul style="list-style-type: none"> • Fuel channel installation in progress • Turbine generator static commissioning is in progress.
Event Notifications and Updates
<p>CNSC staff have received and reviewed Bruce Power and OPG responses to GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes. CNSC staff have requested additional supporting information.</p> <p>CNSC staff will update the Commission on the progress of work in November 2022.</p>
Actions from previous Commission meetings
None.

1.3 Pickering

Operational Status
Unit 1 is at Full Power.
Unit 2 is in a Safe Storage State.
Unit 3 is in a Safe Storage State.
Unit 4 is at 86% of Full Power.
Unit 5 is at Full Power.
Unit 6 is at Full Power.
Unit 7 is at Full Power
Unit 8 is at Full Power.
Licensing
Power Reactor Operating Licence expires on August 31, 2028. OPG requires Commission approval to operate PNGS beyond December 31, 2024.

Comments
Unit 4 is derated to 86% of Full Power due to a fueling deficit. OPG is addressing fuel handling unavailability (West Transfer Mechanism magazine rotation issue).
Event Notifications and Updates
CNSC staff have received and reviewed Bruce Power and OPG responses to GNSCR 12(2) request to report on the hydrogen uptake model validity analyses for pressure tubes. CNSC staff have requested additional supporting information.
CNSC staff will update the Commission on the progress of work in November 2022.
Actions from previous Commission meetings
Potassium Iodide (KI) Pill Working Group Update: <ul style="list-style-type: none"> • See Appendix A for the update on the KI Pill Working Group.

1.4 Point Lepreau

Operational Status
The unit is in a planned maintenance outage.
Licensing
Power Reactor Operating Licence expires on June 30, 2022. The licensee applied for renewal of their licence on June 30, 2021. Part 1 of the relicensing hearing was held on January 26, 2022 and Part 2 was held on May 10-12, 2022.
Comments
The unit is in a planned maintenance outage that began on April 9, 2022.
Event Notifications and Updates
None.
Actions from previous Commission meetings
None.

1.5 Other

No updates.

Appendix A

UPDATE ON THE KI PILL WORKING GROUP

ISSUE

The Potassium Iodide (KI) Pill Working Group (hereafter referred to as the 'Working Group') presented the Phase I Report during a public meeting of the Commission on January 26, 2022. In the Meeting Minutes, the Commission directed CNSC staff to provide an update on a plan to expedite Phase II objectives.

BACKGROUND

The Working Group was enacted following the signing of the Terms of Reference (TOR) in May 2019 by the CNSC, Ministry of Health (MOH), Office of the Fire Marshal and Emergency Management (OFMEM), and Ontario Power Generation (OPG). The Working Group is chaired by the CNSC, with co-chairs from the MOH, OFMEM, and OPG. The Working Group also includes members from Health Canada; and Public Health Units and Emergency Management Coordinators from municipalities located within the Ingestion Planning Zone (IPZ; 50 km) of Pickering Nuclear Generating Station (NGS). The municipalities include Peel Region, York Region, City of Toronto, Durham Region, Simcoe County, City of Kawartha Lakes and Peterborough County. Although Peterborough County is not located within the IPZ, it is designated as a host community for the Pickering NGS in the Provincial Nuclear Emergency Response Plan.

In accordance with the TOR, Phase I of the Working Group focused on providing clarity on the existing plans and associated responsible authorities to distribute KI pills in the event of an emergency at Pickering NGS; and, existing public awareness and education information concerning KI. Phase I was originally anticipated to be completed by the end of 2020; however, due to the COVID pandemic, completion of Phase I was delayed until January 2022 as the majority of Working Group members were directly supporting Ontario's COVID response (i.e., MOH, Public Health Units, Emergency Management Coordinators).

Phase II of the Working Group focuses on Commission direction from the 2018 Pickering licence renewal hearing to determine the feasibility of pre-distribution of KI pills to all schools within the IPZ; and establishing clear and detailed plans for the distribution of KI pills throughout the IPZ in the event of an emergency at Pickering NGS. In addition, the Working Group also identified other topics during Phase I to be considered further during Phase II. The additional topics are focused on enhancing Indigenous and public awareness and education information, developing an emergency communications strategy to support municipal Public Health Units during an event, and evaluating the potential to pre-stage the centralized stockpile of KI to municipalities within the IPZ.

During the public meeting of the Commission in January 2022, the Commission was discouraged by the slow progress in addressing its direction from the 2018 Pickering NGS licence renewal hearing, which was to be completed during Phase II of the Working Group in accordance with the TOR. In the Meeting Minutes from the meeting on January 26, 2022, the Commission indicated its expectation for the Working Group to expedite completion of Phase II objectives, particularly those originating from the 2018 Pickering NGS licence renewal hearing.

This Briefing Note provides an update to the Commission on the Working Group activities completed since January 26, 2022 and the anticipated path forward to meet the Commission's expectations and direction.

DISCUSSION

CNSC staff met with the Working Group co-chairs (collectively known as the signatories to the TOR) on February 10, 2022 to begin planning for Phase II. The focus of this meeting was to discuss how to expedite certain Phase II objectives given the Commission's expectations. The Meeting Minutes for the Commission Meeting held on January 26, 2022 were released on March 2, 2022 providing additional clarity and direction to the Working Group.

On March 3, 2022, the signatories held a second meeting to continue discussing potential approaches to Phase II. CNSC staff proposed splitting Phase II into two workshops, with the first workshop to be held in the summer 2022 focused on Phase II objectives originating from the 2018 Pickering NGS renewal hearing. The objectives completed as part of the first workshop could then be presented to the Commission in a public meeting. The second workshop would then be held in the fall of 2022 and focus on objectives identified by the Working Group in Phase I. A Phase II report addressing all Phase II objectives could then undergo a public review period prior to being presented to the Commission in a public meeting.

On March 14, 2022, the Working Group held a meeting to seek input on the CNSC proposed approach to conduct two workshops during Phase II. The Working Group also discussed whether a third-party consultant may be appropriate to support the completion of some of the Phase II objectives, specifically the feasibility of pre-distribution of KI pills to all schools in the IPZ.

The signatories held a meeting on April 7, 2022, followed by a meeting with the Working Group on April 14, 2022. The purpose of these meetings was to solicit input on the detailed scope of work for each Working Group objective for Phase II, as well as the associated timelines. Based on the discussion, CNSC staff drafted a plan for Phase II including the objectives, detailed scope of each objective and affiliated timelines.

The draft Phase II plan was shared with the signatories in advance of a meeting held on May 4, 2022 to seek concurrence on the plan. At this meeting, the MOH and OFMEM informed CNSC staff that due to the Ontario provincial election being called (i.e., issuing of the writs), the 'caretaker convention' was triggered and MOH and OFMEM may not be able to support work on Phase II during the associated provincial 'caretaker period'. On May 6, 2022, CNSC staff sent the draft plan to MOH and OFMEM requesting a formal determination by May 20, 2022 on whether the province could continue to work on Phase II during the provincial election. As a result of the caretaker convention, CNSC staff were unable to achieve concurrence on the draft plan from the signatories and could not begin seeking Working Group concurrence on the plan, as well as soliciting availability from all Working Group members for the first Phase II workshop at that time.

On June 7, 2022, CNSC staff were informed by OFMEM and MOH that they could continue discussions with the Working Group during the 'caretaker period'. OFMEM and MOH also indicated that prior to embarking on a multi-jurisdictional workshop, there were concerns on the scope of Phase II that would need to be discussed and addressed with the signatories. CNSC staff are currently seeking availability from the signatories to hold a meeting to determine and discuss the MOH and OFMEM concerns.

Once concurrence on the plan is reached by all Working Group members, CNSC staff will provide the Phase II plan to the Commission during a Status Report on Power Reactors, or in a briefing note to the Commission.

Engagement with the Toronto District School Board

A motion was passed in 2018 by the Toronto District School Board (TDSB) to request KI pills for schools within their board. During a public hearing in 2018, teachers from the TDSB and Toronto Catholic District School Board (TCDSB) presented an intervention to the Commission to voice their support for this motion.

Representatives from the TDSB and the TCDSB were invited to be members of the CNSC Advisory Committee to offer insights to the KI Pill Working Group as it specifically relates to the potential pre-distribution of KI pills to their school boards. In March 2020, the TDSB and TCDSB representatives had to prioritize and focus their efforts on the COVID pandemic response and could not participate in the CNSC Advisory Committee. CNSC staff remained in contact with both representatives and continued to keep them informed of all CNSC Advisory Committee and Working Group activities.

With the easing of COVID restrictions, CNSC staff were able to meet with the representatives from the TDSB and TCDSB to re-engage them in the CNSC Advisory Committee and to address the TDSB KI Pill motion from 2018. The representative from the TDSB indicated there was still an interest to address the motion from 2018, and they would have more availability moving forward to address the motion. In order to address the motion, the representative from the TDSB was requested to gather the following information:

- The number of KI pills being requested
- Drop-off destination (e.g., to their distribution centre or to each individual school)
- Logistics and details for pre-distribution, information packages, and parental consent
- Lessons learned from their distribution centre for distributing rapid antigen tests to schools during COVID-19 (TDSB indicated that over the last two years, they have built the capacity to distribute resources to the 600 schools of the TDSB in a matter of days)

Given the responsibility for fulfilling requests for KI pills within the 50 km IPZ falls to OFMEM and OPG, CNSC staff will engage with these organizations once the TDSB has provided additional information. OFMEM has indicated the potential for involvement by the MOH, the Ministry of Education and the City of Toronto Public Health Unit, in determining whether the request for KI pills can be met.

Engagement with Indigenous Groups

CNSC staff met with Curve Lake First Nation (CLFN) on February 24 and April 14, 2022 to provide responses to the comments submitted by CLFN on the Phase I Report. CNSC staff conduct regular meetings (approximately monthly) with CLFN on various CNSC activities, and work associated with the Working Group has been added to the Terms of Reference for these meetings. CNSC staff also discussed and sought input on potential engagement opportunities for CLFN during Phase II of the Working Group, specifically their involvement in a second workshop focused on Indigenous awareness and education information related to KI, should the Working Group support their involvement and the potential two workshop approach. CLFN confirmed their interest to attend the second workshop should this approach be utilized. CNSC staff will continue to update CLFN on Phase II of the Working Group, and potential engagement opportunities. CNSC staff will continue to provide additional information related to the comments submitted by CLFN at the next scheduled meeting in June 2022.

Following concurrence by the Working Group on the scope and timelines for Phase II, including the two workshop approach, CNSC staff will contact all identified Indigenous Groups to discuss engagement opportunities.

CONCLUSION

CNSC staff continue to work with the signatories and all Working Group members to seek concurrence on the plan and associated timelines for Phase II, specifically focusing on expediting objectives related to Commission direction from the 2018 Pickering NGS renewal hearing. CNSC staff will continue to provide updates to the Commission at public meetings of the Commission or through a briefing note to the Commission, and will share the Phase II plan and associated timelines once concurrence on the plan from all Working Group members is achieved.

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