

Canadian Nuclear  
Safety Commission



Commission canadienne  
de sûreté nucléaire

Minutes of the Canadian Nuclear Safety  
Commission (CNSC) Meeting held  
on December 17, 2015



Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held Thursday, December 17, 2015 beginning at 9:06 a.m. at the Public Hearing Room, 14th floor, 280 Slater Street, Ottawa, Ontario.

Present:

M. Binder, President  
A. Harvey  
D. D. Tolgyesi  
R. Velshi  
Dr. S. McEwan

M. A. Leblanc, Secretary  
D. Saumure, Senior Counsel  
D. Carrière and M. Hornof, Recording Secretaries

CNSC staff advisors were: R. Jammal, J. Cameron, B. Howden, R. Awad, L. Sigouin, B. Beaudin, D. Saul, C. Cole, C. Cattrysse, M. Rickard, B. Poulet, K. Owen-Whitred, H. Tadros, D. Miller, P. Lahaie, M. Rinker and G. Frappier

Other contributors were:

- Ontario Power Generation: S. Lesiuta, I. Azevedo, R. Manley and J. Lehman
- Office of the Fire Marshal and Emergency Management Ontario: T. Kontra and D. Nodwell
- Health Canada: B. Ahier and A. Adams
- New Brunswick Power: B. Plummer, C. Hickman, D. Taylor, J. Nouwens and D. Taylor
- Bruce Power: F. Saunders and M. Burton

#### Constitution

1. With the notice of meeting CMD 15-M44 having been properly given and all eligible permanent Members of the Commission being present, the meeting was declared to be properly constituted.
2. Since the meeting of the Commission held September 30, 2015 and October 1, 2015, Commission Member Documents CMD 15-M44 to CMD 15-M50 were distributed to the Members. These documents are further detailed in Annex A of these minutes.

#### Adoption of the Agenda

3. The revised agenda, CMD 15-M45.A, was adopted as presented.

#### Chair and Secretary

4. The President chaired the meeting of the Commission, assisted by M. Leblanc, Secretary, and D. Carrière and M. Hornof, Recording

Secretaries.

Minutes of the CNSC Meeting Held September 30, 2015 and October 1, 2015

5. The Commission commented that paragraphs 121 to 124 of the minutes accurately reflect the information presented during the meeting regarding the standardized radiation safety officer (RSO) training and certification requirements. However, the Commission stated that the discussion was incomplete and requested that further information on this matter be presented at a future meeting of the Commission.
6. The Commission Members approved the minutes of the September 30, 2015 and October 1, 2015 Commission meeting as presented in CMD 15-M46.

ACTION  
due  
September  
2016

STATUS REPORTS

Status Report on Power Reactors

7. With reference to CMD 15-M47, which includes the Status Report on Power Reactors, CNSC staff presented an update regarding the Darlington Nuclear Generating Station (NGS) Unit 3 planned outage and stated that the unit restart is in progress.

*Darlington NGS Unit 1 PHT PM1 Trip*

8. In regards to the Darlington NGS Unit 1 primary heat transport (PHT) pump motor 1 (PM1) trip due to an electrical fault resulting in the unit shutdown, the Commission sought further information about the system's response to the trip. An OPG representative responded that the reactor tripped automatically and immediately following the PM1 failure due to low flow. CNSC staff confirmed this and stated that the system responded to the motor failure as expected.
9. The Commission asked if the reactor is required to be shut down during the repair and asked if the refurbishment scope included the replacement of this motor or pump. CNSC staff confirmed that the reactor is required to be shut down to execute the repair, but that OPG is taking advantage of the outage to execute other work. The OPG representative explained that OPG has an ongoing monitoring program and that a number of pump motors will be replaced on an ongoing basis, both prior to and after refurbishment. The OPG representative also stated that all four PHT pumps on Unit 2 will be replaced during the refurbishment.
10. The Commission enquired about the length of time the pump

motors have been in service. The OPG representative explained that the pump motors currently in service are the original motors, but that a spare motor is available to enable repairs or maintenance of the motors when required.

11. The Commission enquired about the length of time required for the repair of the PM1. The OPG representative explained that a pre-established outage plan of 20 days is followed when performing repairs on this equipment. The OPG representative stated that it expects Unit 1 to be returned to power within a week.
12. The Commission enquired about the cause of the PM1 failure. The OPG representative explained that a root cause analysis is underway to determine the cause of the PM1 failure, but that preliminary findings indicate the cause to be an electrically-induced failure. The OPG representative stated that pump motor failures are infrequent.

*Point Lepreau NGS Level 1 Impairment*

13. The Commission enquired about the physical condition of Fan 03 which is showing signs of rust. The New Brunswick Power Corp. (NB Power) representative stated that the salt concentration in the air in the Point Lepreau NGS environment does frequently cause surface rust on equipment within the facility, but that NB Power monitors and has commenced work to improve the surface condition of equipment.
14. The Commission asked if a failure of Fan 03 can cause a shutdown of the reactor. The NB Power representative responded that a failure of Fan 03 would cause the Level 1 impairment recently experienced and described in the event notification. A response as was performed during the event on November 23, 2015 would prevent the shutdown of the reactor, but operating restrictions would be in place.
15. The Commission asked why a high apparent cause evaluation (ACE) was being completed instead of a root cause analysis (RCA). An NB Power representative responded that ACEs are used at the Point Lepreau NGS for equipment-specific failures; RCAs are used to investigate events stemming from procedural or organizational failures. The NB Power representative stated that ACEs are very comprehensive investigations that determine the extent of conditions and actions to prevent recurrence. The NB Power representative reported that NB Power has implemented preventive maintenance on the affected equipment as an interim measure until the ACE is completed and full prevention measures can be considered.

16. The Commission further enquired about the consequences of the event. An NB Power representative explained that the component failure would have led to the delay of one of multiple trip initiation parameters available for each safety systems, and emphasized that this delay would not have prevented any of the safety systems from being effective. The NB Power representative explained that it performed an evaluation of the safety significance of the event and found that, at all times during the event, NB Power had adequate means to shut down the reactor and to mitigate any radiation releases to the public during an event. There was no increase risk to the public during this event. The NB Power representative provided more details regarding safety systems impairment times described in the event notification. CNSC staff explained that the affected trip initiation parameter may only be required for certain accident scenarios.
  
17. The Commission asked why an operator action was required instead of an automatic system response to the event. The NB Power representative explained that pre-established responses and procedures are in place to respond to events, and, in this case, the response was for the operator to manually box-up containment because one of the initiation parameters was unavailable in the event it was called for. The NB Power representative explained that the system would have automatically initiated containment box-up on high activity during an event had the operator not manually done so. CNSC staff explained that if the pressure decreases too low, it takes longer for the automatic response to initiate the box up of the containment during a high pressure event. A manual response was required to remove the Level 1 impairment in a short amount of time. If NB Power wouldn't have been able to address the Level 1 impairment in a short amount of time, it would have performed a safe shutdown of the unit. NB Power's conservative decision-making and response were performed as expected by CNSC staff.
  
18. The Commission asked if Level 1 impairments are common occurrence and if the level of the impairment has an impact on the licensee's performance. An NB Power representative responded that three Level 1 impairments, including this event, have occurred at the Point Lepreau NGS to date this year. CNSC staff explained that any impairment is reported to the Commission by licensees and appropriate regulatory follow-up is conducted. CNSC staff stated that the level of impairment is not a good measure of performance since impairments vary greatly from system to system; however, while the data is not reported statistically, it is counted and accounted for in the review of system reliability. CNSC staff explained that the level of the impairment is an indication of the potential impact on the unit. Level 1 impairments have to be addressed quickly but do not directly impact the safety

- of a facility. CNSC staff emphasized that there was no safety concern at any time with respect to the application of the operating policy and principles (OP&P) approved by the Commission or the action taken by the operator. If, at any time, the safety of the reactor is in question, the operator is required to shut down the unit.
19. The Commission enquired about the pressure set point for the automatic closure response of the containment isolation valves, which is much higher than normal building pressure, and asked why a lower automatic parameter is not available to box-up containment. CNSC staff explained that the set-point pressure for the automatic closure of the containment isolation valves of 3.45 kilopascals (kPa) is for the response to accident scenarios involving the heat transport system or a secondary cooling system inside the reactor. CNSC staff explained that a manual response was initiated prior to the automatic response to maintain a quick response time to possible events. The NB Power representative agreed with CNSC staff's response.
  20. The Commission further asked if the equipment that failed was included in the refurbishment scope. An NB Power representative responded that the refurbishment scope included equipment critical to the reactor, primarily equipment difficult to access during normal operation. The equipment that failed in this case is easily accessed during normal operation and can therefore be maintained at any time. For this reason, it was excluded from the refurbishment scope. CNSC staff agreed with the NB Power representative's response. The Commission asked if NB Power has a preventive program that requires periodic replacement of controllers. The NB Power representative responded that they do not run this type of equipment to failure; it is maintained preventively to ensure it continues to operate. However, in this case, the fuse that supplies power to the controller that failed was not maintained preventively. NB Power has since added this fuse to its preventive maintenance strategy. It will also look at other measures it can implement on a preventive aspect.
  21. The Commission asked if CNSC staff will present further information regarding this event to the Commission upon completion of the investigation. CNSC staff responded that it is satisfied with NB Power's response to the event to date, and that it will only inform the Commission of unusual findings resulting from the ACE.

## INFORMATION ITEMS

### Exercise Unified Response Update

22. With reference to CMD 15-M48, CNSC staff presented an update on the *Exercise Unified Response* (ExUR) CNSC Action Plan. CNSC staff presented its progress on the post-exercise recommendations that were provided by independent evaluators, as presented to the Commission in November 2014.<sup>1</sup> Annex A to CMD 15-M48<sup>2</sup> (Annex A) provides updates on the 38 CNSC-specific actions that resulted from these recommendations. CNSC staff also provided the Commission with information about *Exercise Intrepid*, which was held at the Point Lepreau NGS in November 2015. CNSC staff reaffirmed to the Commission that it was committed to working with all stakeholders for continuous improvement of nuclear emergency plans and procedures.
23. On one of the recommendations, the Commission requested additional details about the renovations that were planned for the CNSC Emergency Operations Centre (EOC). CNSC staff provided details about the technical assessment meeting room and the command and coordination meeting room construction projects, scheduled for January 2016 and the 2016-17 fiscal year, respectively. CNSC staff stated that these construction projects would allow for more effective collaboration of CNSC work teams during an emergency.
24. The Commission enquired about how the CNSC could ensure that the appropriate staff would be available to respond during an emergency. CNSC staff provided information about the CNSC emergency response staffing structure. CNSC staff also noted that, while the CNSC did not have designated staff on call, an automated call-out system would ensure that CNSC staff with the required expertise would report to the CNSC EOC.
25. The Commission asked about the initiative regarding the automated generation of status reports during a nuclear emergency. CNSC staff responded that these internal status reports provided a complete picture of what was occurring at the NGS and that the automated generation of these reports will greatly improve the efficiency in obtaining the required information during an emergency.
26. The Commission further enquired about how the information in these status reports would be shared with the public. CNSC staff

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<sup>1</sup> *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on November 5, 2014*, e-Doc 4627082.

<sup>2</sup> *Annex A: Actions taken by CNSC Staff on Purdy and Harlick Recommendations for Exercise Unified Response*, e-Doc 4899367.

- responded that these status reports were used by the CNSC communications group to produce public communications materials and that the status report itself was not provided to the public.
27. With respect to the recommendation of including Commission Members in future emergency management exercises and related training, the Commission enquired about whether Commission Members had been included in past emergency exercises. CNSC staff responded that Commission Members had been included in emergency exercises during the 1990s. The Commission Secretary also provided information on past Commission Member exercise involvement and noted that adequate procedures were in place to ensure that Commission Members could be easily contacted in the event of an emergency.
28. The Commission asked about the progress being made with respect to the direct transfer of data from a licensee to the CNSC during an emergency. CNSC staff provided information about the direct data transfer. CNSC staff also noted that an agreement in principle on the use of this system was in place between the CNSC and the licensees and that CNSC staff did not foresee any major challenges in the implementation of this initiative.
29. In reference to Annex A, Action #2, the Commission enquired about the role of a CNSC site inspector in the event of an emergency. CNSC staff responded that the CNSC Nuclear Emergency Response Plan and procedures had always provided for a CNSC site inspector to be present at a licensee's emergency response facility during an emergency. CNSC staff also described how the data transfer redundancy gap, identified during ExUR, would be filled by this additional CNSC site inspector.
- Oral Presentation by Ontario Power Generation Inc.*
30. With reference to CMD 15-M48.1, OPG presented updates on OPG-led initiatives resulting from ExUR, including dose control and modelling during an accident and the implementation of other lessons learned. OPG noted that these initiatives were being addressed collaboratively with key stakeholders.
31. The Commission requested information about the Dose Control and Dosimetry Working Group and OPG's draft *Dose Control Guidance Document*. The OPG representative responded that the draft document, resulting from the working group and which would be finalized in early 2016, proposed a method by which the doses of non-OPG workers, such as first responders, would be tracked off-site during an emergency through a proposed dosimetry database at the emergency worker center. CNSC staff added that

CNSC staff participated in the working group and was involved in the review of the draft *Dose Control Guidance Document*.

32. The Commission enquired about which organization was responsible for monitoring worker doses during an emergency. The OPG representative noted that any worker who came onto an OPG site during an emergency would be monitored via the on-site OPG dose control program. The OPG representative also provided general details about the tracking of doses on- and off- site. The HC representative provided details about HC's field response capacity under the FNEP, including dosimetry. CNSC staff confirmed the information about dose control and dosimetry that was provided by OPG and HC, and provided additional information about on-site and off-site dose control during an emergency.
33. The Commission enquired about whether OPG was able to monitor worker doses remotely from within the NGS. OPG responded that, although some operational areas had tele-dosimetry capabilities, the whole NGS was not covered by that system.

*Oral Presentation by the Office of the Fire Marshal and  
Emergency Management Ontario*

34. With reference to CMD 15-M48.2, the Office of the Fire Marshal and Emergency Management Ontario (OFMEM) provided the Commission with an update on its progress with the action items that were identified in ExUR. The OFMEM noted that key findings from ExUR were related to the Provincial Nuclear Emergency Response Plan (PNERP). The OFMEM provided details about the PNERP update, which was currently underway, and how this update was addressing these key findings.
35. The OFMEM stated that it had recently moved the Provincial Emergency Operations Centre (PEOC) to a new facility with modern technical equipment and extended an invitation to the Commission Members to visit the upgraded PEOC. The Commission appreciated this invitation and indicated that it would be pleased to visit the PEOC, suggesting that this activity be scheduled as part of the Commission Members' training.
36. Noting some of the attributes of the *Nuclear Liability Act*<sup>3</sup> (NLA), the Commission enquired about the role of the Nuclear Compensation Working Group, led by the Ontario Ministry of Municipal Affairs. The OFMEM representative explained that, while the NLA covered direct losses, it did not provide compensation to a municipality that incurred indirect costs related

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<sup>3</sup> R.S.C., 1985, c. N-28.

- to a nuclear accident. In this capacity, the Nuclear Compensation Working Group was re-established to determine what level of insurance would be required to cover those losses. The Commission also asked about federal representation in the working group. The OFMEM representative responded that multiple federal partners were involved with this initiative. It was further noted that this was a complex topic for which many issues were still being examined.
37. The Commission asked about how the OFMEM would communicate with the Province of Quebec in the event of a nuclear emergency at Chalk River Laboratories in Chalk River, ON. The OFMEM responded that, during an emergency with the potential to affect Quebec, the OFMEM would notify the Quebec authorities immediately and noted that details of inter-provincial communication plans were provided.
38. The Commission enquired about the annual emergency exercises conducted by Ontario municipalities. The OFMEM representative explained that the *Ontario Emergency Management and Civil Protection Act*<sup>4</sup> required municipalities to exercise their general emergency plans annually. With respect to nuclear facilities, the OFMEM stated that these facilities had very detailed exercise schedules and that the OFMEM worked with them regarding exercise activities and objectives that would require offsite notification.
39. The Commission enquired about the areas of improvement that were identified during ExUR for the Municipality of Durham. The OFMEM representative responded that the Municipality of Durham was focusing on initiatives related to OFMEM and FNEP action items and provided information about other initiatives that the Municipality of Durham was undertaking. The Commission requested that it be provided with the Municipality of Durham's emergency planning documents and information about how the lessons learned from ExUR were being addressed. The OFMEM committed to providing the Commission with the Municipality of Durham's ExUR After Action Report and any related updates.
40. The Commission asked about how lessons learned from non-nuclear emergency preparedness exercises compared to those from nuclear exercises. The OFMEM representative responded that emergency preparedness lessons learned could be gained from all types of exercises, noting that many of the lessons learned for the Municipality of Durham from ExUR were not directly related to nuclear issues.

**ACTION**  
due  
August  
2016

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<sup>4</sup> R.S.O. 1990, c. E.9.

41. The Commission enquired about the status of the *Discussion Paper, PNERP Planning Basis Review & Recommendations*. The OFMEM representative responded that the document was delivered to CNSC staff and the Nuclear Emergency Management Coordination Committee in December 2015. The OFMEM representative stated that the OFMEM would address all of the Committee's feedback by January 2016. CNSC staff confirmed the information provided by the OFMEM. The Commission stated that it looked forward to being briefed on this matter in the new year.

*Oral Presentation by Health Canada (HC)*

42. With reference to CMD 15-M48.3, HC provided a description of the Federal Interdepartmental After Action Report resulting from ExUR and the status of actions taken to address the report recommendations. HC stated that ExUR successfully validated the FNEP, demonstrating that its governance and concept of operations were sound. HC further stated that the Federal Interdepartmental After Action Report contained 45 recommendations and that HC had developed a Management Action Plan to address them. HC also provided the Commission with information regarding the governance structure as described in the FNEP and the Federal Emergency Response Plan (FERP). HC stated that it would continue to exercise leadership for the FNEP and to strengthen relationships with its federal, provincial and international partners.

*General Questions*

43. The Commission expressed its appreciation to all organizations involved in this update and for all of the work performed related to post-exercise initiatives, particularly the coordination between stakeholders. The Commission noted that ensuring that the momentum created by post-exercise initiatives should remain a priority for all stakeholders. The Commission also requested that a glossary with acronyms be provided during future updates.
44. The Commission noted that the November 2014 Presentation from Margaret Purdy<sup>5</sup> (Purdy Report) stated that ExUR provided an inadequate simulation of the demands on interdepartmental communications at the federal level and enquired about the stakeholders' response to this observation. CNSC staff responded that, while the federal players were not fully tested during ExUR, these observations were addressed through various lessons learned initiatives. CNSC staff also stated that a workshop regarding this topic was held with all federal partners and provided the Commission with details on the improved clarity of roles and

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<sup>5</sup> CMD 14-M72.4, Presentation from Margaret Purdy, *Exercise Unified Response – May 2014, Independent Evaluation of CNSC Performance*, e-Doc 4543372 and *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on November 5, 2014*, e-Doc 4627082.

- responsibilities provided for by the FNEP, noting that federal partners aimed to finalize this work by March 2016.
45. The Commission further enquired about whether these improvements in communications and briefings at the federal level were exercised in *Exercise Intrepid*. CNSC staff responded that, since *Exercise Intrepid*'s focus was mainly at the provincial level with limited federal involvement, the opportunity to fully exercise these improvements did not present itself. The HC representative added that the intent was to have a higher level of federal participation in the next large-scale nuclear emergency exercise at Bruce Power in 2016.
  46. With respect to public health impacts and offsite protective measures, the Commission enquired about whether the roles and responsibilities of HC and the CNSC had been better defined, as was recommended in the Purdy Report. CNSC staff responded that, through the HC-CNSC Liaison Committee for Nuclear Emergency Management, the roles of both CNSC and HC under the FNEP, as well as those of other federal partners, were clarified. CNSC staff provided additional details about this matter, noting that these roles were successfully exercised during *Exercise Intrepid*. The HC representative concurred with CNSC staff. The Commission further enquired about whether Annex A, Action #5 on the definition of emergency response roles and responsibilities was fully completed. CNSC staff stated that this action should have indicated that it was a work in progress and that the HC-CNSC Liaison Committee continued to meet on a regular basis. The Commission was satisfied on this matter.
  47. The Commission asked whether the response structures of the organizations responding to a nuclear emergency were flexible. The OPG representative responded that all of OPG's response structures were flexible and explained how they could be scaled based on the size of the event. The OFMEM representative also responded that the OFMEM's response structure was flexible. The OFMEM representative provided detailed information on the actions, including decision-making, which would be taken upon notification of an event.
  48. The Commission asked whether a major infrastructure failure had been considered in emergency planning. The OFMEM representative responded that the OFMEM had many redundancies in its procedures, provided information about these redundancies and provided examples of how the OFMEM had successfully managed past non-nuclear events involving major infrastructure failures. The HC representative confirmed that HC had multiple redundancies built into its systems. CNSC staff also provided examples of the redundancies built into its systems and procedures.

49. The Commission further enquired about whether the failure of infrastructure had been considered in previous exercises. The OFMEM representative responded that ExUR included a scenario where communications were disrupted and that the OFMEM frequently exercised these types of scenarios. CNSC staff stated that *Exercise Intrepid* included a scenario involving the loss of telephone communication systems.
50. The Commission enquired about the next Commission update on the ExUR action plans. CNSC staff responded that it would update the Commission by way of the 2015 Regulatory Oversight Report for Canadian Nuclear Power Plants, noting that any significant update before that time would be presented through the NPP Status Report. **ACTION**  
due  
August  
2016
51. The Commission further enquired about whether an update from the stakeholders on their action plans would be presented during the CNSC update as well. CNSC staff responded that it would provide an update from these stakeholders at the time of the CNSC update. NB Power indicated that it would welcome the opportunity to present an update on the lessons learned from *Exercise Intrepid* at that time. The Commission indicated that it looked forward to NB Power's update. **ACTION**  
due  
August  
2016
- Municipal Nuclear Emergency Planning and Public Information
52. The Commission stated that it was concerned that there did not appear to be a complete emergency plan in place, from the federal level to the households. The Commission noted that the majority of past feedback from the public was regarding the lack of availability of nuclear emergency plans for households and municipal facilities, and enquired about how the development of such plans could be expedited. The Commission further cited the example of potassium iodide (KI) distribution, which was expedited through REGDOC-2.10.1, *Nuclear Emergency Preparedness and Response*<sup>6</sup> and whether the same should be done for emergency planning. The OPG representative responded that OPG was committed to working with all stakeholders to ensure that these emergency plans were in place. The OPG representative noted that, while KI distribution was an excellent example of how all the stakeholders could work collaboratively, the establishment of municipal emergency plans as a licensing condition was not necessary. The OFMEM representative stated that the OFMEM and other stakeholders were working collaboratively and that such licensing

<sup>6</sup> CNSC Regulatory Document REGDOC-2.10.1, *Nuclear Emergency Preparedness and Response*, October 2014.

- action was not required. The HC representative stated that HC would continue to work with stakeholders to ensure that adequate emergency plans were in place at all levels.
53. The Commission further enquired about when households in the vicinity of the NGS would be receiving detailed emergency planning information. The OPG representative stated that it would work with the municipalities and the OFMEM to ensure that this information was made available to households and municipal facilities, and noted that comprehensive information regarding nuclear emergency preparedness was provided to households during the KI distribution initiative. The OFMEM responded that its public education program was being continuously updated and that, at a minimum, the OFMEM took the opportunity to emphasize nuclear emergency preparedness annually during Emergency Preparedness Week.
54. The Commission asked about how, with the multiple responsible organizations, it could be ensured that communication with the public was properly coordinated and that messaging remained consistent throughout an emergency. CNSC staff provided information about the communication materials that it developed during emergencies and how messaging was coordinated with stakeholders. CNSC staff also confirmed to the Commission that the information provided to the public during an emergency would be delivered as the emergency developed and reflect the situation at that time.
55. The Commission further enquired about which organizations were the first to communicate with the public, particularly at the household level. The OPG representative provided details on the sequence of public communications in the event of an emergency. The OPG representative also stated that the OFMEM would be responsible for the initial off-site messaging, with the Municipality of Durham responsible for providing information to the households and municipal facilities.
56. The Commission asked whether feedback from the public on the language used for messaging during an emergency had been obtained. CNSC staff responded that, during ExUR, a community member focus group provided feedback on the consistency of messaging and language used. CNSC staff also noted that lessons learned after the Fukushima response were used to refine communication with the public during an emergency.

#### Recovery and Restoration

57. The Commission enquired about whether agreed-upon procedures for evacuation, recovery and restoration were now in place. The

- HC representative responded that, while intervention guidelines for these scenarios existed, these guidelines were in the process of being revised to better align them with international recommendations and that they should be finalized in the next year. The OFMEM representative added that the PNERP was being currently revised and that, should the federal guidelines change, the PNERP would reflect these changes.
58. The Commission asked about how the recovery and decontamination strategies complemented one another. CNSC staff responded that the decontamination strategy was part of the overall recovery strategy and that the CNSC was taking the lead on the development of the recovery strategy with primary support from HC. The HC representative concurred with the CNSC on this matter and noted that the broader recovery strategy needed to consider the roles and responsibilities of all stakeholders, which were still under discussion.
59. The Commission enquired about the challenges surrounding the definition of regulatory dose limits versus health limits during the recovery phase of a nuclear accident. The HC representative responded that, with respect to post-accident recovery strategies and associated dose limits, international guidance for appropriate limits for long-term existing radiation protection situations were being considered during discussions on this topic.

#### Exercise Intrepid

60. The Commission asked whether lessons learned from ExUR were used to improve the design of *Exercise Intrepid*. The NB Power representative responded that ExUR included three observers from NB Power and provided details about how lessons learned from ExUR were used to design *Exercise Intrepid*. The NB Power representative also explained that an oversight team, which included a senior OPG representative in addition to representatives from several other organizations, was established during the design of *Exercise Intrepid*.
61. The Commission requested additional details about the 20-kilometre evacuation scenario in *Exercise Intrepid*. CNSC staff responded that, while projected dose consequences from the scenario would not have led to a recommendation of a 20-kilometre evacuation zone during a real event, due to operational considerations and exercise objectives, this larger evacuation zone was exercised. CNSC staff also noted that the protective zones in New Brunswick were not analogous to those in Ontario. The NB Power representative provided the Commission with a detailed explanation on the general design of exercise scenarios, how the evacuation scenario for *Exercise Intrepid* was designed and noted

- that the exercise achieved its objectives as planned. The HC representative concurred with NB Power on this matter.
62. The Commission enquired about whether a similar evacuation scenario could be considered for exercises in Ontario, such as the upcoming exercise at Bruce Power in 2016. CNSC staff responded that this would be dependent on the objectives of the exercise. CNSC staff further noted that, while an evacuation was not conducted during ExUR, decision makers were able to successfully test their decision-making processes, with the exercise meeting its objectives in this regard. The OFMEM representative concurred with this information and stated that the objectives for the exercise at Bruce Power were expected to be defined in January 2016. The OFMEM representative also noted that evacuations had been successfully conducted during non-nuclear emergency exercises, showing that associated procedures were sound.

#### Presentation on Threat Assessment and the Design Basis Threat

Note: the following item was held in closed session.

63. With reference to CMD 15-M50, CNSC staff presented information on the topic of threat assessment and the design basis threat.

#### DECISION ITEM

##### Regulatory Document REGDOC-2.3.1, *Conduct of Licensed Activities: Construction and Commissioning Programs*

64. With reference to CMD 15-M49, CNSC staff presented the draft regulatory document REGDOC-2.3.1, *Conduct of Licensed Activities: Construction and Commissioning Programs*, for the Commission's approval for publication and use by CNSC staff in assessing the construction and commissioning programs of reactor facilities in Canada. CNSC staff provided a historical perspective of the regulatory oversight of reactor facility construction, and presented the objectives of REGDOC-2.3.1 and the requirements and guidance of the construction and commissioning programs. CNSC staff presented the results of the consultation process and the proposed implementation of REGDOC-2.3.1.
65. The Commission enquired about contractor audit requirements under REGDOC-2.3.1. CNSC staff explained that licensees are responsible for auditing their contractors and are required to ensure that contractors are meeting the licensee's licence requirements and following all proper management processes. CNSC staff also explained its role in contractor oversight, stating that it ensures the

- licensees' contractor oversight processes are in place. CNSC staff does regulatory oversight of licensees' activities surrounding the management of contractors. CNSC staff also looks at the records of licensees' audits and day-to-day contractor oversight.
66. Regarding certain comments from reviewers who stated that the requirements and guidance are too onerous, the Commission asked if licensees foresee any additional regulatory burden as a result of this new regulatory document. An OPG representative responded that industry expressed concerns during the review of this draft regulatory document about its applicability to existing facilities; however, it supports the current draft of this regulatory document since it provides guidance, not requirements, to existing facilities. The Bruce Power representative stated that Bruce Power has reviewed the new requirements of REGDOC-2.3.1 and is satisfied with the current draft of this document. The Bruce Power representative stated that the new requirements are reasonable and acceptable. CNSC staff stated that the guidance stipulated in REGDOC-2.3.1 is based on current best practices.
67. The Commission asked if the scope of the Darlington NGS refurbishment project will need to be changed following the publication of REGDOC-2.3.1. The OPG representative responded that OPG has looked into the requirements of this regulatory document against the Darlington NGS refurbishment project scope and stated that it does not believe it would have any effect on the scope submitted to CNSC staff.
68. The Commission enquired about the manner in which this regulatory document will be applied to small reactor facilities, and commented on the onerous requirements this regulatory document may place on such facilities. CNSC staff explained that a graded approach would be used to apply the requirements of REGDOC-2.3.1 to smaller reactor facilities. CNSC staff emphasized that the requirements of REGDOC-2.3.1 will not apply to existing small reactor facilities, but will serve as guidance and best practices. CNSC staff explained how it implements a graded approach when introducing new requirements to licensees. CNSC staff noted that the underlying focus of its regulatory framework for any reactor is to ensure safety and that the information provided in the safety case determines the extent to which requirements apply.
69. Regarding the guidance relating to the receipt of components important to safety, the Commission asked if a list of components that are deemed important to reactor safety exists. CNSC staff responded that CNSC regulatory document REGDOC-2.5.2, *Design of Reactor Facilities: Nuclear Power Plants*, defines systems important to safety, and stated that components within those systems are defined as being important to reactor safety. An

- OPG representative stated that, as a result of operating experience, it has been doing extensive reviews of the processes in place to audit and oversee vendors and has been developing enhancements to make these processes more robust. CNSC staff explained that, during construction and as part of its regular planned regulatory oversight, CNSC staff independently visits suppliers to verify their processes and CNSC staff compares information gathered during these inspections with licensees' audit reports.
70. The Commission enquired about the roles and responsibilities of oversight of modifications to test procedures. CNSC staff explained that, for modifications, the licensee's management system is required to have processes in place to control modifications to commissioning test procedures. There is a requirement under the management system that all commissioning activities be planned, managed, controlled, approved, and implemented. A representative from OPG added that it does have the governance to modify any kind of procedure, and that this governance includes multiple levels of verification and approval authorization. CNSC staff explained that, through their management system, licensees can make modifications according to their own governance; it is CNSC staff's responsibility to verify that the modifications were made appropriately.
71. The Commission recommended that CNSC staff review some of the comments provided by the public as part of the review process, citing examples of some dispositions that inadequately responded to concerns or comments raised by some of the reviewers.
72. The Commission enquired about International Atomic Energy Agency's (IAEA) inspections during construction activities. CNSC staff explained different types of inspections performed by the IAEA – unannounced, short notice, random or planned – and also the specific visit to verify the design information provided on the site.
73. The Commission asked if the commissioning of new reactor facilities is conducted under a construction licence or an operating licence. CNSC staff responded that commissioning activities are completed under both a licence to construct and a licence to operate. CNSC staff explained that the type of licence that covers commissioning activities depends on the information provided by the applicant in its request for a licence. If the request submitted by the applicant to CNSC staff encompasses adequate information for CNSC staff to recommend that the Commission issue a construction and operating licence, then this type of licence is possible. CNSC staff stated that a regulatory hold point can also be used to delineate between construction activities and commissioning activities in any licence issued.

74. After considering the recommendations submitted by CNSC staff and after incorporating the recommendations suggested by the Commission, the Commission approves regulatory document REGDOC-2.3.1, *Conduct of Licensed Activities: Construction and Commissioning Programs*, for publication and use.

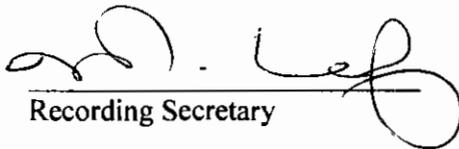
DECISION

Closure of the Public Meeting

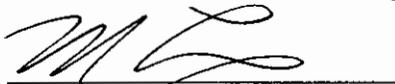
75. The meeting closed at 3:06 p.m.

  
Recording Secretary

03/02/2016  
Date

  
Recording Secretary

02/02/2016  
Date

  
Secretary

01/02/2016  
Date

APPENDIX A

CMD	DATE	File No.
15-M44	November 17, 2015	e-Docs 4882605
Notice of Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on Thursday, December 17, 2015 in the Public Hearing Room, 14 <sup>th</sup> floor, 280 Slater Street, Ottawa Ontario		
15-M45	December 2, 2015	e-Docs 4891921
Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on Thursday, December 17, 2015 in the Public Hearing Room, 14 <sup>th</sup> floor, 280 Slater Street, Ottawa Ontario		
15-M45.A	December 9, 2015	e-Docs 4900120
Updated Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on Thursday, December 17, 2015 in the Public Hearing Room, 14 <sup>th</sup> floor, 280 Slater Street, Ottawa Ontario		
15-M46	December 10, 2015	e-Docs 4900664
Approval of Minutes of Commission Meeting held on September 30 and October 1, 2015		
15-M48	December 17, 2015	e-Docs 4899372
Exercise Unified Response Update – Presentation by CNSC Staff		
15-M48.1	December 8, 2015	e-Docs 4898541
Exercise Unified Response Update – Presentation from Ontario Power Generation Inc.		
15-M48.2	December 8, 2015	e-Docs 4898668
Exercise Unified Response Update – Presentation from the Office of the Fire Marshal and Emergency Management Ontario		
15-M48.3	December 8, 2015	e-Docs 4899636
Exercise Unified Response Update – Presentation from Health Canada		
15-M47	December 14, 2015	e-Docs 4903265
Status Report on Power Reactors		
15-M49	September 23, 2015	e-Docs 4833516
REGDOC-2.3.1, Conduct of Licensed Activities: Construction and Commissioning Programs – Submission from CNSC Staff		
15-M49.A	December 17, 2015	e-Docs 4868180
REGDOC-2.3.1, Conduct of Licensed Activities: Construction and Commissioning Programs – Presentation from CNSC Staff		
15-M50	December 17, 2015	Not publicly available
Presentation on Threat Assessment and the Design Basis Threat		