

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Wednesday, January 9, 2008 beginning at 3:01 p.m. in the Guild Hall at the Holiday Inn Oshawa, 1011 Bloor St. East, Oshawa, Ontario.

Present:

L.J. Keen, Chair

A. Graham
C.R. Barnes
M.J. McDill
A. Harvey
R. Barriault

M. Leblanc, Commission Secretary
P. Bourassa, Recording Secretary

CNSC staff advisers were: B. Howden, H. Rabski, B.R. Ravishankar, L. Lang, K. Lafrenière, T. Schaubel and A. Régimbald.

Other contributors were:

- Cameco Corporation: T. Gitzel, A. Oliver, K. Vetor and A. Thorne,
- Atomic Energy of Canada Limited: B. McGee and A. Abdel-Aziz
- Ontario Power Generation Inc.: M. Elliott, T. Mitchell and C. Sellers
- Hydro-Québec: P. Desbiens

Adoption of the Agenda

1. The agenda, CMD 08-M2, was adopted as presented.

Chair and Secretary

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

Constitution

3. With the notice of meeting, CMD 08-M1, having been properly given and a quorum of Commission Members being present, the meeting was declared to be properly constituted.

4. Since the meeting of the Commission held December 5 and 6, 2007, Commission Member Documents CMD 08-M1 to CMD 08-M4 were distributed to the Commission Members. These documents are further detailed in Annex A of these minutes.

Minutes of the CNSC Meeting Held December 5 and 6, 2007

5. The Commission Members approved the minutes of the December 5 and 6, 2007 Commission Meeting with one modification to paragraph 126 of the draft minutes to correctly indicate that CNSC staff' proposed period of exemption from licensing for the Deloro Mine Site was December 31, 2010 and not December 31, 2009. Therefore, paragraph 126 shall read as follows:

DECISION

“The Commission expressed concern that without a detailed plan, the project would not be completed by the end of the proposed extension timeframe, December 31, 2010”.

6. With reference to paragraph 26 of the minutes of the December 2007 meeting, the Commission requested an update on whether a significant development report (SDR) would be presented regarding Zircatec Precision Industries Inc.'s role in the defective fuel bundles discovered at the Bruce Power Nuclear Generating Station. CNSC staff responded that although Zircatec will be performing a root cause analysis of the event and will report it to Bruce Power, a SDR would not be presented to the Commission. CNSC staff explained that this was satisfactory as Zircatec's operating licence does not require it to have a quality assurance program for its products, rather the quality assurance of the fuel bundles is the responsibility of the user, in this case Bruce Power.

STATUS REPORTS

Significant Development Report

7. The Commission considered the Significant Development Report (SDR) no. 2008-1, submitted by CNSC staff as document CMD 08-M4.
8. In an opening statement, the Commission noted that SDR items are presented at public Commission meetings to inform the Commission Members on the status of specific events. The Commission notes that there are no licensing decisions or compliance determinations made as result of these presentations.

9. With reference to item 4.1.1 of CMD 08-M4 on the Update on Contaminants Discovered under the Uranium Hexafluoride (UF₆) Plant at Cameco Corporation's Port Hope uranium conversion facility, CNSC staff reported that Cameco has provided submissions with respect to the Root Cause Investigation Report, the Corrective Action Plan, the management response and the Environmental Management Plan (EMP). CNSC staff also reported that, with respect to the request made under the *General Nuclear Safety and Control Regulations* on October 15, 2007, Cameco has not yet installed an operational groundwater treatment system. CNSC staff noted that this request had identified that this system would be operational in November 2007.
10. CNSC staff stated that it is planning a site visit on January 10, 2008 to discuss the progress on Cameco's follow-up to the root cause investigation, the rehabilitation proposal for Building 50 and the EMP.
11. Cameco described its EMP and detailed its plans going forward with the remediation of the site, including the rehabilitation of Building 50 and the removal of contaminated soils.
12. Cameco described its proposed groundwater management system. Cameco stated that it has submitted its application to the Ontario Ministry of the Environment (MOE) for an amended site permit to authorize it to take groundwater on a permanent basis. Cameco noted that this was posted on the MOE Environmental Registry on January 3, 2008. Cameco noted that the delay in implementing the groundwater management system is due to the thorough and methodical approach it has taken to analyze the event.
13. The Commission asked for further information on the involvement of the MOE in this issue. Cameco responded that it requires a permit from the MOE in order to be able to take water from the pumping wells. Cameco noted that it expects to receive such a permit February 3, 2008, at which time it plans to have six pumping wells operational. Cameco stated that a temporary permit was granted for testing purposes for the three wells that were installed in October 2007.
14. CNSC staff stated that it has maintained regular contact with the MOE and is sharing all information with the provincial ministry. CNSC staff stated that it has also been updating Environment Canada on the issue.

15. The Commission asked Cameco whether it had fully identified the leading edge of the plumes to the east and the south of the facility. Cameco responded that it has continued to drill to delineate the final extent of the plume, but it has not yet completed the work. Cameco noted that the plume that had been migrating south has now turned east.
16. The Commission asked if any progress has been made in determining whether any contaminated fluids are in the upper level of bedrock. Cameco responded that as part of the updated EMP, it has plans to install additional monitoring wells into the bedrock to further determine the extent of the contamination.
17. In response to the Commission's question regarding the removal of contaminated soil, Cameco stated that the removal of 1000 tonnes of soil and concrete represented the removal of over 40 percent of the contamination without jeopardizing the structural stability of the building or the safety of the workers. CNSC staff stated that it was satisfied with the progress that Cameco has made to date in this respect.
18. Cameco noted that it will hold further discussions with CNSC staff to determine the remaining amount of soil to be removed. In this regard, CNSC staff stated that the soil removal criteria are based on site specific conditions and residual soil concentrations and that a preliminary risk assessment will be undertaken to determine the acceptable level of contamination that could remain in the soil.
19. The Commission asked whether the groundwater management would affect the soil removal. Cameco responded that it would not impact the quantity of soil to be removed, although it would mitigate the migration of the plume.
20. The Commission sought further information from Cameco on the possibility that multiple sources had contributed to the contamination. Cameco responded that the root cause investigation determined that, although there are multiple leaks into the environment, the deterioration of the concrete over time remains the source of the contamination.
21. The Commission asked if there is any new contamination contributing to the migration of the plume. Cameco responded that when the UF₆ plant was shut down, all activities were ceased and there was no further contribution to the contamination under the plant from that point onwards. Cameco further noted that it

- has no evidence to suggest that the uranium dioxide (UO₂) plant is leaking, but that it was planning to conduct a study to confirm this.
22. The Commission sought further information concerning the impact of the SDR on the planned Vision 2010 project. Cameco responded that the Vision 2010 plan did not include the issue of the contaminated soil to the south of the UF₆ plant but that it would be integrated into the future planning of this project.
 23. Cameco described its communication efforts with the community and the municipality regarding this event and follow-up activities.
 24. The Commission asked Cameco how the extended shutdown period has affected the workforce. Cameco responded that it has been keeping its workforce employed through redeployment and other undertakings such as participation in the systematic approach to training (SAT) program.
 25. The Commission asked whether there was an update with respect to the safety culture and safety management at the facility. Cameco responded that it has made organizational changes in 2007 and has focussed on such areas as Safety Culture, Governance and Quality Management.
 26. The Commission stated its expectation that Cameco report on its safety culture in its mid-term report to be presented to the Commission in 2009. The Commission also expects that CNSC staff will provide its views on Cameco's safety culture at that time.
 27. With reference to item 4.1.2 of CMD 08-M4 on an update on Atomic Energy of Canada Limited's (AECL) National Research Universal (NRU) reactor, the Commission, pursuant to a request for a ruling made on behalf of AECL, directed CNSC staff and AECL to limit their presentations to factual information on the developments since the last Commission meeting held on December 6, 2008 and on the plans for the 120-day period covered by Bill C-38 and ending on April 10, 2008.
 28. CNSC staff provided background information and diagrams on the NRU facility, including on the new emergency core cooling system and the emergency power supply (EPS) upgrades.

ACTION

29. AECL objected to CNSC staff's presentation on the basis that the information was outside the scope of the directive given earlier by the Commission. In this respect, the Commission noted that it would consider the information as factual only. Upon request by the Commission, AECL responded that it had nothing further to add to CNSC staff's presentation.
30. In its update, CNSC staff indicated that AECL has finished the connection of the main heavy water pump 5 (MHWP #5) to the EPS and is continuing its work to connect MHWP #4. However, in the event that the connection of MHWP #4 to the EPS is not completed, CNSC staff is also reviewing AECL's safety case to operate the NRU reactor with one pump connected to the EPS.
31. AECL confirmed that it plans to complete the installation of MHWP #4 and connection to the EPS by mid-March 2008. The work will be done during sequenced, planned outages.
32. The Commission sought information on the number of planned outages and trip rate of the NRU reactor. AECL stated that five outages were planned for the first quarter of 2008 in sequence to maintain the radioisotope supply. With respect to reactor trips due to process failures, AECL reported that approximately 17 such trips occur each year. CNSC staff concurred that that number was accurate, noting that AECL had improved in this area as the reactor had previously a much higher trip rate.
33. With respect to on-going communication between the licensee and the CNSC, AECL and CNSC staff confirmed that weekly meetings are being held with senior staff and that AECL is providing daily updates to the CNSC staff on the status of the NRU reactor.
34. The Commission sought further information on the root cause analysis report submitted by AECL on January 7, 2008. CNSC staff responded that it was currently reviewing AECL's initial report and was expecting a more detailed report by March 31, 2008 as part of phase 2 of AECL's investigation. The detailed report is expected to cover collateral root causes that could have been contributing factors to the event.
35. AECL noted that its first report identifies the initiating cause of the event but that it would embark on substantially more work on a lessons-learned basis in phase 2 of its investigation.

36. Regarding lessons learned, the Commission sought an update from CNSC staff on its lessons-learned activities. CNSC staff stated that this work began on January 7, 2008, with the external assistance of international experts. AECL noted that it was prepared to work with CNSC staff on this activity, as appropriate.
37. With respect to recent seismic events in the surrounding area of the facility, CNSC staff and AECL concurred that the two events had no impact on the NRU facility. AECL further noted that the upgraded MHWP #5 is capable of withstanding an earthquake of a magnitude of six on the Richter scale.
38. Considering that there were two seismic events since the last Commission meeting, the Commission sought further information on the level and frequency of seismic activity in the area. CNSC staff committed to provide this information at a near future Commission meeting.
39. The Commission sought assurances that AECL has sufficient staff to manage the on-going modifications to the NRU facility while maintaining normal operations. AECL responded that it had sufficient staff but was cognizant of the current workload on its employees.
40. CNSC staff noted that, from its recent inspections, it was satisfied that the work was being carried out safely. However, CNSC staff also noted that it may have concern regarding the potential maintenance backlog that could occur during this period as the focus will be on the work needed for the installation and connection of the MHWP #4.
41. Concerned with the adequacy of the backup equipment in place at the facility, the Commission sought further information regarding the reliability of the standby generators and set of battery banks. AECL committed to provide this information at the next scheduled Commission meeting.
42. The Commission noted that it expects further updates on this event at future Commission meetings and that, as necessary, it is prepared to hold other proceedings to consider relevant issues.
43. With reference to item 4.1.3 of CMD 08-M4 on an update on the interstation transfer bus (ISTB) issue at Ontario Power Generation Inc.'s (OPG) Pickering Nuclear Generating Station (NGS) A, CNSC staff reported that, to date, the temporary solution implemented by OPG is adequate while OPG pursues a

ACTION

ACTION

- permanent design solution. CNSC staff also noted that it will assess the effectiveness of the corrective actions to be implemented by OPG to determine whether a formal evaluation of OPG's organizational and management processes for all of its NGSs is required.
44. OPG reported that it will complete the conceptual design of the permanent modification to the ISTB by April 2008 at which time a schedule will be issued for the detailed design and installation. The installation date is anticipated to be before the end of 2009.
 45. With respect to safety management, OPG described the positive actions taken by staff and management at the Pickering NGS A following the discovery of the event. OPG also provided an overview of the broader organization and management at the Pickering NGS A, stating that the long lay-up for the return to service of the units had created a more project-oriented culture than an operationally-oriented focus. However, OPG assured the Commission that the Pickering NGS A organization has continued to make this transition to full operation and that the expectations for the organization are now completely in line with those of OPG's Pickering B and Darlington NGSs.
 46. In response to the Commission's comments on the lessons learned from this event, OPG stated that its staff at the other NGSs were kept informed of the activities surrounding the event at the Pickering NGS A and that a workshop had been designed as an exercise for these managers to work through the same process. The event and lessons learned were also shared with the World Association of Nuclear Operators (WANO). OPG further noted that the Chief Nuclear Engineer Office will be conducting an engineering session in the spring of 2008 and sharing the experience of the ISTB event with all 1300 engineering staff.
 47. The Commission sought assurances that no other similar situation exist at the NGS that may go undetected, as was the case for the ISTB that was under capacity since it was built in 1990. OPG responded that it had recently undergone a self-assessment at all three NGSs, where it had considered, among other things, the design modifications that had been implemented since the late 1980s. As a result of that review, OPG stated that it did not have any operability concerns with those modifications that were installed over that period of time.

48. The Commission noted the importance of engineering accountability and project management in the day-to-day operations as well as in the on-going and future refurbishment projects.
49. With reference to item 4.1.4 of CMD 08-M4 on the matter of a portable gauge for sale on e-bay, CNSC staff reported that the investigation is on-going but, to date, it has been able to determine that the gauge in question did not contain a nuclear substance. It has also been determined that the gauge was once owned by Hydro-Quebec who had, at that time, a permit authorizing it to possess the gauge with its radioactive source. It was also determined that the radioactive source that had originally been in the gauge was a relatively low risk source. CNSC staff also noted that it has had the full cooperation of the current owner of the gauge and Hydro-Quebec in this matter.
50. CNSC staff and Hydro-Quebec will continue its investigation to determine when the radioactive source was removed from the gauge and how it has been disposed.

Closure of the Public Meeting

51. The public meeting closed at 6:06 p.m. on January 9, 2008.

Chair

Recording Secretary

Secretary

APPENDIX A

CMD	DATE	File No
08-M1	2007-12-19	(6.02.01)
Notice of meeting of January 9, 2008		
08-M2	2007-12-31	(6.02.02)
Agenda of the meeting of the Canadian Nuclear Safety Commission (CNSC) held in the Guild Hall at the Holiday Inn Oshawa, 1011 Bloor St. East, Oshawa, Ontario on Wednesday, January 9, 2008		
08-M3	2008-01-03	(6.02.03)
Approval of minutes of Commission meeting held December 5 and 6, 2007		
08-M4	2007-12-31	(6.02.04)
Significant Development Report no. 2008-1 for the period of November 20 to December 31, 2007		