



Minutes of the Canadian Nuclear Safety  
Commission (CNSC) Meeting Held on  
April 4, 2018

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held on Wednesday, April 4, 2018, beginning at 9:00 a.m., in the Public Hearing Room, 14<sup>th</sup> floor, 280 Slater Street, Ottawa, ON.

Present:

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

M. Leblanc, Secretary  
L. Thiele, Senior General Counsel  
P. McNelles, Recording Secretary

CNSC staff advisors were: G. Frappier, N. Riendeau, L. Sigouin and K. Heppell-Masys

Other contributors were:

- Ontario Power Generation: R. Manley
- Office of the Fire Marshal and Emergency Management with the Ontario Ministry of Community Safety and Correctional Services: M. Morton and D. Nodwell

#### Constitution

1. With the notice of meeting CMD 18-M17 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 March 15, 2018, Commission member documents (CMD) 18-M20 and M-21 were distributed to members. These documents are further detailed in Annex A of these minutes.

#### Adoption of the Agenda

3. The agenda, CMD 18-M19, was adopted as presented.

Chair and Secretary

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

Minutes of the CNSC Meeting Held March 15, 2018

5. The minutes of the March 15, 2018 Commission meeting will be approved at a later date.

STATUS REPORTS

Status Report on Power Reactors

6. With reference to CMD 18-M20, which provides the Status Report on Power Reactors (Status Report), CNSC staff provided updates on the following:
  - Darlington Nuclear Generator Station (NGS) Unit 3 went into a planned outage for maintenance on March 30, 2018, which was scheduled to be completed in June 2018.
  - CNSC staff clarified that Pickering NGS Unit 7 was operating at full power, correcting an error in the Status Report that had stated that Unit 7 had been shut down.

*Darlington NGS Internal Contamination Event (Alpha Exposure)*

7. The Commission requested an update regarding the matter of the Internal Contamination Event (Alpha Exposure) which had occurred during the Darlington NGS Unit 2 refurbishment.<sup>1,2</sup> CNSC staff provided a detailed description of the oversight activities it had performed, and committed to bringing its conclusions before the Commission at a future public Commission meeting. The Commission further enquired regarding corrective actions that had resulted from this incident. The OPG representative stated that OPG had a robust alpha particle protection program in place and immediate corrective actions had been taken. The OPG representative noted that further corrective actions would be considered once the results of both the ongoing CNSC staff and OPG analyses were completed.

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<sup>1</sup> CNSC Event Initial Report (EIR) – CMD 18-M14, *Darlington Refurbishment – Retube Waste Processing Building – Internal Contamination Event*, March, 2018.

<sup>2</sup> *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on March 15, 2018*, paragraphs 25-31, (Draft), to be presented to the Commission at the May 28, 2018 Commission Meeting.

8. The Commission requested details regarding how OPG transferred knowledge and shared lessons learned between facilities following such an incident. The OPG representative described OPG's processes and procedures for knowledge and information sharing, including its corrective action program, and station condition event report system.
9. The Commission directed during the March 15, 2018 Commission meeting that an update be provided at a public Commission Meeting once the CNSC staff and OPG analyses have been completed.

**ACTION**  
Oct. 2018

*Bruce NGS Primary Heat Transport (PHT) Pump Seal Failure*

10. The Commission requested an update regarding the matter of the Primary Heat Transport (PHT) Pump Seal Failure that had occurred at Unit 4 of the Bruce Power NGS.<sup>3,4</sup> CNSC staff provided an overview of that event, and stated that a root cause analysis was underway by the licensee with results expected in May 2018. CNSC staff reported that Unit 2 was also removed from service for related upgrades, and had since returned to service. CNSC staff provided further details regarding mitigation measures implemented by the licensee, as well as additional oversight CNSC staff had performed in this regard.
11. The Commission directed during the March 15, 2018 Commission meeting that an update be provided at a public Commission Meeting once the CNSC staff and Bruce Power analyses have been completed.

**ACTION**  
Oct. 2018

*General Comments*

12. The Commission noted the quality of this Status Report, and recognized the efforts of CNSC staff in that regard.
13. The Commission recommended that going forward, CNSC staff provide updates in the Status Report regarding previously reported incidents, before the final reports are completed.

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<sup>3</sup> CNSC Event Initial Report (EIR) – CMD 18-M13, *Failure of the primary heat transport pump seals at Bruce A Nuclear Generating Station Unit 4*, March 2018.

<sup>4</sup> *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on March 15, 2018*, paragraphs 14-24, (Draft), to be presented to the Commission at the May 28, 2018 Commission Meeting.

## INFORMATION ITEMS

### Update on Emergency Management in Ontario and the Provincial Nuclear Emergency Response Plan (PNERP)

14. With reference to CMD 18-M21, representatives from the Ontario Office of the Fire Marshall and Emergency Management (OFMEM) presented the Commission with an overview of emergency management in Ontario and the updates included in the approved 2017 Provincial Nuclear Emergency Response Plan (PNERP). The PNERP details the management, support, coordination and protective actions of off-site responses in the event of a nuclear emergency. The PNERP was developed pursuant to Section 8 of the *Emergency Management and Civil Protection Act*<sup>5</sup> (EMPCA), and was approved by the Ontario Cabinet in December 2017. The OFMEM representative also outlined the PNERP technical study that includes assessing the impacts of weather and topographical features on dose projection modelling.
15. The Commission noted the ongoing technical study associated with the PNERP, and requested more information. The OFMEM representative informed the Commission regarding the scenarios and factors considered by those studies. However, the OFMEM representative did not want to speculate on the implications of the study results on the PNERP until the study was completed at the end of 2018. Asked if the OFMEM considered the existing PNERP to be adequate, the OFMEM representative provided a detailed overview of the planning basis and collaborations used to develop the PNERP, and confirmed that the OFMEM considered the PNERP to be appropriate. CNSC staff provided additional details regarding those technical studies and other related technical work, and stated its support of the work performed by the OFMEM.
16. The Commission asked for additional information regarding the potential accident scenarios considered in the technical studies. The OFMEM representative provided additional details in this regard, and stated that the OFMEM would be reviewing the source term<sup>6</sup> used for the study and looking at different accident scenarios.
17. The Commission requested clarification regarding the status of the PNERP master plan and associated implementing plans. The OFMEM representative confirmed that the PNERP master plan was approved by the Ontario cabinet in December 2017, and was available to the public. Addressing the exact publication dates for the implementing plans, the OFMEM representative confirmed that

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<sup>5</sup> *Emergency Management and Civil Protection Act*, R.S.O. 1990, c. E.9.

<sup>6</sup> The amount and isotopic composition of material released (or postulated to be released) from a nuclear facility (CNSC REGDOC-3.6, *Glossary of CNSC Terminology*, December, 2016).

- the implementing plans for the Bruce NGS and Pickering NGS were approved, and that those plans would be translated and published before the end of April 2018. The OFMEM representative provided further information regarding the review schedule for other nuclear emergency implementing plans, including the Darlington NGS.
18. Addressing nuclear emergency planning for nuclear facilities other than power plants, the OFMEM representative informed the Commission that those facilities were covered under other radiological implementing plans rather than each having a separate plan. Regarding nuclear emergency planning for a nuclear source discovered in a community, the OFMEM representative stated the ultimate goal of the implementing plan was protection of the public; and therefore, the Province would take the appropriate action regardless of the type or location of the source, and would look to the facility and the local municipality for some planning and response capabilities.
  19. The Commission enquired whether licensees and CNSC staff reviewed the relevant PNERP implementing plans. The OFMEM representative provided an overview of PNERP consultation activities and confirmed that licensees, CNSC staff, municipalities and Health Canada were consulted.
  20. The Commission enquired as to how the PNERP Emergency Planning Zones (EPZ) compared with international best practices. The OFMEM representative noted that internationally there was a large variation in EPZ size, and that an analysis of the specific NPP technology must be considered. The OFMEM representative stated that from assessments of the CANDU NPPs in Ontario, the OFMEM was satisfied with the zones described in the PNERP.
  21. The Commission asked how the OFMEM would communicate and build trust with the public regarding the PNERP. The OFMEM representative noted that this was a difficult task, and stated the importance of providing communication, engagement and education to communities. CNSC staff stated that it concurred with the information provided by the OFMEM representative. CNSC staff further reported that the PNERP had taken the correct approach, with a large degree of public participation and an emphasis on transparency.

22. The Commission noted that the PNERP focused mainly on severe accidents and enquired about smaller accidents and accident progression. The OFMEM representative provided an extensive description of the provincial response and protective actions that would occur for various accident and accident progression scenarios, as outlined in the PNERP.
23. Regarding the differences in contingency planning zones for the different NGSs, the OFMEM representative confirmed that the contingency plans were unique to each facility, due to the differing population densities and land-use in the area around each facility, and provided examples of contingency planning and response actions in that regard.
24. The Commission enquired about evacuation planning around the Pickering NGS. The OFMEM provided information regarding the existing timing estimates, traffic management plans and evacuation plans. Regarding the size of the evacuation zone around the facility, the OFMEM representative noted that the 10km zone was a planning area that followed the local roads rather than a circle on a map and therefore the detailed planning area extended up to 15 km in some places.
25. The Commission noted that there were local emergency planning exercises already in existence, and asked how those drills would be integrated into the PNERP. The OFMEM representative informed the Commission regarding the phased integration of education, exercises and supporting plans that supported the PNERP. Addressing implementation timelines, the OFMEM representative stated that supporting plans would be brought into alignment with both the PNERP and implementing plans within 12 months, and that there would always be lessons learned to guide the continuous improvement of the PNERP.
26. The Commission asked for additional information regarding new initiatives that would be used to alert the public in the event of an emergency. The OFMEM representative informed the Commission of the planned launch of the wireless public alerting,<sup>7</sup> a new component of the National Public Alerting Service (NPAS)<sup>8</sup>, and provided additional details of those initiatives. The OFMEM representative added that this new initiative would significantly supplement the alerting system in the event of an emergency.

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<sup>7</sup> Canadian Radio-television and Telecommunications Commission – *Emergency Alert Messages and the National Public Alerting System*, Government of Canada, 2018.

< <https://crtc.gc.ca/eng/television/services/alert.htm> >

<sup>8</sup> Public Safety Canada – *National Public Alerting System*, Government of Canada, 2018.

< <https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/mrgnc-prprdss/ntnl-pblc-lrtng-sstm-en.aspx> >

27. Respecting the administration and testing of that new initiative, the OFMEM representative provided information on drills, tests and targeted alerts administered through the Provincial Emergency Operations Centre (PEOC) in the case of a nuclear emergency. The Commission expressed concern regarding the effect of a blackout on the alert system. The OFMEM representative described the mitigation measures in place to ensure that the PEOC maintained public safety communications.
28. The Commission noted the offer from the OFMEM for the Commission to visit the PEOC, and requested that CNSC staff coordinate such an event with Commission members' schedules.
29. The Commission expressed surprise that the Fukushima event was not considered in the OFMEM presentation as a driver of change for the PNERP. The OFMEM representative clarified that though not mentioned in the presentation, the Fukushima event was fully considered by the Province.
30. The Commission asked for more information regarding the OFMEM's collaboration with non-governmental organizations (NGOs), and the OFMEM representative provided an overview of its collaborations with NGOs regarding the development of the PNERP. Addressing consultation specific to environmental NGOs, the OFMEM provided further details regarding public participation and outreach, but that the OFMEM removed itself from the public consultation process to avoid the perception of it influencing the PNERP advisory group. The Commission enquired about the membership of the group that reviewed the public consultations and prepared the report to the Minister, and the OFMEM representative provided the names and associations of the group members.
31. The Commission noted that the province did not allocate additional funding for designated municipalities, and asked if this would pose a risk to the timing of the PNERP implementing plans. The OFMEM representative responded that no risk was posed and that there were mechanisms in place to ensure that all municipalities would have the appropriate level of funding to maintain their responsibilities.
32. Addressing the use of lessons learned on emergency planning from the Point Lepreau NGS during development of the PNERP, the OFMEM representative informed the Commission regarding the OFMEM's interactions and information sharing with the Point Lepreau NGS and the New Brunswick Emergency Measures Organization.

**ACTION**

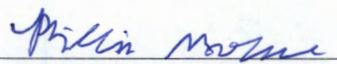
Oct. 2018

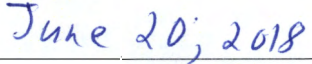


- 33. The Commission expressed its appreciation for the presentation and work performed by the OFMEM on this matter.
- 34. The Commission notes that emergency planning will be a key issue in the upcoming resumptions of the Bruce Power NGS licence renewal hearing, in late May 2018, and the Pickering NGS licence renewal hearing, in late June 2018.

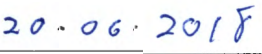
Closure of the Public Meeting

- 35. The meeting closed at 10:57 a.m.

  
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Recording Secretary

  
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Date

  
\_\_\_\_\_  
Secretary

  
\_\_\_\_\_  
Date

APPENDIX A

18-M17	2018-03-08	5476891
Notice of Commission Meeting		
18-M19	2018-03-26	5484422
Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on Wednesday, April 4, 2018, in the Public Room, 14 <sup>th</sup> floor, 280 Slater Street, Ottawa Ontario		
18-M20	2018-03-26	5491288
Status Report Status Report on Power Reactors Submission from CNSC Staff		
18-M21	2018-03-26	5491292
Information Item Update on Emergency Management in Ontario and the Provincial Nuclear Emergency Response Plan (PNERP) Presentation by the Office of the Fire Marshal and Emergency Management Ontario Ministry of Community Safety and Correctional Services		