Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on February 21, 2024

February 21, 2024

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held virtually on Wednesday, February 21, 2024, beginning at 9:30 a.m. EST. The meeting was webcast live via the CNSC website, and video archives are available on the CNSC website.

Present:

T. Berube, Acting President
A. Hardie
J. Hopwood
R. Kahgee
M. Lacroix
V. Remenda

D. Saumure, Commission Registrar
S. Chari, Acting Senior Counsel
M. McMillan, Recording Secretary

CNSC staff advisors were: R. Jammal, M. Fabian Mendoza, K. Hazelton, R. Richardson, L. Sigouin, L. Casterton, J. Brown, N. Tran, M. Schetselaar, D. Papaz, V. Khotylev, H. Hunter, W. Grant, S. Baskey, T. Dunbar, S. MacDougall, L. Love-Tedjoutomo, S. Klein, E. Dagher, J. Giguère, P. Elder and J. Lam.

Other contributors were:

- Bruce Power: M. Burton
- Ontario Power Generation: S. Irvine
- NB Power: J. Nouwens
- Cameco Corporation: L. Mooney
- Ministry of Environment, Province of Saskatchewan: T. Moulding
- Department of Environment and Local Government, Province of New Brunswick: M. Glynn
- Environment and Climate Change Canada: D. Kim

e-Doc 7227056 (Word)
e-Doc 7248341 (PDF)

Constitution

1. With the notice of meeting Commission Member document (CMD) 24-M1 having been properly given and all Commission Members being present, the meeting was declared to be properly constituted.

2. For the meeting, CMDs 24-M3 to 24-M9 were distributed to Commission Members. These documents are further detailed in Appendix A of these minutes.

Adoption of the Agenda

3. The agenda, CMD 24-M2, was adopted as presented.

Chair and Registrar

4. The Acting President, Dr. T. Berube, chaired the meeting of the Commission, assisted by D. Saumure, Commission Registrar.

Minutes of the Commission Meeting Held November 1-2, 2023

5. The minutes of the Commission meeting held on November 1 and 2, 2023 were approved secretarially in advance of this meeting. The Minutes of the Commission Meeting held on December 13 and 14, 2023 were not available at the time of this meeting and are to be provided to the Commission for approval ahead of the next Commission meeting in May 2024.

UPDATES ON ITEMS FROM PREVIOUS COMMISSION PROCEEDINGS

Update from CNSC Staff on the Decision Regarding the Inclusion of Radionuclides as a Chemical of Mutual Concern Under the Great Lakes Water Quality Agreement

6. In CMD 24-M9, CNSC staff provided an update on a previous request from the Commission for information on the nomination of radionuclides as Chemicals of Mutual Concern under the Great Lakes Water Quality Agreement.

7. The Commission asked for clarification regarding how environmental release requirements in Canada compare to those in the United States. CNSC staff explained that, though there is some variation between Canadian and American requirements, both

countries have controls in place to ensure that radionuclides released to the environment are kept as low as reasonably achievable.

8. The Commission noted that it is satisfied with the information provided by CNSC staff. The Commission anticipates CNSC staff's next update on this matter by the end of 2024.

Update from CNSC Staff on Radon in Certain Private Residences in Elliot Lake, ON

9. Regarding CMD 24-M8, the Commission stated that it is satisfied with the information provided by CNSC staff.

STATUS REPORT ON POWER REACTORS

10. With reference to CMD 24-M3, which includes the Status Report on Power Reactors, CNSC staff presented the following updates:

- Bruce Power Nuclear Generation Station (NGS) Unit 1 was shut down on February 16, 2024, for a planned maintenance outage and was expected to return to service on March 22, 2024
- regarding the Pickering NGS, CNSC staff were following up on a security event involving an ex-Ontario Power Generation (OPG) employee. CNSC staff will continue to inform the Commission as the situation develops.

11. The Commission asked CNSC staff to clarify whether the potential refurbishment of Pickering NGS Units 5-8 would be considered during the June 2024 hearing regarding the Pickering NGS. CNSC staff clarified that the upcoming hearing was for the Commission to consider OPG's request to operate Units 5-8 to December 2026 and not for the refurbishment of Units 5-8.

INFORMATION ITEM

CNSC Staff Update on Canadian Nuclear Laboratories' Overdue Radiation Protection Training Event

12. CNSC staff provided a verbal update to the Commission on an event regarding overdue training for employees at Canadian Nuclear Laboratories' (CNL) Chalk River Laboratories site. In January 2024, CNL identified that its electronic learning management system was not properly configured to notify workers when their training requirements were approaching expiration.

CNL identified over 400 employees with expired radiation protection training. In response, CNL expedited training and, at the time of the meeting, approximately 30 workers remained on work restriction awaiting their refresher training. CNSC staff noted that this event did not pose a risk to the public or the environment.

13. The Commission asked when the remaining 30 employees would complete their training. CNSC staff said that CNL was working to provide the training as soon as reasonably possible. CNSC staff explained that CNL had prioritized the training based on operational needs, and that the remaining 30 employees were not at risk.

14. CNSC staff committed to present further information to the Commission at a future Commission meeting, with CNL in attendance. The Commission noted that it looks forward to the future update on this matter. **ACTION** November 2024

DECISION ITEMS

Regulatory Document REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare a Site for a Deep Geological Repository*

15. With reference to CMD 24-M6 and CMD 24-M6.A, CNSC staff presented regulatory document (REGDOC[1]) REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare a Site for a Deep Geological Repository*, to be considered by the Commission for acceptance for publication and use. CNSC staff explained that REGDOC-1.2.3 consolidates requirements and guidance from the CNSC's regulatory framework to assist proponents in preparing an application for a licence to prepare site for a deep geological repository (DGR) facility.[2] CNSC staff noted that REGDOC-1.2.3 does not introduce any new requirements.

16. CNSC staff also provided information regarding the public consultation undertaken for REGDOC-1.2.3. CNSC staff conducted public consultation between February and June 2023 and received written feedback from 20 commenters.

[1] REGDOCs play a key role in the CNSC's regulatory framework. They explain to licensees and applicants what they must achieve in order to meet the requirements set out in the *Nuclear Safety and Control Act* (NSCA) and the regulations made under the NSCA. When included in the licensing basis, REGDOC requirements are mandatory and must be met to obtain or renew a licence or to operate a nuclear facility.
[2] A DGR is an engineered facility where radioactive waste is emplaced in a deep, stable, geological formation designed to isolate and contain radioactive waste over the long-term. A DGR meets the definition of a Class IB nuclear facility under the *Class I Nuclear Facilities Regulations*.

17. CNSC staff submitted that it offered consultation activities associated with REGDOC-1.2.3 to Indigenous Nations and communities, including those communities in locations that may consider hosting a future DGR. CNSC staff noted that the following Indigenous Nations and communities requested meetings with CNSC staff during the consultation period:

    - Anishinabek Nation
    - Athabasca Chipewyan First Nation
    - Historic Saugeen Métis
    - Mississaugas of Scugog Island First Nation

    CNSC staff met with each of the 4 Indigenous Nations and communities to deliver presentations about REGDOC-1.2.3 and to answer questions. Athabasca Chipewyan First Nation and Mississaugas of Scugog Island First Nation both also submitted written comments on REGDOC-1.2.3.

18. CNSC staff noted the following key themes raised during consultation with the public and Indigenous Nations and communities:

    - relevance of the references cited in the document, the applicability of the CNSC's "graded approach"[3], as well as comments related to specific requirements and guidance in the REGDOC
    - technical topics, including site characterization and monitoring, the exclusion zone[4], as well as the CNSC's lifecycle approach to licensing
    - engagement, including the role of community involvement in the licensing process, the use of Indigenous knowledge, as well as any requirements related to public disclosure

19. The Commission asked CNSC staff for additional information on the following topics related to REGDOC-1.2.3:

    - how the requirements for the safety case for a proposed DGR are considered in REGDOC-1.2.3
    - how applicants would demonstrate the credibility of independent experts verifying analyses for a DGR, if required
    - how CNSC staff would assess the safety analysis for a DGR throughout the licensing stages
    - knowledge management practices over the lifetime of a DGR

[3] With a graded approach, requirements are applied in proportion to the risks and particular characteristics of the facility or licensed activity.
[4] An exclusion zone is a parcel of land within or surrounding a nuclear facility on which there is no permanent dwelling and over which a licensee has the legal authority to exercise control.

- applicability of conventional health and safety requirements throughout the lifecycle of a DGR project
- how the radiation protection safety and control area (SCA) would apply during the site preparation phase
- how an impact assessment under the *Impact Assessment Act* (IAA) would align with the application of REGDOC-1.2.3

20. CNSC staff provided responses to the Commission's questions, including:

    - safety case requirements are provided in REGDOC-2.4.4, *Safety Analysis for Class IB Nuclear Facilities*[5] and REGDOC-2.11.1, *Waste Management, Volume III*[6], which are referenced within REGDOC-1.2.3
    - it is the applicant's responsibility to determine that any independent experts have appropriate qualifications
    - the level and type of information required from applicants pertaining to the safety analysis for a DGR evolves throughout each licensing phase
    - long-term knowledge management is an actively developing field; international organizations such as the Nuclear Energy Agency provide knowledge management guidance for both the CNSC and proponents
    - proper conventional health and safety practices are required throughout the lifecycle of a DGR project, per provincial and federal requirements
    - though there are no expected radiological substances to be handled during site preparation, a radiation protection program is still required for the protection of workers from natural hazards such as radon

    CNSC staff also provided a description of the application and public consultation process that a proponent would have to follow under the IAA and the CNSC's regulatory framework

21. Noting that the consultation report appended to CMD 24-M6 did not discuss consultation with the specific Indigenous Nations and communities in locations where a DGR site selection process is currently underway[7], the Commission asked CNSC staff to provide additional detail on its engagement efforts regarding REGDOC-1.2.3 with those communities. CNSC staff responded that it had reached out to Indigenous nations and communities in the areas

[5] REGDOC-2.4.4, Safety Analysis for Class IB Nuclear Facilities, CNSC, October 2022.
[6] REGDOC-2.11.1, *Waste Management*, *Volume III*: *Safety Case for the Disposal of Radioactive Waste*, Version 2, CNSC, January 2021.
[7] The Nuclear Waste Management Organization's Adaptive Phase Management site selection process has identified two potential locations (Saugeen Ojibway Nation-South Bruce area; Wabigoon Lake Ojibway Nation-Ignace area)

where a DGR is currently under consideration to seek their comments. CNSC staff stated that while it has been conducting ongoing engagement activities with the Saugeen Ojibway Nation and the Wabigoon Lake Ojibway Nation, as well as other communities, neither nation provided any comments on REGDOC-1.2.3.

22. The Commission asked for more information on how CNSC staff considered application of the *United Nations Declaration on the Rights of Indigenous Peoples Act*[8] (UNDA) in the development of REGDOC-1.2.3. CNSC staff stated that the CNSC is supporting the ongoing development of implementation measures as part of the *UNDA Action Plan*[9]. CNSC staff noted that UNDA Action Plan Measure 32, which states that the Government of Canada will develop guidance to support successful free, prior, and informed consent, is particularly applicable to REGDOC-1.2.3. CNSC staff explained that Natural Resources Canada (NRCan) is leading the implementation of Action Plan Measure 32 and that the CNSC would update its regulatory framework as required based on NRCan's progress on this matter.

23. CNSC staff added that the majority of comments received from the Indigenous Nations and communities that commented on REGDOC-1.2.3 were more applicable to REGDOC-3.2.1, *Public Information and Disclosure*[10] and REGDOC-3.2.2, *Indigenous Engagement*[11], which are currently undergoing revision.

Decision on REGDOC-1.2.3

24. After considering the recommendations submitted by CNSC staff, a majority of Commission Members accepted REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository* for publication and use. The Commission is satisfied that the proposed REGDOC clarifies the regulatory requirements for applicants. Following the meeting, the Commission issued its decision[12] with respect to this matter. Commission Member R. Kahgee dissented from the majority opinion. **DECISION**

[8] S.C. 2021, c. 14.
[9] *United Nations Declaration on the Rights of Indigenous Peoples Act Action Plan 2023-2028*, Department of Justice Canada, 2023.
[10] CNSC REGDOC-3.2.1, *Public Information and Disclosure*, CNSC, May 2018.
[11] CNSC REGDOC-3.2.2, *Indigenous Engagement*, Version 1.2, CNSC, February 2022.
[12] Commission Decision on Regulatory Document, *REGDOC-1.2.3*, CNSC, February 2024.

25. Commission Member R. Kahgee is of the view that CNSC staff conducted inadequate engagement and consultation with the specific Indigenous Nations located in close proximity to the sites currently being considered for a DGR. The Commission Member noted that the CNSC has terms of reference for long-term engagement with the Saugeen Ojibway Nation[13], and that simply notifying the Nations of the development of the REGDOC and asking for comments was insufficient. The Commission Member did not raise concern with the contents of the REGDOC or CNSC staff's disposition of the comments received.

26. The Commission expects that CNSC staff will conduct engagement and consultation with Indigenous Nations and communities in the next revisions of REGDOC-3.2.1 and REGDOC-3.2.2.

Regulatory Document REGDOC-2.4.5, *Nuclear Fuel Safety and Qualification*

27. With reference to CMD 24-M7 and CMD 24-M7.A, CNSC staff presented REGDOC-2.4.5, *Nuclear Fuel Safety and Qualification*, to be considered by the Commission for acceptance for publication and use. CNSC staff informed the Commission that REGDOC-2.4.5 clarifies requirements and provides guidance for the design, operation, monitoring, qualification, and performance assessments of fuel for operating reactor facilities. CNSC staff noted that REGDOC-2.4.5 consolidates existing requirements and does not introduce any new requirements.

28. CNSC staff reported that it undertook public consultation for REGDOC-2.4.5 between September 2022 and January 2023 and that Indigenous Nations and communities were notified of the public consultation period via the CNSC's mailing list. During the public consultation period, CNSC staff received a total of 188 comments from 11 commenters, including:

    - 78 comments from CANDU industry[14]
    - 99 comments from small modular reactor (SMR) industry[15]
    - 11 comments from individuals

    No comments were received from Indigenous Nations and communities

[13] CNSC Arrangements with Indigenous Nations and Communities.
[14] CANDU industry commenters included OPG, Bruce Power, NB Power, CNL, and the Canadian Nuclear Association.
[15] SMR industry commenters included Global First Power, Terrestrial Energy Inc, GE-Hitachi Nuclear Energy, and Prodigy Clean Energy.

29. CNSC staff noted the following key themes raised during public consultation:

- placement of REGDOC-2.4.5 under the safety analysis SCA
- the focus of the REGDOC
- the potential duplication of requirements
- the ability to use third-party and international fuel suppliers
- technology neutrality
- more guidance on fuel qualification

30. CNSC staff reported that it held a workshop with commentors in July 2023 to further understand the comments and to answer questions. CNSC staff noted that workshop participants were satisfied with its responses.

31. The Commission asked CNSC staff to provide additional information related to REGDOC-2.4.5, including:

- clarification of the fuel safety requirements related to coolable fuel geometry and the insertion of negative reactivity
- consideration of environmental impact in the fuel design process
- how REGDOC-2.4.5 addresses fuel manufacturing quality assurance
- how REGDOC-2.4.5 would apply to new reactor designs and new licensees
- when REGDOC-2.4.5 would be updated
- fuel bundle inspections
- assessment of fuel monitoring and inspection program findings
- fuel design authority

32. CNSC staff provided responses to the Commission's questions, including that:

- fuel must be able to be adequately cooled during accident conditions and be designed such that damaged fuel will not impede reactor control (e.g., the insertion of shutoff rods)
- the consideration of environmental impacts in fuel design pertains to the fuel's ability to contain fission products, the impacts of the fuel manufacturing process, and the ability to dispose of the fuel in the future
- for quality assurance, REGDOC-2.4.5 refers to CSA Group Standard N299.1 *Quality Assurance Program Requirements for the Supply of Items and Services for Nuclear Power Plants*[16]

[16] CSA N299.1, *Quality Assurance Program Requirements for the Supply of Items and Services for Nuclear Power Plants*, CSA Group, 2019.

- licensees can elect to contract qualified third-party fuel designers and manufacturers
- REGDOC-2.4.5 applies to any solid nuclear fuel design; for liquid fuel, CNSC staff would identify the applicable sections of REGDOC-2.4.5 and also include any other requirements in a licensee's Licence Conditions Handbook
- REGDOC-2.4.5 would be updated on the CNSC's typical 5-year cycle and/or after a new reactor design has been in operation long enough to obtain substantial operating experience
- fuel bundle inspections can consist of visual inspections of a fuel bundle in an irradiated fuel bay, or, if required, in-depth inspection in a hot cell
- fuel monitoring and inspection program findings are assessed at least annually under REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*[17]; licensees often conduct more frequent assessments based on fuel performance
- a licensee would designate a fuel design authority who would then have the ability to delegate responsibilities to qualified individuals

The Commission was satisfied with the information provided by CNSC staff.

33. The Commission asked if any nuclear power plant licensees in attendance had concerns regarding REGDOC-2.4.5. Representatives from Bruce Power, OPG, and New Brunswick Power (NB Power) stated that they had no outstanding concerns.

Decision on REGDOC-2.4.5

34. After considering the recommendations submitted by CNSC staff, the Commission accepts REGDOC-2.4.5, *Nuclear Fuel Safety and Qualification*, for publication and use. The Commission is satisfied that the REGDOC clarifies and consolidates the regulatory requirements for nuclear fuel safety and qualification. Following the meeting, the Commission issued its decision with respect to this matter[18]. **DECISION**

[17] CNSC REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, Version 2, CNSC, April 2016.
[18] Commission Decision on Regulatory Document, *REGDOC-2.4.5*, CNSC, February 2024.

Regulatory Document REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, Version 3

35. With reference to CMD 24-M4 and CMD 24-M4.A, CNSC staff presented REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, Version 3, to be considered by the Commission for acceptance for publication and use. CNSC staff reported that REGDOC-3.1.1, Version 3, consolidates and clarifies requirements for reporting found in the *Nuclear Safety and Control Act*[19] (NSCA) and the regulations made pursuant to the NSCA, including requirements for content and timing of reports and additional specific reporting provisions. Changes from REGDOC-3.1.1, Version 2, include revisions to scheduled reports and event reporting, and updates to terminology and definitions. In slide 20 of its presentation (CMD 24-M4.A), CNSC staff identified three corrections to minor errors in CMD 24-M4.

36. CNSC staff informed the Commission that it undertook public consultation for REGDOC-3.1.1, Version 3, between April and August 2022. CNSC staff received a total of 103 comments from 4 commenters:

    - OPG
    - Bruce Power
    - NB Power
    - Curve Lake First Nation

    CNSC staff also held a workshop with commentors in February 2023 to further understand the concerns raised.

37. Regarding consultation with Indigenous Nations and communities, CNSC staff reported that 17 Indigenous Nations and communities located near nuclear power plants were directly notified, in addition to the standard methods used for notifying the public of public consultation periods. Only Curve Lake First Nation provided a comment on REGDOC-3.1.1, Version 3.

38. CNSC staff noted the following key themes raised during public consultation:

    - perceived increase in administrative burden
    - missed opportunities to provide additional guidance
    - concerns over new and revised definitions
    - communication of reportable events with Indigenous Nations and communities

[19] S.C. 1997, c. 9

39. The Commission asked CNSC staff for additional information related to REGDOC-3.1.1, Version 3, including:

- how REGDOC-3.1.1, Version 3, supports the dissemination of information to the public
- reporting on security events
- application of REGDOC-3.1.1, Version 3, to smaller licensees
- the benefits of scheduled reporting
- the use of the unit counts per minute (CPM) in the limits for personnel contamination events
- engagement with Indigenous Nations and communities that have engagement agreements with the CNSC
- how the level of risk significance is determined for reportable events
- difference between loose and fixed contamination events
- lessons learned from the implementation of REGDOC-3.1.1, Version 2

40. CNSC staff provided responses to the Commission's questions, including that:

- REGDOC-3.1.1, Version 3, refers to REGDOC-3.2.1, which details what information licensees must share with the public
- depending on information classification, reporting on security-related events typically occurs in *in-camera* sessions with the Commission
- CNSC staff will consider a graded approach for the application of REGDOC-3.1.1, Version 3, for smaller licensees
- scheduled reports are useful for trending and provide insights into the effectiveness of programmatic controls
- the unit CPM is used for personnel contamination events because it is the unit used by field instrumentation
- CNSC staff engaged with specific Indigenous Nations and communities in accordance with their engagement agreements
- licensees are responsible for determining the significance of events in accordance with their management system and CNSC staff verify the event significance
- fixed contamination is attached to an object whereas loose contamination can be removed
- CNSC staff will consider lessons learned from REGDOC-3.1.1, Version 2, during the implementation of Version 3

The Commission was satisfied with the information provided by CNSC staff on the above topics.

41. The Commission asked for more information regarding the administrative burden on licensees, should REGDOC-3.1.1, Version 3, be approved. CNSC staff acknowledged that the REGDOC revision does introduce new reporting requirements; however, it also adjusts some existing requirements to minimize the additional burden to licensees. Representatives from OPG, Bruce Power, and NB Power stated that they did not have concerns with the revised REGDOC; however, they anticipated an increase in administrative burden due to the required quarterly reporting. The licensee representatives were of the view that since CNSC inspectors have conducted fewer on-site inspections in recent years, there has been an additional burden on licensees to provide information to the CNSC.

42. Asked about the reduction in on-site inspections, CNSC staff informed the Commission that the presence of site inspectors at the nuclear power plants has not been reduced; however, there has been an increase in virtual inspections following the COVID-19 pandemic. CNSC staff heard the licensees' concerns and noted that it would be discussing its approach with them. The Commission directs CNSC staff to update the Commission on any recommendations that may arise from those discussions. **ACTION** December 2024

Decision on REGDOC-3.1.1, Version 3

43. After considering the information and recommendations submitted by CNSC staff, the Commission accepts REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants*, Version 3, for publication and use. The Commission is satisfied that the revised REGDOC consolidates and clarifies the requirements for reporting found in the NSCA and is further satisfied with the new requirements it sets out. Following the meeting, the Commission issued its decision with respect to this matter[20]. **DECISION**

Regulatory Document REGDOC-2.9.2, *Controlling Releases to the Environment*

44. With reference to CMD 24-M5 and CMD 24-M5.A, CNSC staff presented REGDOC-2.9.2, *Controlling Releases to the Environment* to be considered by the Commission for acceptance for publication and use. CNSC staff informed the Commission that REGDOC-2.9.2 clarifies the requirements and provides guidance for controlling releases to the environment and is meant to be used

[20] Commission Decision on Regulatory Document, *REGDOC-3.1.1*, Version 3, CNSC, February 2024.

in conjunction with REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures*[21].

45. CNSC staff previously brought REGDOC-2.9.2 before the Commission in CMD 22-M27[22] at the September 15, 2022 Commission Meeting. In the Minutes of the September 15, 2022 Commission Meeting[23], the Commission declined to accept the REGDOC for publication and use. The Commission had decided that, while it agreed with CNSC staff's proposed approach to redefining licence limits, additional work was required to:

- clarify terms used in the REGDOC
- clarify expectations for implementing the REGDOC
- address concerns regarding regulatory impacts and cost/benefit analysis

46. CNSC staff informed the Commission that, following the Commission's September 2022 decision, it re-engaged with licensees and provincial governments to better understand concerns and to address the issues raised by the Commission. In Appendix D of CMD 24-M5, CNSC staff highlighted the changes it has made to REGDOC-2.9.2 from the version presented to the Commission in September 2022. Such changes included:

- clarification of terms
- clarification of expectations for implementation
- completion of a cost-benefit analysis

47. CNSC staff noted the following four areas remain where CNSC staff and industry understand each other's positions but were not in agreement:

- use of design-based limits versus exposure-based derived release limits for nuclear substances
- perceived misalignment with CSA N288 series documents
- cost of implementation at existing facilities
- harmonizing with provincial authorities (release of hazardous substances)

[21] CNSC REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures*, Version 1.2, CNSC, September 2020.
[22] CMD 22-M7, REGDOC-2.9.2, *Environmental Protection: Controlling Releases to the Environment*, CNSC, August 2022.
[23] *Minutes of the Canadian Nuclear Safety Commission (CNSC) Meeting held on September 15, 2022*, CNSC, October 2022.

48. The Commission asked CNSC staff for additional information related to REGDOC-2.9.2, including:

- application of REGDOC-2.9.2 to new licence applicants
- requirements for best available technology and techniques assessments (BATEA)
- reasoning for transition from derived release limits (DRLs) to licensed release limits (LRLs)
- effort required from licensees to transition from DRLs to LRLs
- timeline for REGDOC-2.9.2 implementation
- work done with provincial governments
- consideration of adaptive management
- development of LRLs for new facilities

The Commission also noted the useful information provided by CNSC staff's cost-benefit analysis.

49. CNSC staff provided responses to the Commission's questions, including that:

- CNSC staff have worked with new applicants to ensure that they will be able to comply with REGDOC-2.9.2
- BATEA assessments will be required for new licensees, not existing facilities
- DRLs apply only to nuclear substances, are based upon a critical receptor achieving an effective dose equal to the public dose limit of 1 millisievert per year, and are not in line with international best practices; the establishment of LRLs will remedy these shortcomings
- the LRL approach is in line with the International Atomic Energy Agency's (IAEA) *International Basic Safety Standards*[24] requirement 29
- the calculation of LRLs is not complex; however, it will require training and additional administrative effort for licensees during the transition period
- as licensees will develop implementation plans based on their specific programs, exact timelines will vary case-by-case
- CNSC staff will allow for flexible implementation timelines to allow licensees to align the implementation of REGDOC-2.9.2 with the cyclical updates of key facility documents
- CNSC staff have worked closely with provincial authorities to ensure alignment regarding the regulation of hazardous substances
- REGDOC-2.9.2 specifies requirements for adaptive management

[24] *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards*, *General Safety Requirements Part 3*, IAEA, 2014.

- REGDOC-2.9.2 outlines the steps for new licensees to conduct a BATEA assessment and to establish their LRLs

50. The Commission asked for feedback from OPG, Bruce Power, NB Power, and Cameco. Licensee representatives provided the Commission with a shared statement. The representatives were of the view that REGDOC-2.9.2 would put excessive administrative burden and expense on licensees and that the document was not required to maintain the safe operation of nuclear facilities. The representatives disagreed with the conclusions of CNSC staff's cost-benefit analysis, noting that the analysis significantly underestimated the financial impact to licensees. The representatives also voiced concern that REGDOC-2.9.2 would negatively impact public trust in the licensees' ability to operate safely.

51. In response to the comments made by the licensee representatives, CNSC staff said that REGDOC-2.9.2 was necessary to provide a consistent approach to the release of hazardous substances and to implement release limits that are more useful from a regulatory perspective. CNSC staff noted that, previously, some action levels and DRLs were set too high to be meaningful regulatory tools. CNSC staff also stated that it completed its cost-benefit analysis in accordance with Government of Canada guidelines and policies.

52. The Commission asked for feedback from other government agencies. Representatives from the Saskatchewan Ministry of Environment, the New Brunswick Department of Environment and Local Government, and Environment and Climate Change Canada informed the Commission that their agencies did not have any concerns with the implementation of REGDOC-2.9.2.

Decision on REGDOC-2.9.2

53. After considering the information and recommendations submitted by CNSC staff, the Commission accepts REGDOC-2.9.2, *Controlling Release to the Environment*, for publication and use. The Commission is satisfied with the measures taken by staff since September 2022 to address the Commission's directions. The Commission concludes that the requirements imposed by REGDOC-2.9.2 will provide a necessary regulatory tool in the form of LRLs and will improve the CNSC's regulatory framework regarding release limits for hazardous substances. The Commission acknowledges the issues raised by licensees but is of the view that REGDOC-2.9.2 is necessary to bring the CNSC's approach to environmental release limits in line with international best practices. The Commission notes that the flexible implementation periods proposed by CNSC staff will assist licensees in their

DECISION

transition to compliance with the REGDOC. Following the meeting, the Commission issued its decision with respect to this matter[25].

Closure of the Public Meeting

54. The public meeting closed at 3:14 EST on February 21, 2024.

McMillan, Megan

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Recording Secretary _____ Date

Salmon, Candace

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Commission Registrar _____ Date

[25] Commission Decision on Regulatory Document, *REGDOC-2.9.2*, CNSC, February 2024.

APPENDIX A

24-M1	2024-01-18	7196355
Notice of Meeting of the Commission on February 21, 2024		
24-M2	2024-02-08	7196491
Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held on February 21, 2024		
24-M10	2024-02-01	7224155
Approval of the Minutes of Commission Meetings held on November 1 and 2, 2023		
24-M9	2024-02-09	7217994 – English 7222030 – French
Updates on items from previous Commission proceedings Update from CNSC Staff on the decision regarding the inclusion of radionuclides as a chemical of mutual concern under the Great Lakes Water Quality Agreement (Action item #19575) Written submission from CNSC Staff		
24-M8	2024-02-06	7218034 – English 7221340 – French
Updates on items from previous Commission proceedings Update from CNSC staff on radon in certain private residences in Elliot Lake, ON (Action Item # 30589) Written submission from CNSC Staff		
24-M3	2024-02-14	7217060 – English 7221668 – French
Status Report Status Report on Power Reactors Written submission from CNSC Staff		
24-M6	2024-02-07	7212741 – English 7212760 – French
Decision Items REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository* Written submission from CNSC Staff		
24-M6.A	2024-02-14	7221457 - English 7221450 - French
Decision Items REGDOC-1.2.3, *Licence Application Guide: Licence to Prepare Site for a Deep Geological Repository* Presentation from CNSC Staff		

24-M7	2024-02-06	7215987 – English 7215990 – French
Decision Items REGDOC 2.4.5, *Nuclear Fuel Safety and Qualification* Written submission from CNSC Staff		
24-M7.A	2024-02-14	7222326 – English 7222325 – French
Decision Items REGDOC 2.4.5, *Nuclear Fuel Safety and Qualification* Presentation from CNSC Staff		
24-M4	2024-02-05	7215205 – English 7215206 – French
Decision Items REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants, version 3* Written submission from CNSC Staff		
24-M4.A	2024-02-14	7222304 – English 7222299 – French
Decision Items REGDOC-3.1.1, *Reporting Requirements for Nuclear Power Plants, version 3* Presentation from CNSC Staff		
24-M5	2024-02-06	7216489 – English 7216492 – French
Decision Items REGDOC-2.9.2, *Controlling Releases to the Environment* Written submission from CNSC Staff		
24-M5.A	2024-02-14	7222227 – English 7222231 – French
Decision Items REGDOC-2.9.2, *Controlling Releases to the Environment* Presentation from CNSC Staff		
24-M11	2024-02-16	7224059 **Protected B**
Event Initial Report Security event reported by Ontario Power Generation Written submission from CNSC Staff This submission contains prescribed security information and is not publicly available		