



Minutes of the Canadian Nuclear Safety
Commission (CNSC) Meeting Held on
May 28, 2018

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held Monday, May 28, 2018, beginning at 6:00 p.m., in the TownePlace Suites Marriott, Highland Conference Room, 19 Millenium Way, Kincardine, ON.

Present:

M. Binder, President
R. Velshi
S. Demeter
K. Penney
T. Berube
M. Lacroix

M. Leblanc, Secretary
L. Thiele, Senior General Counsel
S. Baskey, Recording Secretary

CNSC staff advisors were: G. Frappier and L. Sigouin

Other contributors were:

- Bruce Power: F. Saunders
- Énergie NB Power: M. Power
- Ontario Power Generation: Z. Khansaheb

Constitution

1. With the notice of meeting CMD 18-M22 having been properly given and all permanent Commission members being present, the meeting was declared to be properly constituted.
2. Since the meeting of the Commission held April 4, 2018, Commission member documents CMD 18-M22 to CMD 18-M26 were distributed to members. These documents are further detailed in Appendix A of these minutes.

Adoption of the Agenda

3. The agenda, CMD 18-M23, was adopted as presented.

Chair and Secretary

4. The President chaired the meeting of the Commission, assisted by M. Leblanc, Secretary and S. Baskey, Recording Secretary.

Minutes of the CNSC Meeting Held March 15, 2018

5. The Commission members approved the draft minutes of the March 15, 2018 Commission meeting as presented in CMD 18-M24.

Minutes of the CNSC Meeting Held April 4, 2018

6. The Commission members approved the draft minutes of the April 4, 2018 Commission meeting as presented in CMD 18-M25.

STATUS REPORTS

Status Report on Power Reactors

7. With reference to CMD 18-M26, which provides the Status Report on Power Reactors, CNSC staff provided updates on the following:
 - Pickering Nuclear Generating Station (NGS) Unit 8 was reduced to 93% of full power due to fuelling unavailability. CNSC staff confirmed that there was no impact to safety.
 - The Point Lepreau NGS was at 0.1% of full power during its return to service and was transitioning back to full power following the completion of the planned maintenance outage.
 - New Brunswick Power (NB Power) submitted an event report to the CNSC in accordance with REGDOC-3.1.1,¹ concerning a worker who was exposed to alpha contamination below NB Power's action levels of 2 mSv. CNSC staff provided details on the event and noted that additional information on this event would be presented at a future public Commission meeting.

General Questions

8. Concerning the recent flooding in New Brunswick, the Commission enquired about any impacts on the Point Lepreau NGS or protective actions NB Power needed to take. The NB Power representative reported that the flooding had no direct impacts on plant operations. The NB Power representative explained that some employees experienced delays in their commute, but confirmed to the Commission that NB Power had maintained the required staff complement throughout the flooding

¹ CNSC Regulatory Document REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, 2016.

event.

9. The Commission asked for information about the dose to a worker, and the tritium concentration in the moderator, in the Darlington NGS Unit 3 internal contamination incident that occurred on May 11, 2018. The OPG representative provided additional details about the circumstances around the incident and reported to the Commission that the current estimates were 11 Ci/kg (407 GBq/kg) of tritium in the moderator of Unit 3 and that the worker exposure was approximately 12 mSv, below the 50 mSv regulatory limit for a nuclear energy worker.

Bruce A NGS Unit 4 EIR Update on the Failure of the Primary Heat Transport (PHT) Pump Seals

10. The Commission requested an update from Bruce Power about the PHT pump seal failure previously reported to the Commission in March 2018.² The Bruce Power representative provided information to the Commission about the current understanding of the failure mechanisms in this event, which was predominantly related to the tolerances between the bushings and shaft of the outer most (tertiary) seal, noting that the same failure mechanism was seen in the Unit 3 event that was reported on during the August 2017³ and October 2017⁴ public Commission meetings. The Bruce Power representative further stated that additional follow-ups, testing and investigations were still being conducted; that the pumps were currently being repaired; and that a technical assessment was being prepared before returning the pumps to service.
11. The Commission requested further information about the uniqueness of this failure and consequences to other NGS' that may use similar pumps. The Bruce Power representative provided information about the similarities between the pumps at the Bruce NGS and those at other NGS' and stated that the information Bruce Power compiled was being shared with the other utilities.
12. Asked about an update on the root cause analysis for this event, CNSC staff informed the Commission that Bruce Power had been providing the CNSC with bi-weekly updates on the progress of its root cause investigation. CNSC staff further stated that it would perform an assessment of the root cause at the Bruce site in July

² *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on March 15, 2018.*

³ *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on August 16 and 17, 2017.*

⁴ *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on October 11 and 12, 2017.*

2018. CNSC staff also informed the Commission that it would present the results of the assessment during the annual Regulatory Oversight Report (ROR) for Nuclear Power Generating Sites at a public Commission meeting in November 2018. The Commission was satisfied with the information provided to date. The Commission notes that there is an outstanding action item with regard to the root cause investigation⁵ and looks forward to an update.

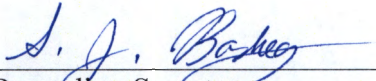
13. The Commission requested information about the maintenance of the pump seals that had failed in this event. The Bruce Power representative explained that when the pumps were in operation, they were monitored for vibration, water leakage and water temperature. The Bruce Power representative also provided additional information about Bruce Power's monitoring and maintenance program for pumps and improvements that had been made following the recent seal failure events.
14. The Commission enquired about whether there was a necessity to replace or redesign the PHT pumps. The Bruce Power representative explained that the Bruce B pumps were in good working order and that an expedited replacement schedule was being created for the Bruce A pumps.
15. Noting that Bruce Power had reduced allowable concentrations of iodine-131 (I-131) in the heat transport system to mitigate worker exposure and potential releases to the public and the environment in the event of another PHT pump seal failure, the Commission enquired about the reduced allowable I-131 concentration. On May 29, 2018, following the closure of this public meeting, the Bruce Power representative informed the Commission that the allowable level of I-131 in the heat transport system had been reduced tenfold to 2 $\mu\text{Ci/kg}$ (74 kBq/kg).⁶

⁵ *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on March 15, 2018.*

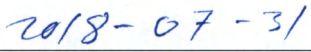
⁶ Following the closure of the public Commission meeting, the Bruce Power representative provided the Commission with the updated value during the morning session of the May 29, 2018 Bruce Power Relicensing Hearing held in the TownePlace Suites Marriott, Highland Conference Room, 19 Millenium Way, Kincardine, ON.

Closure of the Public Meeting

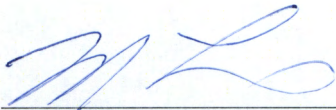
16. The meeting closed at 18:18 on May 28, 2018.




Recording Secretary



Date



Secretary



Date

APPENDIX A

18-M22	2018-04-30	e-Docs 5522394
Notice of Commission Meeting of May 28, 2018		
18-M23	2018-05-17	e-Docs 5525800
Agenda of the meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on Monday, May 28, 2018 in the Highland Rooms of the TownePlace Suites Marriot in Kincardine, ON		
18-M24	2018-05-23	e-Docs 5526186
Approval of Minutes of Commission Meeting held on March 15, 2018		
18-M25	2018-05-23	e-Docs 5526192
Approval of Minutes of Commission Meeting held on April 4, 2018		
18-M26	2018-05-23	e-Docs 5540898
Status Report on Power Reactors Submission from CNSC Staff		