

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Wednesday, May 19th, 2010 beginning at 5:28 p.m. at the Public hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario.

Present:

M. Binder, President
A. Graham
A. Harvey
R.J. Barriault
D.D. Tolgyesi
M. J. McDill

M. Leblanc, Secretary
L. Thiele, Senior Legal Counsel
S. Gingras, Recording Secretary

CNSC staff advisors were: P. Webster, G. Rzentkowski, P. Elder,
K. Lafrenière and B. Thériault

Other contributors were:

- Ontario Power Generation Inc.: S. Seedhouse
- Bruce Power: D. Hawthorne and M. McQueen

Adoption of the Agenda

1. The revised agenda, CMD 10-M27, was adopted as presented.

Chair and Secretary

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

Constitution

3. With the notice of meeting, CMD 10-M26, 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 April 8, 2010, Commission Member Documents CMD 10-M26 to CMD 10-M31 were distributed to Members. These documents are further detailed in Annex A of these minutes.

Minutes of the CNSC Meeting Held April 8, 2010

5. The Commission Members approved the minutes of the April 8, 2010 Commission Meeting as presented in CMD 10-M28.

STATUS REPORTSEarly Notification Report (ENR)

6. With reference to CMD 10-M29, CNSC staff presented information regarding a spurious shutdown system (SDS)-2 trip at the Darlington Nuclear Generating Station (NGS) 'A' Unit 4. CNSC staff stated that there were no safety implications and no hazards to the workers or the public from this event.
7. The Commission asked if the event could be simulated. The OPG representative responded that the event occurred following an approved maintenance procedure. The OPG representative added that OPG personnel were able to reproduce the event when the unit was shut down and in a safe state. The OPG representative added that the event had occurred in the past but was not serious enough to trip the reactor. The OPG representative also noted that Bruce Power personnel had revised the maintenance procedures to eliminate the chance of this event occurring again. In response to further questioning from the Commission, the OPG representative noted that the event could occur at any power above which this trip is conditioned, which includes full power.
8. The Commission enquired if this event could occur only at the Darlington NGS or if it could happen at other NGS as well. The OPG representative answered that Bruce Power considers this type of event to be specific to the safety system at the Darlington NGS, but that the information related to this event would be shared with the CANDU Owners Group and the World Association of Nuclear Operators through its operating experience programs. The OPG representative also noted that he was not aware of any similar events previously occurring at other NGS.
9. The Commission asked about the time frame for submitting the detailed report. The OPG representative responded that the detailed report is expected to be submitted on May 31st of this year¹.
10. In response to a question from the Commission on any potential damage to the reactor if this incident had occurred at full power, the OPG representative explained that SDS-2 operated as planned and that he does not expect any damage to the plant at any power level resulting from such an incident, including at full power.

¹ CNSC staff confirmed after the meeting that OPG submitted the detailed report.

11. CNSC staff also orally informed the Commission that an incident had occurred at Atomic Energy of Canada Limited (AECL)'s Chalk River Laboratories. AECL has released the information under their proactive public disclosure program. CNSC staff reported that one of the transfer tanks associated with their waste water treatment centre had leaked and lost approximately 5000 litres of waste water into the environment. This waste water was processed water coming from the active area, including the National Research Universal (NRU) reactor and the laboratories. CNSC staff added that the water contained only trace amounts of radioactivity and chemicals, and that no contamination had been detected in adjacent monitoring wells. CNSC staff noted that the tank has since been emptied. CNSC staff added that there were no radiological or chemical hazards resulting from this event. CNSC staff considers that there is no threat to workers, the public or the environment as a result of the event.
12. The Commission enquired on the number of tanks and their status. CNSC staff answered that these tanks are buried in the ground, but that they did not have any information on the number of tanks or their age. The Commission asked CNSC staff to provide, through the Secretariat of the Commission, the complete report on the event as well as further information on the tanks, including their number, age, condition and the maintenance and monitoring activities done on these tanks. The Commission, after looking at the information provided, will determine if a follow-up meeting item is required on this topic.
13. In response to further questioning from the Commission, CNSC staff estimated that the tank had been leaking for approximately one month. CNSC staff added that, to their knowledge, this type of event was a first-time occurrence at the Chalk River Laboratories.
14. The Commission asked if there are specific requirements for this type of system. CNSC staff responded that, while there are no precise specifications for this system, they would expect AECL to comply with general industry standards while designing these systems.

ACTION

by

August 2010

Status Report on Power Reactors

15. With reference to CMD 10-M31, which includes the Status Report on Power Reactors, CNSC staff presented updates on the following:
- Bruce A Unit 3 was shut down manually on May 17, 2010 due to a loss of suction to the moderator pumps, which led to a low moderator flow and insufficient moderator cooling. The event was caused by a malfunction of a check valve in the moderator system. The unit will return to service once the repairs are made.
 - Bruce B Unit 6 started a maintenance outage on May 14, 2010. The duration of the outage is estimated to be 52 days.
16. The Commission also asked for more information on the current inspection for pressure tubes at Gentilly-2. CNSC staff explained that sampling of the pressure tubes is done during these inspections, which are part of activities done during annual shutdowns. The results of the analyses of these samples are sent to the CNSC. CNSC staff confirmed that inspectors are always present during these activities.

Updates on items from previous Commission proceedings

Bruce Power: Alpha Contamination Event in Bruce A Unit 1

17. With reference to CMD 10-M30.1, the Bruce Power representative presented information on the alpha contamination event in the Bruce A Unit 1. The Bruce Power representative provided an update on the status of sample testing for alpha radiation and noted that Bruce personnel had completed its investigation of the event and sent the detailed report to CNSC staff, as per standard S-99, *Reporting Requirements for Operating Nuclear Power Plants*². The Bruce Power representative added that Bruce Power shared lessons learned with the industry through operational experience reports. The Bruce Power representative also noted that Bruce Power had developed a model used to calculate doses to individuals, which has been accepted by CNSC staff. The Bruce Power representative described the improvements made to prevent recurrence of a similar event. These improvements include the installation of new alpha monitoring equipment, revising work planning protocols and the improvement in the on-site dosimetry laboratory. The Bruce Power representative also detailed its communication activities regarding this event.

² Standard document S-99, *Reporting Requirements for Operating Nuclear Power Plants*, March 2003, ISBN 0-662-33690-9.

18. CNSC staff commented that Bruce Power continued to follow appropriate regulatory requirements and implemented adequate compensatory measures. CNSC staff confirmed that it had reviewed the proposed model used to calculate doses and considers the model to be acceptable. CNSC staff also reported to have reviewed the detailed report on the root causes of the contamination event and considers the proposed corrective actions to be acceptable. CNSC staff stated that they had verified the alpha contamination programs of other power reactor licensees and concluded that they were adequate.
19. CNSC staff reported that they had established contacts with the Ontario Ministry of Labour, who requested assistance from CNSC staff regarding this event.
20. The Commission asked for more information on the involvement of testing laboratories in the United States. The Bruce Power representative explained that, because of limited capabilities at the AECL laboratory, screening tests are performed at another laboratory in the United States. If the results are above a threshold value, further testing is then done at AECL.
21. In response to a question from the Commission on the results of the investigation, the Bruce Power representative explained that, since similar work had been done at Bruce Unit 2 without alpha contamination problems, Bruce Power mistakenly assumed that there would be no issues of this type in Unit 1. Due to this assumption, the people who were in the vicinity but not directly involved with the work were not properly protected.
22. The Commission asked CNSC staff about the possibility of changing regulatory requirements as a result of this event. CNSC staff explained that, while they are not planning on suggesting changes to regulatory requirements on alpha contamination, they will ask licensees to strengthen their radiation protection programs to better monitor alpha releases.
23. The Commission asked if Bruce Power traced everybody who went into the contaminated area. The Bruce Power representative answered that the vault area is a controlled entry point and, therefore, a full inventory of people who entered this area is available. Everyone who went in the vault was offered testing for alpha contamination, with priority given to workers who had the highest probability of contamination.

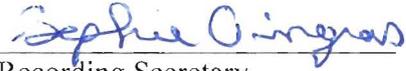
24. In response to a question from the Commission on actions taken elsewhere in the nuclear industry after the event, CNSC staff confirmed that lessons learned have been transferred across the industry including the Point Lepreau site, where some alpha contamination was found while proper radiation protection measures were in place. The Bruce Power representative added that personnel involved in the Point Lepreau refurbishment went to the Bruce site to have a better understanding of the event. Bruce Power representative reported that Bruce Power had met with other CANDU owners and confirmed that all power reactor sites enhanced their alpha monitoring programs as a result of the event.
25. CNSC also noted that they were examining with the members of the CANDU Owners Group possible changes to the dosimetry service licences to allow alpha monitoring on their workers.
26. The Commission asked if any changes were made to accelerate the testing process. Bruce Power representative answered that Bruce Power will do a preliminary assessment of transient employees (who regularly change site locations) in order to get their baseline radiation exposure.
27. The Commission asked for Bruce Power employees' reaction to this event. Bruce Power representative acknowledged that the employees' confidence in the radiation protection measures was shaken, and that trust needs to be regained. Bruce Power representative is of the opinion that the nervousness expressed by some people is caused by a lack of knowledge in radiation, and stated that all attempts were made to reassure them.
28. In response to a question from the Commission on employees reassigned to other work, Bruce Power representative explained that a few employees were reassigned to non-radiation work while waiting for the radiation exposure results. Since these results confirmed that there were no radiation exposures beyond regulatory limits, the workers went back to their usual duties.
29. The Commission requests a further update once all the tests have been completed and the results received. The nature of this update will be commensurate on the severity of alpha contamination results.

ACTION

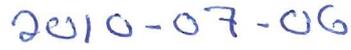
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Closure of the Public Meeting

30. The meeting closed at 6:48 p.m.



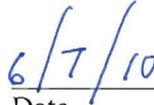
Recording Secretary



Date



Secretary



Date

APPENDIX A

CMD	DATE	File No
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10-M26	2010-04-23	(Edocs 3537312)
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Notice of Meeting of May 19, 2010

10-M27	2010-05-05	(Edocs 3542777)
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Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Wednesday, May 19, 2010, at the Public Hearing Room, 280 Slater Street, Ottawa, Ontario.

10-M28	2010-05-10	(Edocs 3545510)
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Approval of Minutes of Commission Meeting held April 8, 2010

10-M29	2010-04-30	(Edocs 3540831)
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Early Notification Reports:
Ontario Power Generation: Darlington Nuclear Generating Station 'A' Unit 4 – Spurious Shutdown System-2 trip

10-M30.1	2010-05-12	(Edocs 3547051)
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Updates on items from previous Commission proceedings:
Bruce Power: Alpha Contamination Event in Bruce A Unit 1

10-M31	2010-05-12	(Edocs 3546075)
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Status Report on Power Reactor Units as of May 12, 2010