

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Thursday, May 19, 2005 beginning at 1:25 p.m. in the Public Hearing Room, CNSC Offices, 280 Slater Street, Ottawa, Ontario.

Present:

L.J. Keen, Chair

C.R. Barnes

J. Dosman

A. Graham

M.J. McDill

M. Taylor

M.A. Leblanc, Secretary

J. Lavoie, General Counsel

S. Gingras, Recording Secretary

CNSC staff advisers were: I. Grant, P. Webster, G. Cherkas, R. Jammal, P. Fundarek, G. Schwarz, T. Schaubel, K. Lafrenière, A. Blahoianu, B. Howden, L. Colligan, G. Lamarre, G. Martin, P. Wong and P. Thompson

Other contributors were:

- New Brunswick Power: R. White, J. Slade and J. McCarthy
- Bruce Power: D. Hawthorne
- Canspec Group Inc.: T. Levey and T. Matthews
- Ontario Power Generation Inc.: P. Charlebois and P. Tremblay
- Hydro-Québec: A. Ouellet and R. Lemieux
- Atomic Energy of Canada Limited : P. Fehrenbach, B. Kupperschmidt, G. Koroll, B. McCamis, B. Lange and G. Archinoff

#### Adoption of the Agenda

1. The revised agenda, CMD 05-M27.A, was adopted as presented.

#### Chair and Secretary

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

#### Constitution

3. With the notice of meeting 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 6, 2005, Commission Member Documents CMD 05-M26 to CMD 05-M35 were distributed to the Members. These documents are further detailed in Annex A of these minutes.

#### Minutes of the CNSC Meeting Held April 6, 2005

5. The Members approved the minutes of the April 6, 2005 Commission meeting (reference CMD 05-M28) without change.

#### Significant Development Report

6. Significant Development Report (SDR) no. 2005-04 (CMD 05-M29) was submitted by staff. The following information was added orally during the meeting.
7. With reference to item 4.1.1 of CMD 05-M29 regarding the planned maintenance outage at the Point Lepreau Nuclear Generating Station (NGS), the Commission sought further information on the rate of feeder pipe deterioration. In response, New Brunswick Power stated that, from its inspections earlier in 2005, the slow development of cracks in the feeder pipes is consistent with what was expected according to its previous experience. New Brunswick Power added that it is confident that those inspections were adequate to assess the condition of the feeder pipes.
8. With reference to item 4.1.2 of CMD 05-M29 regarding the failure of an electrical transformer at Unit 6 of the Bruce NGS-B, CNSC staff reported that, while the Unit had since returned to service, it was shut down again for reasons unrelated to the transformer problem.
9. Referring to a reported spill of mineral oil associated with the failure of the transformer at Unit 6, the Commission sought details on the amount of oil that was spilled and the environmental consequences of the spill. In response, Bruce Power reported that approximately 6,000 gallons of the 17,000 gallons of mineral oil in the transformer was spilled to Lake Huron. The rest of the oil was recovered. Bruce Power added that most of the oil had been recovered from the surface of the lake, and that the Ontario Ministry of the Environment took samples and concluded that there was no contamination of drinking water or other significant damage to the environment.
10. The Commission asked whether any workers had been adversely affected by the smoke from the fire that also occurred during the transformer failure event. Bruce Power responded that no workers

- were exposed to smoke during the event because the transformers are located outside in a relatively isolated area.
11. With reference to item 4.1.3 of CMD 05-M29 concerning problems with the storage of combustible materials at Bruce NGS-A, CNSC staff reported that Bruce Power has since made significant improvements at Units 3 and 4, but that significant issues remain at Units 1 and 2.
  12. In response to the Commission's questions on this issue, Bruce Power explained that its employees appeared to have been of the view that, because Units 1 and 2 were shut down and defuelled, inspections of those areas did not need to be as rigorous as for the operating Units 3 and 4. Bruce Power added that its senior management has since made it clear to its employees that this was not acceptable. Bruce Power further reported that discussions with CNSC staff were ongoing to determine how and where materials may be appropriately stored within the facility. CNSC staff noted that it is confident that an agreement on this issue will be reached with Bruce Power shortly.
  13. The Commission questioned whether this issue was related to deficiencies in training. In response, Bruce Power stated that it considers the issue to be linked more directly to the consistent setting of standards throughout the organization rather than training. CNSC staff concurred with Bruce Power's assessment.
  14. The Commission requests CNSC staff and Bruce Power to provide a progress report on this fire protection issue at the earliest Commission meeting following Bruce Power's submission to CNSC staff of a proposed action plan and schedule for addressing the inspection findings. The report should include photographs of the sites in question to assist the Commission understanding.
  15. With reference to item 4.1.5 on the extremity exposure of an industrial radiography operator employed by Canspec Group Inc. (Canspec), CNSC staff provided the Commission with the following updated information:
    - the manufacturers of the type of device involved in the incident have been granted CNSC certification for a modification that will reduce the risk of the source becoming disconnected;
    - CNSC staff has reviewed the corrective actions proposed by the licensee and has found them to be inadequate to prevent recurrence of similar incidents;

**ACTION**

- Canspec has reported a similar incident which took place on May 13, 2005 at a different location. That subsequent incident involved a considerably more powerful radiation source.
16. The Commission asked about possible reasons for the worker's actions during the extremity exposure incident reported in CMD 05-M29. Canspec answered that it has worked very closely with CNSC staff over the years to improve its training program. Despite having received the training, the worker did not follow procedures. Canspec also considers that there are problems in the design of the device which contributed to the incident. CNSC staff concurred with the licensee, adding that, in its opinion, training was the major cause of the incident.
17. The Commission sought information on the current status of the worker involved in the incident. Canspec responded that the worker was reassigned to non-radioactive work. In addition, Canspec noted that no adverse health effects from the incident have been observed on this worker.
18. In response to a question from the Commission on the possibility that operational time pressure was one of the causes of the incident, Canspec explained that this was a possible factor, along with the fact that the operator was interrupted several times during the execution of his work. CNSC staff concurred with these statements by Canspec.

#### Status Report on Power Reactors

19. With reference to the Status Report on Power Reactors (CMD 05-M30), CNSC staff provided the following update during the meeting:

- Bruce Unit 6 is now offline.

#### Annual CNSC Staff Report for 2004 on the Safety Performance of the Canadian Nuclear Power Industry

20. With reference to CMD 05-M31 and CMD 05-M31.A, CNSC staff presented the 2004 annual report on the safety performance of the Canadian nuclear power industry.
21. As part of its presentation, CNSC staff presented mid-term reports for the Darlington and Gentilly-2 NGSs. Mid-term performance reports were requested by the Commission at the time those facilities were relicenced in January 2003 and November 2002, respectively. In its oral presentation for the Darlington and

- Gentilly-2 NGS mid-term reports, CNSC staff added information for the full reporting period and on the issues that were raised at the time of the last licence renewals, including on the status of the licensees' programs that were rated as "below requirements" at that time.
22. The Commission sought further information on why the licensees appear to be having difficulty in improving in the areas rated as "C" – below requirements. In response, the representatives of the licensees expressed the general view that the apparent delays are mostly linked to the amount of work required to complete the improvements, rather than to any lack of attention by them to the problems.
  23. The Commission sought further details on the 18 staffing complement violations that were reported for the Bruce NGS-B. CNSC staff explained that the violations were relatively minor and relate to such things as exceeding the hours of work limits for various reasons.
  24. The Commission sought further details on the periodic inspection program for the heat transport system and safety systems at Point Lepreau NGS and Bruce NGS-B that did not meet requirements. CNSC staff explained that the problems related to the use of standards that are not current. CNSC staff noted that, while the matter requires attention, the associated risks are minor and acceptable.
  25. In response to a question from the Commission on whether there were staffing issues at Point Lepreau NGS, New Brunswick Power explained that, while it expects staffing to be a challenge within the next few years, the station currently has an adequate complement of qualified staff.
  26. The Commission expressed concerns about the reported radiation protection issues at Gentilly-2 NGS and sought a further explanation of these problems. In response, Hydro-Québec acknowledged that the changes required to improve the situation had been slow to implement. However, Hydro-Québec listed several actions taken recently to remedy the situation.
  27. In concluding its discussion of the annual and mid-term reports, the Commission suggested that the power reactor licensees make these report available to their respective Boards of Directors.

Interim Report on the Whiteshell Laboratories Nuclear Research and Test Establishment Decommissioning Activities

28. With reference to CMD 05-M32 and 05-M32.A, CNSC staff presented the first interim report on the decommissioning activities of the Whiteshell Nuclear Research and Test Establishment. The Commission requested staff to present interim reports biannually during the six-year term of the decommissioning licence issued by the Commission in January 2003. The next mid-term report is planned to be presented in the spring of 2007.
29. The Commission questioned AECL how it is capturing and documenting operational knowledge and corporate memory that will be relevant to the ongoing and future decommissioning activities. In response, AECL confirmed that it has an extensive program in place for this purpose. AECL also explained that it has put in place a resourcing and succession plan, as well as a system for filing of records related to each of the buildings. CNSC staff concurred with these statements by AECL.
30. In response to further questioning by the Commission on the quality of the Winnipeg River sediments downstream of the site, AECL provided a summary of the activities undertaken for the monitoring of sediments. It was concluded that the sediments affected during site operation would not require remediation as part of the decommissioning program.
31. As requested by the Commission, AECL provided further details on the in-ground “standpipes” at the facility which contain the higher level radioactive wastes from past operations, including the timing of their removal and the decommissioning process to be used.
32. The Commission sought additional information on AECL’s public information activities with the local communities. AECL responded that it has been very actively engaged with the local communities through a Public Liaison Committee. AECL is also keeping Manitoba Conservation and the Saugeen First Nation apprised of developments at Whiteshell.

Mid-Term Report on Atomic Energy of Canada Limited’s Nuclear Research and Test Establishment in Chalk River, Ontario

33. With reference to CMD 05-M33 and 05-M33.A, CNSC staff presented a mid-term report on AECL’s Chalk River Laboratories (CRL). The Commission requested that the mid-term report be prepared at the time it renewed the site licence in May 2003.

34. The Commission questioned the status of the earlier identified communication problems between CNSC staff and AECL. In response, CNSC staff expressed the view that, as a result of a number of meetings, there currently exists a much better understanding of the issues between the parties.
35. At the request of the Commission, AECL provided detailed information on a reported leak of tritium from CRL to the Ottawa River. AECL expressed the view that the tritium release does not constitute a significant risk to the environment. CNSC staff concurred with AECL, but indicated that it expects AECL to identify the source of the leak and take appropriate mitigation measures.
36. The Commission expressed concern about what appears to be a generally reactive approach by AECL to identifying and dealing with compliance issues. In response, AECL expressed its desire and intent to be more proactive with respect to issues of concern to the CNSC.

Canada's Participation at the Third Review Meeting of the Convention on Nuclear Safety, 11-22 April 2005

37. With reference to CMD 05-M34, CNSC staff presented a summary of Canada's participation at the Third Review Meeting of the Convention on Nuclear Safety, 11-22 April 2005.
38. The Commission expressed its satisfaction and congratulations to the members of the team who produced this report.
39. The Commission sought further information on how the concept of Periodic Safety Review (PSR) is applied in a regulatory context. CNSC staff explained that PSR is a comprehensive review of planned performance to confirm the licensing basis, including an extensive review of operating experience, a review of safety issues that have been raised, a comparison of the licensing basis with modern standards and the justification of differences or upgrades.
40. In response to further questions from the Commission, CNSC staff explained that the International Regulatory Review Team (IRRT) is a service that has been offered by the International Atomic Energy Agency (IAEA) for a number of years. A number of reviews have been carried out with a number of regulatory bodies.

### Regulatory Strategy for Industrial Radiography

41. With reference to CMD 05-M35, CNSC staff provided a report on its regulatory strategy for industrial radiography. This report was provided in fulfillment of an action placed on staff during the Commission Meeting held on April 6, 2005.
42. The Commission sought further details on how CNSC staff plan to verify that industrial radiography workers are always wearing their dosimeters during radiation work. In response, CNSC staff explained that this can be generally verified by comparing the cumulative dose recorded on the dosimeter with the number of “shots” declared to have been done by a worker. A significant discrepancy would be an indicator of problem with the dosimetry practices.
43. The Commission questioned whether CNSC staff would be taking measures to increase compliance activities in Alberta where there is a relatively higher and growing amount of industrial radiography being carried out in association with the oil and gas industry. In response, CNSC staff stated that it has already increased its compliance activities at the CNSC western regional office and that the need for additional resources is being assessed.
44. The Commission commended CNSC staff for moving forward quickly on this issue.

### **Closure of the Public Meeting**

The public portion of the meeting closed at 7:50 p.m.

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*Chair*

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*Recording Secretary*

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Secretary

## ANNEX A

CMD	DATE	File No
05-M26	2005-04-12	(1-3-1-5)
Notice of meeting held on Thursday, May 19, 2005 in Ottawa		
05-M27	2005-05-03	(1-3-1-5)
Agenda of the meeting of the Canadian Nuclear Safety Commission (CNSC) held in the public hearing room, 14th floor, 280 Slater Street, Ottawa, Ontario, on Thursday, May 19, 2005		
05-M27.A	2005-05-13	(1-3-1-5)
Updated Agenda of the meeting of the Canadian Nuclear Safety Commission (CNSC) held in the public hearing room, 14th floor, 280 Slater Street, Ottawa, Ontario, on Thursday, May 19, 2005 – Supplementary Information		
05-M28	2005-05-03	(1-3-1-5)
Approval of minutes of Commission meeting held April 6, 2005		
05-M29	2005-05-02	(1-3-1-5)
Significant Development Report no. 2005-4 for the period of March 17, 2005 to April 28, 2005		
05-M30	2005-05-03	(1-3-1-5)
Status report on power reactors for the period of March 18, 2005 to May 2, 2005		
05-M31	2005-05-03	(26-1-0-0-0)
CNSC Staff Annual Report for 2004 on the Canadian Nuclear Power Industry, Including the Interim Status Reports on the Performance of Darlington and Gentilly-2 Nuclear Power Stations		
05-M31.A	2005-05-02	(26-1-0-0-0)
CNSC Staff Annual Report for 2004 on the Canadian Nuclear Power Industry, Including the Interim Status Reports on the Performance of Darlington and Gentilly-2 Nuclear Power Stations - Contains prescribed security information and is not publicly available		
05-M32	2005-05-09	(37-20-15-0)
Interim Report on the Whiteshell Laboratories Nuclear Research and Test Establishment Decommissioning Activities		
05-M32.A	2005-05-03	(1-11-27-3)
Interim Report on the Whiteshell Laboratories Nuclear Research and Test Establishment Decommissioning Activities - Contains prescribed security information and is not publicly available		

05-M33        2005-05-09    (24-1-0-0)  
Mid-Term Report on Atomic Energy of Canada Limited's Nuclear Research and Test  
Establishment in Chalk River, Ontario

05-M33.A     2005-05-03    (1-11-27-2)  
Mid-Term Report on Atomic Energy of Canada Limited's Nuclear Research and Test  
Establishment in Chalk River, Ontario - Contains prescribed security information and is  
not publicly available

05-M34       2005-05-03    (29-1-1-0-0)  
Canada's Participation at the Third Review Meeting of the Convention on Nuclear  
Safety, 11-22 April 2005

05-M35       2005-05-03    (15-1-0)  
Regulatory Strategy for Industrial Radiography