Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held Wednesday, June 10, 2009 beginning at 4:55 p.m. at the CNSC Headquarters, 14th floor, 280 Slater Street, Ottawa, Ontario. The meeting was adjourned at 6:53 p.m. on Wednesday, June 10, and reconvened on Thursday, June 11, 2009 at 9:00 a.m. at the same location. The public meeting was closed at 2:52 p.m.

Present:

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

M. Leblanc, Secretary
J. Lavoie, Senior General Counsel
P. Reinhardt, Recording Secretary

CNSC staff advisors were: P. Elder, B. R. Ravishankar, A. Erdman, J. Schmidt, M. Santini, R. Marini, R. Awad, G. Rzentkowski, T. Schaubel, P. Webster, F. Rinfret, K. Lafrenière, P. Corcoran and M. Couture.

Other contributors were:

- MDS Nordion Inc.: R. McGregor, J. Kavanagh, R. Beekmans, R. Decaire and J. Mahoney
- Canadian Light Source Inc.: J. Hormes, M. deJong and M. Benmerrouche
- Atomic Energy of Canada Limited: B. Shorter, H. MacDiarmid, W. Pilkington, I. Muir and D.S. Cox
- Bruce Power Inc.: D. Hawthorne and R. Fisher
- Ontario Power Generation: W. Robbins, F. Demarkar, P. Pasquet, S. Seedhouse and M. Elliott
- Hydro-Québec: N. Sawyer and P. Desbiens
- New Brunswick Power Inc.: G. Thomas and D. Parker

Adoption of the Agenda

1. The revised agenda, CMD 09-M21.B, was modified to hear the two information items outlined in CMD 09-M28 and 09-M28.A before the two mid-term status reports scheduled at the beginning of the meeting. The rest of the agenda was adopted as published.

Chair and Secretary

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

Constitution

3. With the notice of meeting, CMD 09-M20, 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 29, 2009, Commission Member Documents CMD 09-M20 to CMD 09-M28 were distributed to Members. These documents are further detailed in Annex A of these minutes.

Updates on items from previous Commission proceedings

SRB Technologies (Canada) Inc. (SRBT): SRBT Status on meeting its financial commitments for the period of April 15 to May 26, 2009

5. With reference to CMD 09-M26, CNSC staff confirmed that SRBT had met its financial commitments for the period cited above.

Ontario Power Generation: Additional information with respect to the Bruce Heavy Water Plant Status Report presented at the April 29,2009 Commission Meeting financial commitments for the period of April 15 to May 26, 2009

6. With reference to CMD 09-M26, CNSC staff provided additional information regarding the existence of oil contamination in bedrock at the Oil Storage Area of the Bruce Heavy Water Plant. **ACTION CLOSED**

STATUS REPORTS

Mid-Term Status Reports

Interim Status Report on MDS Nordion Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario

7. With reference to CMD 09-M23.1 and CMD 09-M23.1A, CMD 09-M23 and CMD 09 M23.A, MDS Nordion (MDS) and CNSC staff presented information regarding the Interim Status Report on the Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario.

8. The Commission requested more information from CNSC staff on the MDS Fire Protection Program, recalling that this had been an outstanding issue at the time of the licence renewal. CNSC staff confirmed that it had received the MDS revised Fire Protection Program on May 15, 2009, that it was presently reviewing it and that it will send its recommendations to MDS when the review is completed. CNSC staff added that MDS had also submitted a fire hazard analysis last year which was revised by CNSC staff and which is presently being updated by MDS in response to CNSC staff's recommendations.

9. The Commission asked MDS if its Fire Program had been reviewed by a third party during the past year. MDS responded that a third party was reviewing it for inspection test and maintenance on an annual basis. MDS reported that some gaps were identified in the frequency of inspection of some systems but that the problem was being taken into account. MDS added that CNSC staff found the procedures used for inspection test and maintenance to be acceptable.

10. The Commission further asked when was performed the last fire drill to which the local fire department participated. MDS answered that it happened in 2002. MDS added that regular meetings were held with the local fire department to discuss fire emergency plans and to provide it with tours of the facility.

11. The Commission asked MDS about the radiation safety of the packages leaving the facility. MDS added that all materials were shipped in approved transport packages that meet the Transport Index (TI) required by the shipment. MDS stated that radio-pharmaceuticals were shipped in a type A package while larger volume materials, like cobalt sources, used a type B package. MDS added that most of the short-lived isotopes were leaving the facility in MDS trucks to the airport or with qualified carriers.

12. The Commission asked CNSC staff about the transportation requirements for the type of materials produced at MDS. CNSC staff noted that two sets of regulations were applying to the transportation and the packaging of nuclear substances: the *Packaging and Transport of Nuclear Substances Regulations*[1] and the *Transportation of Dangerous Goods Act*[2]. CNSC staff provided more detail on the areas verified during inspection of packages, and confirmed that MDS was compliant with these regulations as explained in CMD 09-M23.

[1] S.O.R./2000-208
[2] 1992, S.C. 1992, c. 34

13. The Commission asked CNSC staff if MDS's airborne emissions were acceptable. CNSC staff confirmed that it was satisfied with MDS's airborne emissions' levels, but noted that MDS had been tracking some elements for only a few years. CNSC staff added that it would be verifying these elements as part of its review of the annual report.

14. The Commission asked about the level of ^{14}C present in the water released from the facility. MDS responded that the liquid releases over the last five years have been below 0.007 percent of the Derived Release Limit (DRL).

15. The Commission asked MDS how much of the 12,000 kilograms of waste, disposed of in 2008, went to landfill. MDS did not have the answer but responded that it would get the information and communicate it to the Commission. **ACTION (staff to confirmed receipt of info)**

16. The Commission requested more information on MDS's computerized monitoring system. MDS explained that the system was used to monitor many of the nuclear systems and the radiation monitoring systems. MDS added that it was also used to monitor equipment that needed to be maintained and checked to ensure the quality requirements for the products were met.

17. The Commission asked about the results of an audit performed on the employee Health and Safety Program. MDS responded that nine items requiring actions were identified and that these issues should be resolved by the end of June 2009.

18. The Commission inquired about the safety culture survey conducted at MDS. MDS responded that six questions were posed and that a summary of the survey results was available in CMD 09-M23.1.

19. The Commission asked MDS about the effect of the closure of Atomic Energy of Canada Limited (AECL) National Research Universal (NRU) on its operation. MDS answered that, due to the absence of production of molybdenum and xenon 133, its own production had slowed down. MDS added that it was evaluating the situation on a regular basis to be able to make appropriate decisions. MDS confirmed that, at this time, small amounts of material were still produced; nonetheless, there was a reduction of activity in the facility.

Mid-Term Performance Report on Canadian Light Source Inc. Operating Licence for its Class IB Particle Accelerator located in Saskatoon, Saskatchewan

20. With reference to CMD 09-M24.1, CMD 09-M24.1A and CMD 09-M24.1B, CMD-M24 and CMD-M24.A, Canadian Light Source Inc. (CLSI) and CNSC staff presented information regarding the Mid-Term Performance Report on the Operating Licence for the Class IB Particle Accelerator, located in Saskatoon, Saskatchewan.

21. The Commission congratulated CLSI on the excellence of its report and on its timely response to the issues raised after inspection in the areas of compliance, radiation protection and quality management.

22. The Commission asked if the proposed addition of a new building at CLSI, during the Phase III of the project, would have to go through an Environmental Assessment (EA). CNSC staff responded that an EA is required for this kind of addition, unless it is funded under the Federal Knowledge Infrastructure Program which is part of a new exclusion list under the *Canadian Environmental Assessment Act*[3]. CNSC staff added that, however, CLSI will have to come before the Commission for an amendment to its licence for the commissioning of Phase III.

23. The Commission asked CLSI how accidents were reported at the facility. CLSI answered that all injuries were tracked and looked at seriously as part of its occupational health and safety program. CLSI added that it was using these reports to improve the health and safety in the workplace. CLSI added that these statistics were also required to be reported on an annual basis under the Canada Labour Code[4].

24. The Commission asked for information on the potential risks related to issues identified in CLSI fire protection program. CNSC staff reported that these findings were related to frequency in testing equipment and that they would be resolved in the short term.

25. The Commission asked when the five action notices made during a recent inspection would be resolved by CLSI. CNSC staff answered that four of the five action items were solved and that the remaining one should be solved by the end of July.

[3] S.C. 1992, c. 37
[4] R.S., 1985, c. L-2

26. The Commission asked for clarification on the CLSI organizational chart. The CLSI Executive Director explained that, at the moment, ten people were reporting directly to him which is comparable to the organization in other facilities of the same type with seven departments.

27. The Commission asked how CLSI would deal with the expected sharp increase in users from a safety management standpoint. CLSI answered that users would still have to meet strict rules when entering the facility and using the beam lines. CLSI added that each proposal would go through peer-reviewing and that each user would have to declare all the samples to be measured. CLSI noted that all users' information forms are collected by the Health and Safety Department. CLSI assured that each user would be properly trained on the hazards linked to the usage of the systems.

28. The Commission asked CLSI how training was managed. CLSI responded that the users were trained through an online system and that training was monitored by the user's office. CLSI added that it was also mandatory for all users to be trained on health and safety, radiation protection, and usage of the beam line before being allowed to use the systems for their research.

29. The Commission asked CLSI if the biomedical experiments proposed in Phase II had started. CLSI answered that no experiments with live animals had been conducted yet.

30. The Commission asked if CLSI could produce isotopes. CLSI responded that there were issues with the target and with potential methods to retrieve isotopes. CLSI expressed its willingness to work on the matter with other interested organizations.

Minutes of the CNSC Meeting Held April 29, 2009

31. The Commission Members approved the minutes of the April 29, 2009 Commission Meeting as presented in CMD 09-M22 and CMD 09-M22.A with some modifications. The Secretary noted that the minutes (CMD 09-M22.A) had to be corrected to change an action item from paragraph 64 to paragraph 66.

32. The meeting was adjourned at 6.53 p.m. and reconvened June 11, 2009 at 9:00 a.m.

Significant Development Report no. 2009-1

Atomic Energy of Canada Limited: Heavy Water Leak at the NRU reactor, Chalk River Laboratories

33. With reference to CMD 09-M25.1, Atomic Energy of Canada Limited (AECL) presented information regarding the heavy water leak at the National Research Universal (NRU) reactor at the Chalk River Laboratories. AECL President and Chief Executive stated that all actions taken during the current situation at Chalk River had been guided by safety principles. AECL added that the production of medical isotopes was part of its core mission, for Canada and for the world, and that it was his duty to resume production as soon as safety and practical considerations permit. AECL stated that the leak did not pose a threat to the safety of AECL's staff, the public or the environment.

34. With reference to CMD 09-M25.A, CNSC staff presented a summary of the actions taken by AECL since the heavy water leak at the NRU reactor.

35. The Commission required from AECL information on the age, the nature, the date of installation and the expected life span of the reactor vessel. The Commission also asked if the kind of leak, presently occurring, could have been prevented.

36. AECL answered that the current reactor vessel came into service in 1974 and that it had been inspected in 1996 and in 2004. AECL added that, in 2004, the inspection results had predicted that the reactor vessel could have at least 10 years of additional life and, with additional inspection, presumably a further 10 years.

37. AECL gave more details on how the inspection was conducted. It told the Commission that the vessel was inspected with strips of one or two centimetres wide that were ran down vertically along the wall. AECL added that these strips confirmed that the loss in the thickness of the wall was less than a millimetre. AECL noted that the strips had missed the localized corrosion responsible for the current leak.

38. The Commission asked AECL if it had indications on how long the corrosion had been going on. AECL responded that it was suspecting it had been going on slowly for more than five years.

39. The Commission wanted to be updated on the status of the examination conducted up to now. AECL answered that a visual inspection around the annulus had been conducted and that the thickness of the wall inside the vessel will be evaluated next. AECL added that a test on the technology used to do the investigation was performed and that it has proven its efficacy.

40. The Commission requested information from AECL on the techniques considered to repair the vessel. AECL responded that several repair techniques had been assessed, but that the volumetric inspection still needed to be completed to evaluate the exact wall loss before the most appropriate technique could be identified. AECL added that some of the options considered were mechanical patch-type repairs, weld overlay repairs, and aluminum cold spray applications.

41. The Commission asked if there was an existing benchmark for the expected life of a vessel like the NRU vessel. AECL answered that the NRU was one of the oldest reactor in the world and that with a life management program in place and periodic inspection of its condition, there was no defined end of life for the vessel.

42. The Commission asked if other issues than corrosion could be responsible for the leakage problem. AECL responded that, while it was focussing on the corrosion mechanisms, damage from radiation was also being studied.

43. The Commission further inquired why corrosion has not been detected earlier. CNSC staff responded that the 2004 inspection had detected potential pitting in the vessel but that it was demonstrated during further inspections that the problem was under control and that there was no risk to operate. AECL mentioned the existence of air ingestion in the vessel which can contribute to corrosion of the aluminum.

44. The Commission asked if the light water draining from the annulus contained corrosion signs. AECL answered that conductivity was observed in the water, but that more information would be provided from the root cause analysis. CNSC staff added that when the assessment was done in 2004, some general corrosion was noted but not enough to explain the local corrosion of the lip and the wall.

45. The Commission asked why the 2004 inspection did not get to the bottom of the vessel. AECL answered that the 2004 inspection was limited and that it was performed from inside the vessel using ultrasonic techniques. AECL added that, by design, with the CO2 cover gas intact, it was expected that the vessel would be protected from corrosion in that region. AECL added that a full circumferential visual inspection of the external vessel wall from the "J" rod annulus had recently been performed and that the areas of concern for corrosion had been identified.

46. The Commission asked about the challenge faced by AECL to repair the vessel. AECL answered that the challenge was not related to the technology used to repair the vessel but more to the remote location of the corrosion. AECL added that the technologies being considered were well developed and had been used in similar situations.

47. The Commission asked AECL if it had considered replacing the reactor instead of repairing it. AECL answered that there was no evidence at this point in time suggesting that the reactor could not be repaired. AECL added that it was working very hard to get the reactor back in service as soon and safely as practically possible.

48. The Commission asked about the status of the cooling pumps during the recent reactor outage. AECL responded that the pumps worked exactly as expected and that full cooling was assured throughout the event.

49. The Commission asked how inspections of the reactor were planned in the past. AECL answered that the last inspection was conducted in 2004 at the time of the NRU licence renewal. AECL added that the inspection revealed that the reactor was fit for service for 10 additional years. AECL noted that inspection of the vessel was not included in the periodic scheduled inspections. AECL added that, with the recent finding of corrosion, periodic inspections of the vessel would now be scheduled. CNSC staff confirmed that the inspection frequency of the NRU reactor was established according to the CSA Standard N285.5,[5] and that, due to the fact the NRU reactor vessel was a low pressure and low temperature element, it was exempted from the CSA Standard requirement.

[5] Periodic inspection of CANDU nuclear power plant containment components, 48 pp., 2008

50. Following the Commission's question on the effect of the 5 kg of heavy water/hr (0.0014 kg/sec) loss on the reactor, AECL responded that the reactor emergency core cooling system had the capacity to compensate for a leak up 40 kg of heavy water/sec. AECL added that its current inventory of heavy water was capable to deal with the current loss rate well beyond the scheduled date to complete the de-fuelling and the removal of the water from the reactor.

51. The Commission asked if it was possible to operate the reactor with the leak. AECL responded that because of the lack of knowledge of the extension of the corrosion and the potential for the leak to increase, it was decided that to not operate the reactor was the most prudent approach.

52. The Commission questioned why, knowing in 1974 that the 19 years old vessel was replaced because of degradation; AECL was now considering repairing a 35 years old vessel to extend its life for an additional 20 years. AECL responded that the original vessel had a specific degradation problem that has been recognised to be responsible for the reduction of its useful life.

53. The Commission asked AECL why a complete analysis of the reactor status had not been conducted in 2004, at the time of the licence renewal, since it was seeking approval for the refurbishment of the reactor before finally asking for the renewal of its licence. AECL responded that this question will be answered by the root cause investigation. CNSC staff reassured the Commission on the safety of the reactor and confirmed that leak detection systems were in place, and that with the presence of defence in depth (redundant) systems, the NRU was well protected.

54. The Commission asked CNSC staff about the tritium released in the Ottawa River and in the atmosphere due to the NRU leak. CNSC staff responded that AECL had exceeded its derived release limit by a very small percentage and that some correction actions were initiated like the reduction of 25% of the vessel level which lowered the head over the leak and consequently the leak rate of about a 25%. CNSC staff indicated that AECL had also started to remove the fuel from the reactor, which would allow drainage of the vessel, to stop the leak. AECL stated that, even if the release was above the action level, it was still 1/1,000 of the regulatory limit. CNSC staff confirmed that AECL was reacting as quickly as it could and that the reactor should be entirely drained by the end of June.

55. The Commission wanted to know if the workers would be exposed to additional radiation during the inspection and reparation of the reactor. AECL responded that, due to the presence of an efficient ventilation system and adequate tritium protection clothing, the additional radiation exposure to the workers will be negligible.

56. The Commission asked why AECL's Ageing Management Program did not succeed to predict this event. CNSC staff responded that AECL's root cause investigation should provide a response to this question.

57. The Commission asked how long the leak had been going on before being identified. AECL responded that it would have been present only for some hours due to the existence of the very sensitive leak detection mechanisms in place.

58. The Commission asked if AECL had consulted with external technical experts to review the data collected during inspection of the vessel. AECL responded that it was consulting with a team of experts that had started meeting in the past week to discuss the findings collected from investigation of the vessel.

59. The Commission requested that, at the next Public Meeting in August, AECL and CNSC staff communicate to the Commission and to the public with more clarity on the technical issues raised by the NRU reactor and on its plan to solve the problem. CNSC staff informed the Commission that it would provide an update on the NRU reactor in writing for the August meeting. ACTION

Ontario Power Generation Inc. Pickering B Nuclear Generating Station - Reactor Trip : Unit 7 Shutdown System No. 2 (SDS2) and Shutdown System No. 1 (SDS1) Actuation

60. With reference to CMD 09-M25, CNSC staff presented information regarding Ontario Power Generation (OPG) Pickering B Nuclear Generating Station (PBNGS) Reactor Trip: Unit 7 Shutdown System No. 2 (SDS2) and Shutdown System No. 1 (SDS1) Actuation.

61. CNSC staff summarized the events. CNSC staff explained that when the shutdown system initiated the reactor trip, a heat-transport system pressure-relief valve opened and discharged heavy water into a collection tank. CNSC staff added that a failure of the relief-valve in the open position caused overflowing of the collection tank and the discharge of heavy water onto the reactor building floor. However, CNSC staff reported that the unit response to the reactor trip was normal, but that the event led to slightly elevated airborne tritium emissions for the three days following the leak.

62. OPG explained that it did extensive reviews and took immediate corrective actions regarding operation performance. OPG added that the root cause analysis report would be ready by the end of June.

63. The Commission asked OPG about the tritium release from this event. OPG responded that the tritium release was below 1% of the regulatory limit and also below the action limit. OPG added that its staff was not exposed to unusual levels of radiation.

64. The Commission asked for further information on the reasons of the valve failure. OPG provided detailed information on this topic as well as actions taken to prevent reoccurrence. The Commission was satisfied with the information received.

Status Report on Power Reactors

65. With reference to CMD 09-M27, which includes the Status Report on Power Reactors, CNSC staff presented updates on the following:
    - Bruce B units frequently enter surplus base load generation outages which mean that all units could be in or out of operation due to a lower demand for power in the Province of Ontario.

66. The Commission wanted to confirm if Hydro-Québec Gentilly- 2 Nuclear Generating Station was back into service as planned. A representative of Hydro-Québec (Hydro) responded that the power reactor was not back into service yet due to the need of additional maintenance work on support pipes for certain seismic supports. Hydro provided a detailed explanation of the issue and noted that the work should be completed by the end of June and the reactor be restarted then. The Commission further asked Hydro if it was still planning to start the refurbishment in March 2011, which was confirmed by Hydro.

67. The Commission requested from CNSC staff that, in future status reports, the percentage of each power reactor units be outlined clearly. **ACTION**

68. The Commission asked about Point Lepreau's refurbishment work. CNSC staff responded that the refurbishment work was on schedule and that New Brunswick Power Inc. (NB Power) had confirmed it would be ready to come before the Commission in November 2009 for its request to reload and restart the reactor.

INFORMATION ITEMS

Integrated Safety Assessment of Canadian Nuclear Power Plants for 2008

69. With reference to CMD 09-M28, CNSC staff presented its annual report for 2008 on the safety performance of the Canadian nuclear power industry (NPP report).

70. CNSC staff provided overall conclusions and integrated ratings for all of the nuclear power plants in Canada. CNSC staff then presented its findings regarding each nuclear power generating station's performance, a review of the current CNSC Public Outreach Program as well as future options for this program.

71. CNSC staff explained that the new rating system adopted in 2008 was based on a risk informed approach to provide a process-based assessment of NPP safety performance. CNSC staff added that it will no longer assign separate ratings for a program and its implementation, but that it will rather rate the safety performance of each program to reflect the effectiveness of its implementation by the licensees. CNSC staff further added that the integrated rating would derive of the combination of the ratings for each program, based on the program relative contribution to the overall safety of the plant.

72. CNSC staff concluded that, based on its evaluation from monitoring, inspections, reviews, and assessments, nuclear power plants operated safely in Canada during the year 2008, and that nuclear power plant operators made adequate provision for their programs and procedures to protect the health and safety of Canadians and their environment, as well as to ensure that Canada was able to meet its international obligations on the peaceful use of nuclear energy.

73. CNSC staff reported that, based on the analysis of its public outreach effort, it concluded that the information sessions conducted in the past were not effective in reaching large numbers of concerned individuals in the NPP host communities or in reaching the rest of Canadians. For this reason, CNSC staff considered alternatives, including the delivering of the presentation as part of local municipal council meetings to ensure community audiences or using a Webinar to reach more effectively a wider audience. Finally, CNSC staff recommended, as the best alternative, the web-based option which would involve a live presentation on the web with interactive audio to allow participants to ask questions to the presenter. CNSC staff added that the Web presentation could be recorded and archived on the CNSC website. The Webinar would occur in the fall to avoid the summer holiday season.

74. Each licensee was offered the opportunity to comment on the CNSC 2008 NPP Report and proposed an outreach approach.

75. The Commission asked OPG to elaborate on the human factor issues still present at Pickering A and B. OPG (Pickering A) answered that the human factor issue should be solved soon by working on the minimum complement issue and by reducing the forced outages. OPG believes that this should improve the whole organization and also the management of the plant.

76. The Commission asked OPG what it was planning to do to improve its environmental rating. OPG (Pickering A) responded that the environmental protection rating will be improved with the installation of nets to reduce fish impingement at the station.

77. OPG (Pickering B) added that, even if some issues still needed to be worked on, the focus was on two things: improving the performance of the staff by working with them to develop and train them and improving the material condition of the plant.

78. The Commission asked CNSC staff to comment on OPG's comments. CNSC staff responded that, comparing to previous years, some positive trends were observed in the behaviour of the management of the Pickering Nuclear Stations (NGSs) and in the response of their staff. CNSC staff reported that it had recently conducted an assessment of the safety culture at the Pickering NGSs, and that, for example, Pickering A had put in place a very aggressive program to improve organizational behaviours. CNSC staff added that improvement should start to show up gradually which should be confirmed soon at a meeting with Pickering NGSs representatives scheduled for the month of July.

79. The Commission was satisfied with OPG's Darlington assessment and did not ask further questions on the performance of the station.

80. The Commission asked CNSC staff to elaborate on the meaning of "Below Expectations". CNSC staff explained that this means that some areas needed to improve to meet CNSC expectations. CNSC staff added that OPG did implement a change in their minimum complement in 2006 but that it was not satisfactory. CNSC staff noted that the below satisfactory rating was not due to a lack of staff at Pickering NGSs but to the fact that they were not assuring that the right staff was in place. CNSC staff added that OPG was working on that issue.

81. The Commission asked all NPP if they had a list of the employees considered as safety sensitive, i.e. those whose employment can affect their safety and that of others. Bruce Power responded that, in NPPs, key positions were occupied by employees that had to be certified and compliant with CNSC requirements.

82. The Commission further asked all NPPs how they were monitoring the fitness for work of their certified employees. Bruce Power answered that it was discussing with CNSC staff to establish a manner to monitor the fitness for work without breaching employee's rights. OPG added that it had a continuous observation program through which it could observe the employees in action. Hydro-Québec added that it had the same type of observation program. New Brunswick Power Inc. responded that it possessed the same type of program as OPG, and that it also had a relationship management program where each supervisor meets with their employees three times a year to address any potential extra-curricular issue.

83. The Commission asked if the NPPs had made some comparison with other critical industries with regards to fitness for duty requirements. Bruce Power Inc. responded that a group of Chief Nuclear Officers had been created to review fitness-for-duty program requirements across all the Canadian utilities, with the intention of comparing each other's program and best practices as well as producing guidelines that will provide consistency of the fitness for duty requirements.

84. The Commission asked OPG about the mitigation measures it will implement to reduce fish impingement. OPG answered that the installation of a net should be satisfactory to mitigate fish impingement in the long term, but added that the entrainment issue was more difficult to resolve. OPG reported it was working with CNSC staff to prepare a cost benefit analysis of all the mitigation features that could be efficient to stop fish entrainment and impingement. OPG added that the cost analysis study should be ready to share with CNSC staff in the fall of 2009.

85. The Commission asked OPG about Pickering B's formal submission proposing a solution for the critical heat flux. OPG responded that it will submit to CNSC staff a schedule of activities by the end of June 2009.

86. The Commission asked Hydro-Québec (Hydro) to elaborate on the degradation of its "Preventive Maintenance Implementation Coefficient". Hydro responded that it was due to a calculation mistake and that it had notified the Commission of the mistake in a letter at the beginning of June 2009. Hydro added that there were also issues with the maintenance and that it was working to resolve them. CNSC confirmed it had recently learned about the mistake. CNSC staff added that being aware of the maintenance issues and Hydro's willingness to solve it, it will communicate with Hydro soon to solve and understand better the whole area of maintenance.

87. The Commission asked Hydro to comment on the low rate of success (57 %) of its staff on the certification test. Hydro responded that it needed to discuss in more detail with CNSC staff to agree on that percentage and concurred that, in some areas, some adjustments to Hydro's learning program needed to be made.

88. The Commission asked Hydro how it intends to resolve its ongoing management issues. Hydro agreed that this should be resolved and noted that an action plan would be implemented by the end of the year 2009 to do so.

89. The Commission asked CNSC staff to comment on the manner it calculated the indicator for accidents and the severity rate. CNSC staff responded that a revision of the reporting requirements had been initiated and was now documented in the Regulatory Document S-99, *Reporting Requirements for Operating Nuclear Power Plants*. CNSC staff added that it would take into consideration the manner used in the rest of industry to calculate this coefficient and make adjustments to the reporting requirements in S-99 if necessary.

90. The Commission asked for comments from NPPs on how the annual industry report could be communicated and disseminated to better inform the public, stakeholders and the other governmental departments, provincial and federal on the manner NPPs operate and how CNSC staff evaluates their performance annually.

91. Bruce responded that the annual report was an opportunity for the licensee to report on its performance and inform the community on specific issues and challenges, and also to reassure the community that the company has targets and goals and that it is working to meet them. Bruce Power insisted that it was important to continue to present the results of the report to the local community because it was a means to remain transparent. Bruce added that it was important that the regulator be also present to explain the ratings

attributed to the company because the community has a lot of confidence in the regulator. OPG and New Brunswick Power Inc. agreed with Bruce's statement on the manner the report should be used in the community. Hydro-Québec reported that the report was used internally at the moment, but that it was ready to work in collaboration with CNSC staff to prepare an external document. NB Power recognized that an improved executive summary of the document should be produced.

ACTION (detailed executive summary in 2009 report)

92. The Commission stated that it was hoping not to see "unsatisfactory" rating in the annual NPP Report. The Commission added that if such a rating was attributed to a program after CNSC staff inspection during the year, corrective actions should be rapidly taken by the licensee to resolve the issue before the rating appears in the annual report. CNSC staff agreed with the Commission's comment.

93. On a separate matter, the Commission asked about OPG's anticipated decision on Pickering B NGS refurbishment. OPG responded that the decision had not been made yet. OPG added that Pickering B will prepare for the end of this year an end-of-life plan and will submit it to the Commission.

Site Security Assessment for CNSC Staff Integrated Safety Assessment of Canadian Nuclear Power Plants for 2008

With reference to CMD 09-M28.A, CNSC staff presented its annual report on the site security assessment of Canadian Nuclear Power Plants for 2008 in a closed session due to presence of confidential information in the aforementioned CMD.

Closure of the Public Meeting

94. The public meeting part of the meeting closed at 2:52 p.m.

L. Rinaldi — *Recording Secretary*

2009/09/03 — *Date*

Secretary

4/9/09 — *Date*

APPENDIX A

CMD DATE File No

09-M20 2009-05-08 (6.02.01)
Notice of Meeting of June 10 and 11, 2009

09-M21 2009-05-28 (6.02.02)
Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Wednesday and Thursday, June 10 and 11, 2009, in the Public Hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario

09-M21.A 2009-06-04 (6.02.02)
Updated Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Wednesday and Thursday, June 10 and 11, 2009, in the Public Hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario

09-M21.B 2009-06-08 (6.02.02)
Updated Agenda of the meeting of the Canadian Nuclear Safety Commission to be held on Wednesday and Thursday, June 10 and 11, 2009, in the Public Hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario

09-M22 2009-06-03 (6.02.03)
Approval of Minutes of Commission Meeting held April 29, 2009

09-M22.A 2009-06-08 (6.02.03)
Revised - Approval of Minutes of Commission Meeting held April 29, 2009

09-M23 2009-05-25 (6.02.04)
MDS Nordion: Interim Status Report on MDS Nordion Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario – Oral presentation by CNSC staff

09-M23.A 2009-05-14 (4.11.02)
MDS Nordion: Interim Status Report on MDS Nordion Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario – Contains prescribed security information and is not publicly available

09-M23.1 2009-05-21 (6.02.04)
MDS Nordion: Interim Status Report on MDS Nordion Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario – Oral presentation by MDS Nordion Inc.

09-M23.1A 2009-06-03 (6.02.04)
MDS Nordion: Interim Status Report on MDS Nordion Class IB Nuclear Substance Processing Facility located in Ottawa, Ontario – Oral presentation by MDS Nordion Inc. - Supplementary Information

09-M24 2009-05-25 (6.02.04)
Canadian Light Source Inc.: Mid-Term Performance Report on Canadian Light Source Inc. Class IB Particle Accelerator Operating Licence located in Saskatoon, Saskatchewan – Oral presentation by CNSC staff

09-M24.A 2009-05-21 (4.11.02)
Canadian Light Source Inc.: Mid-Term Performance Report on Canadian Light Source Inc. Class IB Particle Accelerator Operating Licence located in Saskatoon, Saskatchewan – Oral presentation by CNSC staff – Contains prescribed security information and is not publicly available

09-M24.1 2009-05-21 (6.02.04)
Canadian Light Source Inc.: Mid-Term Performance Report on Canadian Light Source Inc. Class IB Particle Accelerator Operating Licence located in Saskatoon, Saskatchewan – Oral presentation by Canadian Light Source Inc.

09-M24.1A 2009-05-21 (6.02.04)
Canadian Light Source Inc.: Mid-Term Performance Report on Canadian Light Source Inc. Class IB Particle Accelerator Operating Licence located in Saskatoon, Saskatchewan – Oral presentation by Canadian Light Source Inc. – Contains prescribed security information and is not publicly available

09-M24.1B 2009-06-02 (6.02.04)
Canadian Light Source Inc.: Mid-Term Performance Report on Canadian Light Source Inc. Class IB Particle Accelerator Operating Licence located in Saskatoon, Saskatchewan – Oral presentation by Canadian Light Source Inc. – Supplementary Information

09-M25 2009-05-14 (6.02.04)
Significant Development Report no. 2009-1 for the period of April 14 to May 14, 2009

09-M25.A 2009-05-26 (6.02.04)
Significant Development Report no. 2009-1 for the period of May 15 to 26, 2009

09-M25.1 2009-06-08 (6.02.04)
Significant Development Report no. 2009-1 for the period of April 14 to May 14, 2009 – Oral presentation by Atomic Energy of Canada Limited

09-M26 2009-05-26 (6.02.04)
Updates on items from previous Commission proceedings

09-M27 2009-05-27 (6.02.04)
Status Report on Power Reactors Units as of May 27, 2009

09-M28 2009-05-29 (6.02.04)
CNSC Staff Integrated Safety Assessment of Canadian Nuclear Power Plants for 2008

09-M28.A 2009-05-29 (6.02.04 / 4.11.02)
Site Security Assessment for CNSC Staff Integrated Safety Assessment of Canadian Nuclear Power Plans for 2008 – Contains prescribed security information and is not publicly available