

Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Thursday, February 24, 2005 beginning at 3:45 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: B. Howden, G. Lamarre, A. Alwani, B. Pearson, J. Mecke, R. Jammal and C. Doyle

Other contributors were:

- Atomic Energy of Canada Limited: R. Van Adel, D. Torgerson, P. Fehrenbach, K. Hedges and P. Lafrenière
- Bakos Inspection: C. Prowse and S. Bakos

Adoption of the Agenda

1. The revised agenda, CMD 05-M8.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 January 12, 2005, Commission Member Documents CMD 05-M7 to CMD 05-M11 were distributed to Members. These documents are further detailed in Annex A of these minutes.

Minutes of the CNSC Meeting Held January 12, 2005

5. The Members approved the minutes of the January 12, 2005 Commission meeting (reference CMD 05-M9) without change.

Significant Development Report

6. Significant Development Report (SDR) no. 2005-02 (CMDs 05-M10, 05-M10.A and 05-M10B) was submitted by staff. The following information was added orally during the meeting.
7. With reference to section 4.1.3 of CMD 05-M10.A, regarding an update on an event involving the discovery of fuel in the refueling flask at Atomic Energy of Canada's (AECL's) NRU Reactor at Chalk River Laboratories, CNSC staff reported that it completed its review of AECL's investigation report and conducted an inspection of the flask operation at the reactor site. CNSC staff also reported that it met with AECL officials on the matter and communicated its findings to AECL in a letter dated February 22, 2005.
8. CNSC staff noted that AECL identified six inappropriate actions during its investigation. These relate to the pre-checking of verification checklists, skipping procedural steps, and interrupting the task sequence without proper handover from one operator to another. AECL's investigation also identified a number of causal factors, mostly related to work practices and supervisory methods.
9. CNSC staff reported that it found AECL's investigation to be incomplete in that it did not satisfactorily address the root causes, particularly as related to the number of human errors that occurred. CNSC staff has therefore requested AECL to provide, by May 31, 2005, a barrier analysis for the processes which have the potential to result in similar events. The analysis must take into account all engineered and procedural barriers and their reliabilities.
10. AECL noted that it will be confirming the expectations for the barrier analysis more precisely with CNSC staff.
11. AECL further noted that, while it considers the event to be serious, there was no impact on the environment or on the health and safety of persons.
12. In response to questions from the Commission regarding actions taken by AECL towards the employees involved in the incident, AECL reported that while disciplinary action was taken for failing to follow procedures, the employees remained valued members of the team. One employee has since left AECL on his own accord.

AECL noted that the disciplinary actions were taken in consultation with the applicable union representatives. CNSC staff noted that it will examine those disciplinary actions in the context of the root cause analysis assessment.

13. In response to the Commission's concerns about how certain disciplinary actions have the potential to discourage employees from reporting safety incidents, AECL stated that it strives to promote a culture in which open reporting occurs. AECL noted that, while disciplinary action is not taken as the first response to a procedural problem, it is taken when appropriate and warranted.
14. The Commission questioned whether engineering changes to the flask and related equipment could be made to reduce the risk of human error. In response, AECL stated that, while this can be a challenge where older equipment designs are involved, the feasibility of engineered solutions will be examined as part of the review.
15. The Commission requested CNSC staff to provide an update on refueling flask incident at the June 2005 Commission Meeting.
16. With reference to section 4.1.4 of CMD 05-M10.A, concerning the update on the small loss of coolant event that occurred in an experimental loop at the NRU Reactor, AECL provided additional information to address concerns raised about the maintenance records for the valve that was involved in the event. AECL explained that the maintenance records for the valve are stored in a shutdown database, rather than the preventative maintenance database. This is because the valve is only maintained when the reactor is shutdown. From the maintenance records, AECL reported that the valve had been maintained six times in the last eight years. AECL noted that it will consolidate all valve maintenance records into a single preventative maintenance database.
17. AECL acknowledged that approval for start up should not have been given after the work was done to correct the initial leak observed.
18. With reference to section 4.1.5 of CMD 05-M10.A concerning a non-compliance with the guaranteed shutdown state (GSS) at the MAPLE reactor at AECL's Chalk River Laboratories, CNSC staff reported that AECL responded in a timely manner to CNSC staff's letter of February 7, 2005. In its response, AECL acknowledged the seriousness of the issue and committed to resolve, by the end of February 2005, the issues identified by CNSC staff.

ACTION

19. CNSC staff further reported that, on February 16, 2005, AECL informed CNSC staff that the MAPLE 1 reactor was in GSS, and CNSC staff has confirmed this during a subsequent site inspection.
20. CNSC staff noted that, in a letter dated February 21, 2005, it advised AECL that the proposed plan for resolving the deficiencies was acceptable. CNSC staff stated that it will continue to follow up on these outstanding issues with AECL.
21. In response to the Commission's questions on the above-noted plan for resolving deficiencies, CNSC staff explained that the plan includes returning the reactor to GSS (now complete), performing a root cause assessment of the incident, identifying all appropriate corrective actions, and preparing an action plan. CNSC staff stated that AECL has committed to submit to the CNSC by February 28, 2005, documentation on: the results of the assessment; the action plan; and the updated operational limits and conditions, and shutdown states.
22. In response to a question from the Commission about how the incident will affect the CNSC's regulatory compliance program at the facility, CNSC staff confirmed that its regulatory oversight at the MAPLE facility has already increased as a result of this event.
23. In response to the Commission's questions about the possible causes for this event, AECL stated that, while the root cause analysis was not yet complete, there are indications that the event may have been caused by the fact that AECL did not have complete procedures describing reactor states, and by the presence of conflicting processes. AECL added that actions were taken to address the issue, including the increase of support and management to the project.
24. The Commission expressed concerns about AECL's apparent confusion over the definition of GSS. The Commission considers that this should have been clearly defined and understood by AECL. In response to this concern, AECL noted that precise information on GSS will be contained in the Operating Limits and Conditions document. That document, however, remains under development and has been under discussion with CNSC staff.
25. The Commission requested a follow-up report from CNSC staff on this event at a future Meeting of the Commission.

ACTION

26. In response to the number of significant developments that have occurred at Chalk River Laboratories in recent months, and to enhance its operational effectiveness, AECL reported that it has created a new executive level position of Chief Regulatory Officer and has added several key specialist support positions. AECL also announced appointments which have full accountability for all aspects of the new medical isotope facilities at Chalk River Laboratories. AECL indicated that it will continue to add resources where process improvements, and enhanced monitoring and compliance are needed. AECL expressed confidence that these measures, in addition to the specific responses to the incidents, will meet the CNSC's requirements.
27. The Commission requested AECL to provide a copy to CNSC staff of the new organization chart as soon as it is available. **ACTION**
28. In closing its discussion of the recent significant developments at AECL's Chalk River Laboratories site, the Commission reiterated that it considers these events to be very serious and clarified its expectation that AECL will take all appropriate measures to prevent reoccurrence.
29. The Commission also requested that CNSC staff investigate its role in the events recently reported by AECL and to make any appropriate adjustments to the CNSC regulatory processes. **ACTION**
30. With reference to section 4.1.1 of CMD 05-M10 regarding the update on Millardair contamination and cleanup at Pearson International Airport, CNSC staff reported that the majority of the cleanup work at the hangar has been completed and that a consultant was conducting independent verification checks. CNSC staff stated that it will perform its own verification inspection of the site after reviewing the results of the consultant's decontamination report. Staff noted that access to the contaminated office will remain restricted until CNSC staff has verified and documented that the decontamination is complete.
31. With reference to section 4.1.2 of CMD 05-M10 regarding the overexposure of an industrial radiographer, the Commission, noting that the affected individual was no longer employed by the licensee (Bakos (NDT) Inspection), commented about the importance of developing a work safety culture in which employees are encouraged to come forward if they have made a mistake without fear of dismissal. In response, Bakos (NDT) Inspection stated that it does not discipline its employees for mistakes such as the one described in this report. Temporary suspension from radiation work, however, was necessary in this case for safety and regulatory

- reasons. Bakos (NDT) Inspection stated that the affected employee left the company on his own volition to pursue other employment opportunities.
32. The Commission sought the views of Bakos (NDT) Inspection on the affected employee's written statement that the event occurred as a result of undue pressure placed on him to complete work in a timely manner. In response, Bakos (NDT) stated that, in its opinion, a simple check would have allowed the worker to prevent the incident, and that the worker should have not allowed himself to be pressured by the client. Bakos (NDT) Inspection stated that the safety of its employees is its first priority.
33. With respect to the incident report filed by Bakos (NDT) Inspection, CNSC staff reported that, while it agreed with the analysis of the incident as it pertained to the device, staff is of the view that the root cause analysis has not yet properly taken the human factors into consideration. Staff will continue to follow-up with the licensee on the event analysis.

Status Report on Power Reactors

34. With reference to the Status Report on Power Reactors (CMD 05-M11), CNSC staff provided the following update information during the meeting:
- Pickering B Unit 5 has now entered a planned outage.

Closure of the Public Meeting

The public portion of the meeting closed at 5:33 p.m. The Commission moved in camera to discuss a Significant Development Report item involving protected security considerations related to Hydro-Québec at Gentilly-2.

Chair

Recording Secretary

Secretary

ANNEX A

CMD	DATE	File No
05-M7	2005-01-19	(1-3-1-5)
Notice of meeting held on Thursday, February 24, 2005 in Ottawa		
05-M8	2005-02-08	(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, February 24, 2005		
05-M8.A	2005-02-17	(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, February 24, 2005 – Supplementary Information		
05-M9	2005-02-08	(1-3-1-5)
Approval of minutes of Commission meeting held January 12, 2005		
05-M10	2005-02-03	(1-3-1-5)
Significant Development Report no. 2005-2 for the period of December 22, 2004 to February 2, 2005		
05-M10.A	2005-02-15	(1-3-1-5)
Significant Development Report no. 2005-2 for the period of December 22, 2004 to February 2, 2005 – Supplementary Information		
05-M10.B	2005-02-16	(1-3-1-5)
Significant Development Report no. 2005-2 for the period of December 22, 2004 to February 2, 2005 – Supplementary Information		
05-M11	2005-02-07	(1-3-1-5)
Status report on power reactors for the period of December 22, 2004 to February 7, 2005		