



Minutes of the Canadian Nuclear Safety
Commission (CNSC) Meeting held on
January 26, 2017

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held Thursday, January 26, 2017 beginning at 4:19 p.m. at the CNSC Hearing room, 14th floor, 280 Slater Street, Ottawa, ON.

Present:

M. Binder, President
S. McEwan

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

CNSC staff advisors were: C. Moses, G. Frappier, H. Tadros, J. LeClair

Other contributors were:

- OPG: F. Grant, K. Carew and Z. Khansaheb
- CNL: D. Cox

Constitution

1. With the notice of meeting CMD 17-M1 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 December 14, 2016, Commission member documents CMD 17-M3 to CMD 17-M6 were distributed to members. These documents are further detailed in Annex A of these minutes.

Adoption of the Agenda

3. The revised agenda, CMD 17-M2.A, 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 November 10, 2016

5. The Commission approved the minutes of the November 10, 2016 Commission meeting as presented in CMD 17-M3.

Minutes of the CNSC Meeting Held December 14, 2016

6. The Commission approved the minutes of the December 14, 2016 Commission meeting with the following change:

- paragraph 17 of CMD 17-M4 will be corrected to state that the dose referenced in CMD 16-M72¹ was administered by a radiologist with the assistance of a nuclear medicine technologist.

STATUS REPORTS

Status Report on Power Reactors

7. With reference to CMD 17-M5, which includes the Status Report on Power Reactors at Canadian Nuclear Generating Stations (NGS), CNSC staff presented the following information:
 - Bruce Power NGS Unit 4 has returned to service and is now at full power
 - Bruce Power was charged by the Ontario Ministry of Labour under the *Occupational Health and Safety Act*² after a worker suffered burns due to a hydrogen interaction in February 2016, as originally detailed in CMD 16-M18³. CNSC staff noted that this accident occurred on the non-nuclear side of the plant, and that CNSC staff will continue to offer assistance to the Ontario Ministry of Labour as needed and will update the Commission as this matter progresses.
 - A worker injury at the Darlington NGS Unit 2 was reported on January 23, 2017, when an employee working in the reactor vault tripped, fell and broke bones in his fingers and hands. The employee was to be absent from work for four days, and CNSC staff will monitor this event.
 - The defuelling of the Darlington NGS Unit 2 was completed on January 11, 2017 and represents the first step in the refurbishment process. CNSC staff noted that the defuelling was completed ahead of the original target completion date of February 9, 2017.
 - The Point Lepreau NGS is running at 93% of full power due to a turbine governor valve malfunction. CNSC staff noted that there are no immediate safety concerns due to this malfunction, and that CNSC staff will follow up on this matter.

ACTION
by
April 2018

ACTION
by
March 2017

Pickering

¹ Canadian Nuclear Safety Commission Event Initial Report (CMD 16-M72) – *Exceedance of a Regulatory Dose Limit by a Nuclear Energy Worker During a Therapeutic Nuclear Medicine Procedure*, December 2016.

² Occupational Health and Safety Act, R.S.O. 1990, c. O.1

³ Canadian Nuclear Safety Commission Event Initial Report (CMD 16-M18) – *A Bruce Power Worker Was Injured on February 1, 2016 at the Bruce B Nuclear Generating Station*, February 2016.

8. The Commission noted that the Pickering NGS fuelling machine reliability data was presented in the figures in Appendix A of CMD 17-M5, as requested as per an action item from the December 2016 Commission meeting. Addressing the units in those figures, the OPG representative explained that the units on the forced loss rate graph are the percentage at which any of the units were not at 100% of full power due to the unavailability of the fuelling machine. The OPG representative further clarified that this percentage is an aggregate number for all Pickering NGS units, representing the time that any of those units were derated or shut down due to fuel handling issues
9. The Commission noted the variability of critical failure review data, as well as the overall downward trend of that data over the last 24 months. Asked if that downward trend is sustainable, the OPG representative responded that that graph represents discrete events, therefore the resulting curve is not smooth. The OPG representative added that there is a relatively small number of events that compose that metric, contributing to its variability. The OPG representative added that the trend is improving in the long-term.
10. The Commission recognized that the unavailability of the fuelling machine does not represent a safety issue, but instead represents an economic issue. The Commission expressed concern with OPG's inability to repair the fuelling machine. The OPG representative stated that this unavailability includes the planned maintenance outages, and that fuelling machine issues are prioritized and addressed promptly. The OPG representative added that OPG is consistently reducing its backlog of corrective maintenance work orders, which is currently at its lowest level. The OPG representative noted that there is an increased demand on the fuelling machines for fuel channel inspections, increasing their usage and reducing their normal maintenance window. The Commission was satisfied with the responses from the OPG representative. The Commission considers this action item closed.

Darlington

11. The Commission was informed that the correct date of the D₂O leak at the Darlington NGS Unit 1 was January 4, 2017. Asked if the event caused that unit to shut down, the OPG representative responded that Unit 1 remained in operation throughout the duration of this leak. The OPG representative summarized the event and stated that the leak was rapidly isolated in heat exchanger 2 within 20 minutes. The Commission further enquired

if the detection of any D₂O leak would result in the shutdown of a unit in order to avoid a break. The OPG representative stated that the leak occurred in a heat exchanger that was not part of normal on-power operation. Therefore, there was no requirement to shut down the unit. CNSC staff stated that they are satisfied with the procedures taken by OPG regarding this event. CNSC staff added that the issue of a D₂O leak occurring before a break is a concern in the primary heat transport system, whereas the leak that occurred in this event is in a heat exchanger that is used (only) when the unit is shut down. The Commission is satisfied with the responses from OPG and CNSC staff. The Commission commented that the inclusion of a diagram would have been helpful to explain this event.

12. The OPG representative provided a detailed account of the worker injury at Unit 2, stating that the worker's boot was caught in the grating, causing the worker to fall and then break his hand and finger, and that the worker immediately reported the injury to his supervisor.

Gentilly-2

13. On the status of the Gentilly-2 (G-2) NGS, CNSC staff stated that the status of G-2 would no longer be included in the regular nuclear power plant status report, and that there was no news to report to the Commission regarding G-2. CNSC staff added that, if any significant events occur with respect to G-2, CNSC staff will inform the Commission through the normal event indicators. The Commission is satisfied with the information provided by CNSC staff and agrees that G-2 information no longer needs to be part of the regular NPP Status Report.

Canadian Nuclear Laboratories Limited: Status Report on the Fitness for Service for the Chalk River Laboratories

14. With reference to CMD 17-M6, which includes the Status Report on Fitness for Service for Chalk River Laboratories (CRL), CNSC staff presented to the Commission an update on CNL's progress regarding the fitness for service for CRL. In the Record of Decision for the renewal of the CRL licence⁴, the Commission requested CNSC staff to report on the status of the fitness for service Safety and Control Area (SCA) at each Commission meeting, until an overall rating of "satisfactory" is obtained. CNSC

⁴Canadian Nuclear Safety Commission Record of Decision – *Application to Renew and to Amend the Nuclear Research and Test Establishment Operating Licence for Chalk River Laboratories*, April 6, 2016, Canadian Nuclear Laboratories Limited.

staff reported that the CRL site, except for the National Research Universal (NRU) reactor, has progressed to a satisfactory rating in the fitness for service SCA. However, there remains additional work to be performed before the NRU reactor itself can obtain a satisfactory rating for that SCA. This CMD represents the sixth status update on this matter.

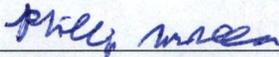
15. CNSC staff noted that, since the last update at the December 2016 Commission meeting, CNL had achieved a “satisfactory” rating in the refurbishment of the rod monitoring system and establishment of the technical basis of preventive maintenance activities for safety-related systems. CNSC staff further noted that the two remaining activities required to achieve the “satisfactory” rating in this SCA relate to the installation of hardware. The CNL representative concurred with the information presented by CNSC staff in this status report and stated that CNL is continuing to make progress on the two remaining items.
16. CNSC staff provided updated information on part B on page 3 of CMD 17-M6. CNSC staff noted that the first inverter was completed in December 2016, and that the installation of the second inverter is scheduled to start in February 2017.
17. The Commission congratulated CNL and CNSC staff on the progress of the work and on the quality of the status report.
18. Asked about the inventory of spare parts for the refurbished rod monitoring system, the CNL representative responded that the required number of spare parts has been procured, and that the spare parts inventory is sufficient for the remaining period of reactor operation. The Commission is satisfied with the response from the CNL representative.
19. Addressing the feasibility of the April 1st and May 31st target dates for the completion of the two remaining items, the CNL representative provided an overview of the work being performed with respect to the ion chamber replacements and the Class I, II and III power system refurbishment. The CNL representative stated that the majority of the work has been completed on these items, and that CNL is confident that the target completion dates are realistic. The Commission is satisfied with the information provided by the CNL representative.
20. The CNL representative updated the record by stating that the data on the number of overdue Preventive Maintenance (PM) jobs for January 2017 has become available and stands at 28. Asked if this downward trend in overdue PM jobs is sustainable, the CNL

representative responded that improvements in CNL's work management system will allow CNL to sustain these lower levels of overdue PM jobs.

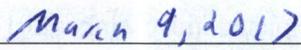
21. CNSC staff recommended that the next status report be presented during the April 12, 2017 Commission meeting since, due to CNL's progress, there are no other milestones until April 2017. The Commission directed CNSC staff to present the next Status Report on Fitness for Service for Chalk River Laboratories at the April 12, 2017 Commission meeting.

Closure of the Public Meeting

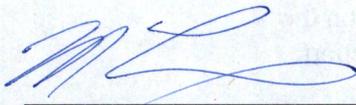
22. The meeting closed at 4:50 p.m.



Recording Secretary



Date



Secretary



Date

APPENDIX A

17-M1	2017-01-06	6.02.01
Notice of Meeting of January 26, 2017		
17-M2	2017-01-06	6.02.02
Agenda of the Meeting of the Canadian Nuclear Safety Commission to be held on Thursday, January 26, 2017 in the Public Hearing Room, 14 th floor of the 280 Slater Street, Ottawa, Ontario		
17-M2A	2017-01-23	6.02.02
Revised Agenda of the Meeting of the Canadian Nuclear Safety Commission to be held on Thursday, January 26, 2017 in the Public Hearing Room, 14 th floor of the 280 Slater Street, Ottawa, Ontario		
17-M3	2017-01-17	6.02.03
Approval of Minutes of Commission Meeting held on November 10, 2017		
17-M4	2017-01-24	6.02.03
Approval of Minutes of Commission Meeting held on December 14, 2016		
17-M5	2017-01-20	6.02.04
Status Report on Power Reactors facilities as of January 20, 2017		
17-M6	2017-01-23	6.02.04
Status Report on Fitness for Service for the Chalk River Laboratories Submission from CNSC Staff		