September 14, 2005

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Wednesday, September 14, 2005 beginning at 1:30 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.A. Leblanc, Secretary
J. Lavoie, General Counsel
S. Gingras, Recording Secretary

CNSC staff advisers were: P. Dubé, I. Grant, T. Schaubel, P. Webster, R. Jammal, P. Jones, P. Fundarek and K. Murthy

Other contributors were:

- Ontario Power Generation Inc.: J. Coleby and R. Manners
- Bruce Power: F. Saunders and J. Hegarty

Adoption of the Agenda

1. The revised agenda, CMD 05-M51, 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 August 17, 2005, Commission Member Documents CMD 05-M51 to CMD 05-M55 were distributed to Members. These documents are further detailed in Annex A of these minutes.

Minutes of the CNSC Meeting Held August 17, 2005

5. The Members approved the minutes of the August 17, 2005 Commission meeting (reference CMD 05-M52) with the addition of a new paragraph regarding the Significant Development Report on the temporary unavailability of the Pickering-B NGS standby generators. The following action is added immediately following paragraph 13 of the draft minutes:

> "14. The Commission requests OPG and CNSC staff to submit more information on this issue at a future Commission meeting when the root causes of the incident have been determined, including providing details on any necessary remedial actions." **ACTION**

Update on Investigation of Suspicious Item at Pickering-A NGS

6. With reference to an action placed on CNSC staff during the Commission meeting held on June 29, 2005 (ref. paragraph 8 of the approved minutes), the Commission requested an update on the police investigation that followed the discovery of a suspicious item at the Pickering NGS. CNSC staff reported that Durham Regional Police Services has concluded its investigation and that they were unable to identify the perpetrator of the incident. At the request of the Commission, OPG provided a detailed description of the actions taken during the investigation.

7. In response to a question from the Commission on whether the incident could have been related to the layoff notices given to construction workers during the same period of time, OPG explained that, while security is increased during such labour announcements, a relationship between the events was not found during the investigation.

8. The Commission requested CNSC staff to provide further information on this topic during an in-camera discussion on other security-related matters that is planned for the November 30 /December 1, 2005 session of Commission proceedings. **ACTION**

Significant Development Report

9. Significant Development Report (SDR) no. 2005-07 (CMD 05-M53 and CMD 05-M53A) was submitted by staff. The following information was added orally during the meeting.

10. With reference to item 4.1.1 of CMD 05-M53 regarding an electrical transient caused by a thunderstorm at the Pickering-A NGS Unit 4, CNSC staff clarified that the reported lightning strike caused a loss of power to only half of the injection valves. Therefore, the statement in the SDR, which reports that there was no means to make up the lost coolant, is incorrect.

11. OPG provided further details on how the lightning strike affected the plant systems and on the corrective actions taken by OPG.

12. In response to a question from the Commission on the risks that such an event could pose to the safe operation of the station, OPG stated that, based on a worst case scenario, the ability to cool some of the fuel would have been limited, but that the ability of the operators to safely and effectively shut down any affected units would have remained unaffected. CNSC staff concurred with this response from OPG.

13. With reference to item 4.1.2 of CMD 05-M53 regarding the shutdown of three of the four operating units of Pickering B due to a large influx of algae in the cooling water intake screen house in Lake Ontario, CNSC staff made the following correction to its report:

    - The statement, "In addition to the ECI unavailability…" is replaced by: "In addition to the ECI potential unavailability…".

14. The Commission asked whether such events could be prevented by using screens at the water intake. In response, OPG stated that there are screens already installed, but that the extent of accumulation of algae was so unusually large that the screen conveyor systems used to collect and remove the algae from the intake could not keep up with the volume.

15. With reference to item 4.1.3 of CMD 05-M53.A regarding a demonstration at Hydro Québec's Gentilly-2 nuclear site, the Commission questioned CNSC staff on whether the security response would have been as effective if there had not been advanced notice of the demonstration. In response, CNSC staff stated that the facility is adequately protected in the event of an unplanned demonstration, or any other type of disruption.

16. In addition to its written SDR (CMD 05-M53 and CMD 05-M53A), CNSC staff orally reported on an incident that occurred on September 7, 2005 at Bruce-A NGS Unit 3. During the event, a malfunction caused a loss of regulation in the unit that was terminated by the activation of both shutdown systems. Bruce

Power promptly reported the event to CNSC staff in accordance with regulatory standard S-99, *Reporting Requirements for Operating Nuclear Power Plants*. CNSC staff further noted that no radioactivity was released and that there was no harm to workers or the public. However, CNSC staff has classified the event as a serious process failure with potential risk implications.

17. CNSC staff further reported that it is satisfied that Bruce Power's investigation has led to a good understanding of the direct cause. CNSC staff is also satisfied that Bruce Power has taken adequate and appropriate corrective actions to prevent and mitigate similar events in future.

18. CNSC staff also reported that Bruce Power has implemented similar actions at Bruce-A NGS Unit 4. Unit 3 still remains in the guaranteed shutdown state while discussions continue regarding residual concerns. CNSC staff noted that Bruce Power has formed a team to perform a root-cause analysis which will be made available to CNSC staff within the next few weeks. CNSC staff has informed other licensees of this event and they are examining the implications for their reactors.

19. In response to further questioning on the event by the Commission, Bruce Power provided additional details on the equipment malfunction that caused the event. Bruce Power also explained that if the shutdown systems had not activated, the reactor regulating system would have had sufficient time to shut down the reactor before any damage occurred. CNSC staff concurred with this statement and noted that, because the reactor is limited to 92.5% of its rated electric power, the shutdown occurred before the reactor had reached 100% full power.

20. In response to a follow-up question from the Commission, Bruce Power stated that it has since stopped the practice of manually controlling the alternate system.

21. The Commission requests CNSC staff to provide an update on this serious process failure at the Bruce-A NGS when the full investigation and analysis is completed. **ACTION**

Status Report on Power Reactors

22. With reference to the Status Report on Power Reactors (CMD 05-M54), CNSC staff provided the following information that was added orally during the meeting:

    - The Designated Officer has given approval for Pickering-A

NGS Unit 1 to increase power beyond 1% full power.

23. In response to a question from the Commission, OPG explained that it expects Unit 1 to be at 60% full power by approximately mid-October, and that the unit could be at full power by early 2006.

Nuclear Energy in Medicine: Current Trends and Future Challenges

24. With reference to CMD 05-M55, CNSC staff presented an information item on the use of nuclear energy in medicine: current trends and challenges.

25. Following the presentation, the Commission questioned CNSC staff's issues related to the training and certification of persons working in this area of medicine. CNSC staff responded that the operators of the nuclear devices must be certified by their own college and must pass a CNSC-approved examination to obtain a licence to practice. Every facility must also have a training program that includes refresher training for the employees.

26. In response to the Commission's questions about the most significant regulatory challenges that nuclear medicine in Canada poses, CNSC staff stated that these challenges include: the proposed use of mobile scanning facilities; the trend towards the development of smaller, but more powerful devices; and the general rapid growth of the industry.

27. The Commission also sought and received information on several other topics, including security issues related to nuclear medicine.

Closure of the Public Meeting

The public portion of the meeting closed at 3:37 p.m.

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Chair *Recording Secretary*

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Secretary

ANNEX A

CMD	DATE	File No

05-M50 2005-08-12 (1-3-1-5)
Notice of meeting held on Wednesday, September 14, 2005 in Ottawa

05-M51 2005-08-30 (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 Wednesday, September 14, 2005

05-M51.A 2005-09-09 (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 Wednesday, September 14, 2005

05-M52 2005-08-30 (1-3-1-5)
Approval of minutes of Commission meeting held August 17, 2005

05-M53 2005-08-26 (1-3-1-5)
Significant Development Report no. 2005-7 for the period of July 29, 2005 to August 26, 2005

05-M53.A 2005-09-08 (1-3-1-5)
Significant Development Report no. 2005-7 for the period of July 29, 2005 to August 26, 2005 – Supplementary Information

05-M54 2005-08-29 (1-3-1-5)
Status report on power reactors for the period of July 29, 2005 to August 26, 2005

05-M55 2005-08-30 (15-1-0)
Nuclear Energy in Medicine: Current Trends and Future Challenges