

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Thursday, September 30, 2010 beginning at 11:31 at the Public Hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario.

Present:

M. Binder, President
A. Graham
A. Harvey
R.J. Barriault

K. McGee, Assistant Secretary
L. Thiele, General Counsel
S. Gingras, Recording Secretary

CNSC staff advisors were: K. Lafrenière, P. Webster, A. Régimbald, K. Murthy, A. Licea, R. Jammal, P. Larkin, H. Rabski, G. Frappier, V. Khotylev, B. Ecroyd and M. Dallaire

Other contributors were:

- Bruce Power Inc.: F. Saunders and K. Ellis
- Southlake Regional Health Centre: I. Yeung,
- Princess Margaret Hospital: D. Jaffray
- Elekta Inc.: T. Valentine
- University Health Network: F. Tourneur
- Acuren Group Inc.: T. Levey
- CIRSA: A. Brady
- Health Canada: N. Shadeed
- Spencer Mfg. Ltd.: C. Spencer

Constitution

1. With the notice of meeting, CMD 10-M48.A, having been properly given and a quorum of Commission Members being present, the meeting was declared to be properly constituted.
2. Since the meeting of the Commission held August 19, 2010, Commission Member Documents CMD 10-M48 to CMD 10-M55 were distributed to Members. These documents are further detailed in Annex A of these minutes.

Adoption of the Agenda

3. The revised agenda, CMD 10-M49.A, was adopted as presented.

Chair and Secretary

4. The President chaired the meeting of the Commission, assisted by K. McGee, Assistant Secretary and S. Gingras, Recording Secretary.

Minutes of the CNSC Meeting Held August 19, 2010

5. The Commission approved the minutes of the August 19, 2010 Commission Meeting as presented in CMD 10-M50.

STATUS REPORTS

Early Notification Report (ENR)

Bruce Power: Unit 6 Shutdown due to Maintenance Cooling System Leak

6. With reference to CMD 10-M51.A, the Bruce Power representative verbally summarized the event and noted that a formal root cause investigation was being undertaken. CNSC staff indicated that they reported the event to the Commission as a precautionary measure, but determined later that it was not safety significant. The Bruce Power representative noted that the unit is currently returned to full power after a 10-day outage.
7. The Commission asked for the volume of heavy water leaked into the collection tanks. The Bruce Power representative responded that 39 metric tons of heavy water leaked during this incident and that all of the heavy water was recovered. None of heavy water was lost into the environment.
8. At the request of the Commission, the Bruce Power representative explained that the actuators for these valves proved unreliable and that they were all in the process of being replaced.
9. The Bruce Power representative noted that information about the event will be shared with other members of the nuclear industry and possibly the manufacturer of the actuators if any issues with this piece of equipment are discovered.
10. The Commission asked if workers had any contact with the heavy water. The Bruce Power representative confirmed that the workers in the area had not had any contact with hot water or steam.

11. The Commission asked what might have been the potential consequences if there had been no human intervention during this type of event. The Bruce Power representative explained that the reactor would have shut down automatically since the heavy water inventory in the heat transfer system would fall below a preset critical level.

Updates on items from previous Commission proceedings

Elekta Inc., University Health Network and Southlake Regional Health Centre: Follow up regarding uncertified Class II accelerators used at two Ontario Hospitals

12. With reference to CMD 10-M53, CNSC staff provided an update on this topic and summarized the actions taken to prevent recurrence of such an event. The Southlake representative also summarized the event and actions taken by the Centre to prevent recurrence.
13. In response to a question from the Commission on certifications in the United States, the Elekta representative confirmed that the Infinity model was approved by the Food and Drug Administration in the United States before being sold in Canada.
14. The Commission asked the Elekta representative if this company was aware of the certification requirements in Canada for the Infinity model. The Elekta representative responded that, following discussions with Health Canada, they thought that the individual components that were being sold were properly introduced in the Canadian market. According to this representative, this misunderstanding is one of the main causes of the event.
15. The Commission asked how the CNSC inspectors had verified that the facilities were operated safely during the site visits. CNSC staff answered that they had verified the proper working order of all safety systems and the doses received by the employees and also conducted a radiation survey. The Southlake and Princess Margaret Hospital representatives noted that they had provided some documents outlining the commissioning process upon request from CNSC staff, including the verification of dose output of the machines and the process of radiation therapy delivery. These documents also detailed the improvements made by these hospitals on the independent review of dosimetry results.

16. The Commission asked for an update on discussions with Health Canada regarding a Memorandum of Understanding between Health Canada and the CNSC. CNSC staff answered that a working draft had been created and that discussions were ongoing. CNSC staff added that communications at the working level had already been established before the Memorandum of Understanding, which will formalize the communications between the two groups, is finalized.
17. The Commission asked about actions taken to ensure that suppliers of accelerators are aware of the CNSC requirements. CNSC staff responded that they were gathering the information that will be provided to Health Canada, and that actions were taken to include information on the CNSC regulatory requirements on the Health Canada web site.
18. The Commission enquired about actions taken to prevent recurrence of a similar event. The Princess Margaret Hospital representative answered that they had reviewed their procedures for procurement commissioning and that they were aligned with the procedures at the Southlake Regional Health Centre.
19. CNSC staff confirmed that they verified with their licensees that all devices of this type currently being used in Canada were certified.

Status Report on Power Reactors

20. With reference to CMD 10-M52, which includes the Status Report on Power Reactors, CNSC staff presented updates on the following:
 - Bruce B Unit 6 has now returned to full power from its forced outage;
 - The Gentilly-2 start of refurbishment activities has been delayed, possibly to the year 2012;
 - OPG stated that the Safe Storage Project at Pickering A Units 2 and 3 is complete;
 - Pickering B Unit 7 has now entered the planned maintenance outage;
 - The planned restart of the Point Lepreau Nuclear Generating Station (NGS) has been delayed to 2012.
21. The Commission asked for more information on the work planned by NB Power to resolve the calandria tubes leakage issue and the impact on the planned restart date. CNSC staff explained that, from their understanding, the Point Lepreau NGS personnel were planning on removing and replacing the 76 calandria tubes that did not pass the leakage tests. CNSC staff did not know the impact of this work on the planned restart date.

22. The Commission asked for an update on the licensing activities for the Gentilly-2 NGS. CNSC staff explained that Hydro-Québec had not yet submitted an application for a licence renewal or an extension of their current licence. CNSC staff added that they were planning the month of December for Hearing Day One, depending on the quality of the technical information submitted by Hydro-Québec.

Briefing on the Industrial Radiography Regulatory Strategy

23. With reference to CMD 10-M39, CNSC staff summarized the industrial radiography regulatory strategy implemented in Canada and the results of this implementation. Representatives of the industry commented on their experiences with the working group that was created and expressed their satisfaction with the improvement in communications with CNSC staff.
24. The Commission asked for the highest annual doses since the only results presented were average annual doses. CNSC staff explained that the number of annual doses above 5 mSv has been decreasing. In particular, the annual doses between 20 and 50 mSv have declined from 56 in 2001 to 3 in 2009.
25. The Commission expressed its concerns regarding radiation protection and asked for actions that could be taken by the industry to lower the non-compliance rate on radiation protection. CNSC staff answered that training would be reinforced, as well as communicating the message to licensees that proper radiation protection measures should be taken. The representative from the Acuren group noted that they were planning to analyze the incidents to identify lessons learned and implement corrective actions. He acknowledged that the industry should take full responsibility in reducing those non-compliances.
26. The Commission asked for comments on communication issues between CNSC staff and the industry. CNSC staff explained that there were still challenges in efficiently communicating CNSC staff's expectations to the licensees, and described the efforts made to resolve the issue. The representative from Team Industrial Services agreed that work still needed to be done on both sides to ensure a proper understanding of the regulatory requirements.
27. The Commission invited the representatives of the industry to provide comments on the relevant draft regulatory documents and guidance documents.

28. In response to a question from the Commission on improvements that can be done to increase the safety of the industrial radiography equipment, a representative from Spencer Manufacturing Limited explained that improvements were slow because of the very few manufacturers in this industry (mostly based in the United States) and the cold weather conditions in Canada. This representative added that discussions were in progress with the manufacturers to better understand the issues specific to Canada and come up with possible solutions.
29. The Commission asked about the possibility of using an uncertified device. CNSC staff responded that the use of uncertified equipment would be noticed by the inspectors as they often inspect the licensees. CNSC staff noted the existence of a world-wide tracking mechanism that identifies the location of each higher risk source. The devices are not tracked since they pose no regulatory concern without a source.

DECISION ITEMS – REGULATORY DOCUMENTS

Regulatory Document RD-327, *Nuclear Criticality Safety*

30. With reference to CMD 10-M54, CNSC staff summarized the Regulatory Document and the comments received.
31. The Commission asked CNSC staff for more details on one comment suggesting the cut-off frequency for criticality safety be changed from 1×10^{-6} to 1×10^{-5} . CNSC staff explained that the current criterion used for determining credible accident scenarios (accident probability of 1×10^{-6}) is consistent with two existing Canadian and other internationally recognized standards, and that their research determined that this criterion is used everywhere in the nuclear industry, including with the current licensees.
32. The Commission enquired about the significant number of comments. CNSC staff indicated that there was approximately an equal amount of editorial and technical comments, and that the amount of comment was not surprising since the specialists in this field are known to be meticulous and that they were interested in this topic.
33. After considering the recommendations submitted by CNSC staff, the Commission approves Regulatory Document RD-327, *Nuclear Criticality Safety*, for publication and use.

DECISION

Note: the following item was held in closed session.

Regulatory Document RD-321, *Criteria for Physical Protection Systems and Devices at High-Security Sites*

- 34. With reference to CMD 10-M55, CNSC staff presented to the Commission its recommendations on this Regulatory Document.
- 35. After considering the recommendations submitted by CNSC staff, the Commission approves Regulatory Document RD-321, *Criteria for Physical Protection Systems and Devices at High-Security Sites*, for publication and use (limited distribution to high-security site licensees).

DECISION

Note: the following item was held in closed session.

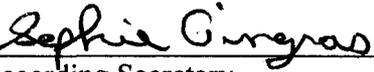
Regulatory Document RD-361, *Criteria for Explosive Substance Detection, X-Ray Imaging, and Metal Detection Devices at High-Security Sites*

- 36. With reference to CMD 10-M55, CNSC staff presented to the Commission its recommendation on this Regulatory Document.
- 37. After considering the recommendations submitted by CNSC staff, the Commission approves Regulatory Document RD-361, *Criteria for Explosive Substance Detection, X-Ray Imaging, and Metal Detection Devices at High-Security Sites*, for publication and use (limited distribution to high-security site licensees).

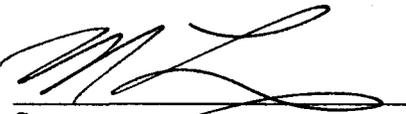
DECISION

Closure of the Public Meeting

- 38. The meeting closed at 3:35 p.m.


Recording Secretary

04-11-2010
Date


Secretary

04-11-2010
Date

APPENDIX A

CMD	DATE	File No
10-M48	2010-09-01	(3603084)
Notice of Meeting of September 30, 2010		
10-M48.A	2010-09-16	(3608597)
Revised Notice of Meeting of September 30, 2010		
10-M49	2010-09-16	(3608726)
Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Thursday, September 30, 2010, at 280 Slater, Ottawa, Ontario.		
10-M49.A	2010-09-23	(3611718)
Updated Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Thursday, September 30, 2010, at 280 Slater, Ottawa, Ontario.		
10-M50	2010-09-27	(3612836)
Approval of Minutes of Commission Meeting held August 19, 2010		
10-M51	2010-09-16	(3608738)
Early Notification Report: No new Events to report		
10-M51.A	2010-09-22	(3611277)
Early Notification Report: Bruce Power: Unit 6 Shutdown due to Maintenance Cooling System Leak		
10-M52	2010-09-22	(3610904)
Status Report on Power Reactor units as of September 22, 2010		
10-M53	2010-09-16	(3608747)
Update on an item from a previous Commission proceedings: Elekta Inc., University Health Network and Southlake Regional Health Centre: Follow-up regarding uncertified Class II accelerators used at two Ontario hospitals – Oral presentation by CNSC staff		
10-M53.A	2010-09-22	(3610787)
Update on an item from a previous Commission proceedings: Elekta Inc., University Health Network and Southlake Regional Health Centre: Follow-up regarding uncertified Class II accelerators used at two Ontario hospitals – Oral presentation by the Southlake Regional Health Centre		
10-M39	2010-05-31	(3546691)
Briefing on the Industrial Radiography Regulatory Strategy – Oral presentation by CNSC staff		

10-M54 2010-09-14 (3599759)
Regulatory Document **RD-327**, *Nuclear Criticality Safety*

10-M55 2010-09-14 (3601202)

Regulatory documents:

RD-321, *Criteria for Physical Protection Systems and Devices at High-Security Sites*
and;

RD-361, *Criteria for Explosive Substance Detection, X-ray Imaging, and Metal
Detection Devices at High-Security Sites* – Contains Cabinet Confidence documents and
is not publicly available