



Minutes of the Canadian Nuclear Safety
Commission (CNSC) Meeting held on
December 15 and 16, 2022

December 15 and 16, 2022

Minutes of the Canadian Nuclear Safety Commission (CNSC) meeting held virtually on Thursday December 15, 2022, beginning at 1:00 p.m. EST and Friday December 16, 2022, beginning at 9:30 a.m. EST.

Present:

R. Velshi, President
T. Berube
S. Demeter
R. Kahgee
M. Lacroix
I. Maharaj
V. Remenda

D. Saumure, Registrar
L. Thiele, Senior General Counsel
D. MacDonald, Recording Secretary

CNSC staff advisors were: P. Burton, K. Gorzkowski, J. Lam, M. Fabian Mendoza, S. Akhter, R. Snider, Q. Zheng, R. Froess, W. Stewart, A. Viktorov, A. McAllister, A. Mostafa, C. Purvis, A. Levine and K. Randhawa

Other contributors were:

- Cameco Corporation: L. Mooney, K. Nagy, K. Cuddington and R. Peters
- Orano Canada Inc.: D. Huffman
- Saskatchewan Health Authority: J. Irvine
- Saskatchewan Ministry of Energy and Resources: K. Brecht
- Saskatchewan Ministry of Labour Relations and Workplace Safety: L. Kaskiw
- Saskatchewan Ministry of Environment: T. Moulding
- Énergie NB Power: J. Nouwens and N. Reicker
- BWXT Nuclear Energy Canada: D. Snopek
- SRB Technologies (Canada) Inc.: S. Levesque
- Nordion: R. Bandali
- Best Theratronics: M. Efseaff
- BWXT Medical Ltd.: J. Cirtain

Constitution

1. With the notice of meeting [Commission Member document \(CMD\) 22-M43](#) having been properly given and all permanent Commission Members being present, the meeting was declared to be properly constituted.
2. For the meeting, [CMD 22-M35, CMD 22-M36, CMD 22-M37, and CMD 22-M43 to CMD 22-M46](#) were distributed to Commission Members. These documents are further detailed in Appendix A of these minutes.

Adoption of the Agenda

3. The revised agenda, [CMD 22-M44.B](#), was adopted as presented.

Chair and Registrar

4. The President chaired the meeting of the Commission, assisted by D. Saumure, Commission Registrar, and D. MacDonald, Recording Secretary.

Participant Funding Program

5. In its [Notices of Participation at a Commission Meeting](#), the CNSC invited members of the public to intervene by way of written submission regarding the meeting items to consider two 2021 Regulatory Oversight Reports prepared by CNSC staff. In the spirit of reconciliation and in recognition of the Indigenous oral tradition for sharing knowledge, Indigenous Nations and communities were invited to also make oral presentations regarding CNSC staff's Regulatory Oversight Reports. The CNSC announced the availability of funds through the [Participant Funding Program \(PFP\)](#) to assist in the review of these reports. A Funding Review Committee (FRC) – independent of the CNSC – reviewed funding applications and made recommendations for funding to the eligible applicants.

Minutes of the Commission Meeting Held November 1-3, 2022

6. The Commission approved the [minutes of the November 1, 2, and 3, 2022](#), Commission meeting as presented in CMD 22-M46.

STATUS REPORT ON POWER REACTORS

7. With reference to [CMD 22-M45](#), which includes the Status Report on Power Reactors, CNSC staff presented the following updates:
 - Bruce Power Nuclear Generating Station (NGS) Unit 3 was shut down to repair an instrument leak and had since returned to service;
 - Bruce Power NGS Unit 4 was returned to service following a planned outage;
 - Bruce Power NGS Unit 6, which is offline for a major component replacement, had the moderator fill completed;
 - Ontario Power Generation's (OPG) Darlington NGS Unit 4 was shut down to repair a small heat transport system leak; and
 - New Brunswick (NB) Power's Point Lepreau NGS was shut down after experiencing a partial loss of Class IV¹ power on December 14, 2022, followed by a leak on an instrumentation line connected to the primary heat transport system.
8. CNSC staff informed the Commission that, as a result of the December 14 event at the Point Lepreau NGS, NB Power had declared a radiation alert² and the CNSC had partially activated its emergency operations centre (EOC). CNSC staff reported that no injuries to workers or releases to the environment above regulatory limits had occurred, and that shutdown system 1 and shutdown system 2³ functioned as designed to safely shut down the reactor. CNSC staff noted that Class IV power had since been restored, the leak had been isolated, and that the Point Lepreau NGS would remain shut down to allow NB Power to perform the required maintenance.

¹ The [electrical systems](#) of an NGS are classified into 4 levels of reliability, where Class I is the most reliable and Class IV the least. Class IV power is used to supply systems that are not essential to safety.

² The Point Lepreau NGS defines 3 emergency classes: radiation alert, site area emergency, and general radiation emergency – where radiation alert is the least severe.

³ The Point Lepreau NGS has two independent systems to automatically safely shutdown the reactor. These systems trigger on separate, but sometimes common, criteria and are designed to simultaneously activate.

9. The Commission asked for more information on the Point Lepreau NGS event, including about the cause and any identified consequences. NB Power representatives informed the Commission that the reactor was in a safe state. The representatives explained that NB Power was investigating the cause of the event and believed that the Class IV outage triggered the event. The representatives noted that the leak was entirely contained within the reactor building, which resulted in elevated airborne tritium concentrations that NB Power was working to reduce. The representatives highlighted that NB Power staff had safely accessed the reactor building to correct the leak.
10. Asked for details about the leak, an NB Power representative explained that the leak occurred on a $\frac{3}{4}$ -inch instrumentation line. The representative stated that the leak likely formed during the shutdown process and may have been caused by a vibration. The representative added that NB Power would analyze the failed line to determine if it was flawed. Regarding the volume of water that had leaked, the representative noted that NB Power was still working to quantify the amount and described the reactor's liquid recovery systems.
11. Asked about the partial loss of Class IV power, an NB Power representative provided details about the power systems at the Point Lepreau NGS. The representative noted that such outages are not common, but that reactor design and procedures ensure that such events are handled safely. The representative explained that the Class IV power issue occurred due to a fault on a station transformer. The representative expressed that NB Power would assess the extent of repairs required and anticipated being able to safely access the transformer within 2 days.
12. The Commission asked about the emergency response process and how it is triggered. An NB Power representative detailed the criteria for declaring an emergency. The representative noted that declaring a radiation alert assembles the emergency response organization to support the incident response. The representative added that NB Power would terminate the radiation alert after it had completed an assessment of the condition within the reactor building. CNSC staff provided details on its EOC response levels and stated that while the event did not meet the criteria to partially activate the EOC, CNSC staff chose a higher level of response in order to be better prepared.

13. The Commission noted the number of NGS outages, both planned and unplanned, detailed in the status report. CNSC staff agreed that this was unusual and stated that it would investigate if there was a trend in the three outages that had been caused by small leaks. CNSC staff added that it would ensure that licensees verify and prevent degradation mechanisms, and share operating experience and lessons learned.
14. The Commission expects NB Power to provide further information to the Commission regarding the Point Lepreau NGS event, including any lessons learned, at a future public meeting when such information becomes available. The Commission further directs CNSC staff to prepare an event report for the Commission when details become available.

Action
By
April 2023

INFORMATION ITEMS

Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021

15. With reference to [CMD 22-M35](#) and [CMD 22-M35.A](#), CNSC staff presented its 2021 regulatory oversight report (ROR) for uranium and nuclear substance processing facilities (UNSPFs) in Canada (the UNSPF ROR). The UNSPF ROR provides an overview of licensee safety performance at the following facilities.
- Uranium processing facilities:
 - Cameco Corporation's (Cameco) Blind River Refinery;
 - Cameco's Port Hope Conversion Facility;
 - Cameco Fuel Manufacturing Inc.; and
 - BWXT Nuclear Energy Canada Inc. (BWXT NEC) Toronto and Peterborough.
 - Nuclear substance processing facilities:
 - SRB Technologies (Canada) Inc. (SRBT);
 - Nordion (Canada) Inc. (Nordion);
 - Best Theratronics Ltd.; and
 - BWXT Medical Ltd. (BWXT Medical)
16. The UNSPF ROR includes information on the following:
- CNSC staff's regulatory oversight of the relevant UNSPFs, including performance ratings;

- CNSC staff's assessment of safety at UNSPFs across all 14 safety and control areas (SCAs), with a focus on the radiation protection, conventional health and safety, and environmental protection SCAs;
 - engagement with Indigenous Nations and communities; and
 - reportable events and other matters of interest, including the CNSC's independent environmental monitoring program (IEMP).
17. In addition, CNSC staff's presentation provided:
- key themes from interventions regarding the UNSPF ROR, including consultation and engagement with Indigenous Nations and communities; and
 - errata to the UNSPF ROR that did not impact the conclusions of the ROR.
18. CNSC staff reported that UNSPFs operated safely in 2021. CNSC staff confirmed that, at all facilities, radiation protection programs were effective at keeping doses as low as reasonably achievable (ALARA), environmental protection programs were effective at protecting people and the environment, and conventional health and safety programs continued to protect workers.
19. Licensee representatives provided oral comments to the Commission. The representatives highlighted the strong performance in 2021 and detailed recent activity, including emergency exercises, as well as engagement with the public and Indigenous Nations and communities.
20. The Commission found the UNSPF ROR to be a well written and comprehensive document. The Commission appreciated the inclusion of information on notices of non-compliance with each SCA and found it allowed for a fuller understanding of where issues are occurring.

Interventions

21. With respect to the CNSC's [PFP availability for the 2021 UNSPF ROR](#), the FRC recommended that [up to \\$48,756.20 in participant funding](#) be provided to:
- Curve Lake First Nation
 - Kebaowek First Nation
 - Nuclear Transparency Project
 - Algonquins of Pikwakanagan First Nation

22. The Commission received written interventions regarding the UNSPF ROR from Curve Lake First Nation (CLFN) ([CMD 22-M35.2](#)) and the Nuclear Transparency Project ([CMD 22-M35.3](#)).
23. Algonquins of Pikwakanagan First Nation (AOPFN) provided the Commission with an oral presentation and written intervention ([CMD 22-M35.1](#), [CMD 22-M35.1A](#)) that were focused on the facilities located within its traditional territory. AOPFN discussed recent engagement activities and expressed concerns related to information sharing, impacts to mental health and wellness, and Aboriginal⁴ rights.
24. Kebaowek First Nation (KFN) provided the Commission with an oral presentation and written intervention ([CMD 22-M35.4](#)). KFN discussed its concerns related to Indigenous consultation, the transport of nuclear waste, and the reportable events included in the UNSPF ROR.
25. The Commission asked for an update on the status of formal relationship agreements with Indigenous Nations and communities. CNSC staff responded that establishing such agreements is a good practice that is becoming more common among licensees. CNSC staff added that engagement activities can be conducted without establishing a formal agreement and described how such relationships develop over time. With respect to CLFN, CNSC staff stated that the CNSC's formal relationship with CLFN includes a focus on developing an Indigenous Knowledge (IK) and land use study. CNSC staff provided the Commission with information on how this study may inform CNSC practices and confirmed that this work will be a priority in 2023.
26. The Commission asked AOPFN for more information regarding its concerns with respect to the psychosocial impacts of UNSPFs. An AOPFN representative explained that, due to a deep connection to the land, what occurs on the land can impact the mental health of AOPFN community members. The AOPFN representative highlighted the importance of sharing information and in-person meetings to build trust. CNSC staff confirmed that it was aware of these psychosocial concerns and that it was working with other federal government organizations to better understand and

⁴ "Aboriginal" is the term used in S. 35 of the Constitution Act, 1982. In all other cases, "Indigenous" is the preferred terminology and used accordingly.

- mitigate these. CNSC staff added that it would also be working in collaboration with AOPFN and other Indigenous Nations and communities to develop solutions.
27. Asked about information available on the Open Government portal,⁵ CNSC staff expressed that disseminating comprehensive environmental data is a priority. CNSC staff explained that effluent data is currently posted to the portal and that it is working to continuously improve the available information. CNSC staff noted that it plans to include other information, such as groundwater and stormwater data, on the portal in the future.
28. The Commission asked for more information on Indigenous guardian programs and the CNSC's IEMP. An AOPFN representative provided details on AOPFN's guardian program and noted that it is in the early stages. The AOPFN representative added that it plans to connect with other Indigenous Nations and communities that have already established guardian programs. Regarding the IEMP, the AOPFN representative noted a desire for more sampling across all seasons. CNSC staff expressed that the IEMP is adaptable and detailed the planning activities undertaken to ensure that the IEMP incorporates comments and suggestions from Indigenous Nations and Communities. CNSC staff added that it plans to investigate ways that the IEMP can collaborate with guardian programs.
29. The Commission noted that AOPFN rated some licensees' engagement as "below expectations" in its intervention and asked what improvements AOPFN were looking for. An AOPFN representative stated that AOPFN's criteria for "above expectations" include respect for its rights and a commitment to long term agreements. Asked for their comments, licensee representatives provided the Commission with information on their respective relationships with Indigenous Nations and communities and acknowledged that work remains to be done. The Commission encourages licensees to continue to work towards improving their relationships with Indigenous Nations and communities and expects to be updated on such progress at the next UNSPF ROR.

⁵ The [Open Government portal](#) is a government of Canada website where government organizations may post information and data for public reference and use.

30. Asked about available funding or support beyond the PFP, CNSC staff highlighted that building capacity is one of the top issues raised by Indigenous Nations and communities. CNSC staff provided the Commission with information on capacity-building tools used by the CNSC, including providing access to subject matter experts and encouraging licensees to provide funding support. CNSC staff also referenced a new CNSC fund, the Indigenous and Stakeholder Capacity Fund, which will be focused on building institutional capacity. CNSC staff informed the Commission that it will have more information about this fund available in the spring of 2023.

Discussion

31. The Commission asked about how radiation doses are monitored and assessed at UNSPFs. CNSC staff provided information on the fence-line gamma⁶ radiation monitoring performed by licensees and noted that, while methodologies are similar, results may differ across different facilities. CNSC staff noted that the reported increase in the maximum public dose for Cameco Fuel Manufacturing Inc. in 2021 was due to a calculation change and not a change in radiological emissions from the facility. CNSC staff also explained that action levels⁷ are revisited periodically, or in response to a triggering event, and are specific to an individual facility.
32. Asked about the assessment of individual internal dose, a Cameco representative provided details about Cameco's bioassay program.⁸ The Cameco representative explained the impact of sample timing on analysis results and noted that non-routine samples, which may be collected in response to an event, are expected to contain a higher quantity of uranium. The Cameco representative highlighted that there are different action levels based on the type of uranium present.
33. On the issue of releases to the environment from uranium processing facilities, a Cameco representative provided details on a discharge action level exceedance that occurred at the Port Hope Conversion Facility following a heavy precipitation event. The Cameco representative

⁶ Information on different types of radiation, including gamma, can be found on the [CNSC website](#).

⁷ A radiation protection [action level](#) is a specific dose that, if reached, may indicate a loss of control of part of a licensee's radiation protection program and triggers a requirement for specific action to be taken.

⁸ Bioassay is any procedure used to determine the nature, activity, location, or retention of radionuclides in a body. E.g., the analysis of urine samples.

- noted that Cameco had taken intermediate steps to mitigate the risk through infrastructure upgrades and that the area affected by the event would be fully remediated in the future. Regarding the monitoring of fluoride, CNSC staff explained that different water quality guidelines and standards, such as for drinking water or the protection of aquatic life,⁹ are used depending on the circumstances. Asked for an update on beryllium monitoring in Peterborough, CNSC staff informed the Commission that it had completed 3 samples around the BWXT NEC facility and that it would be providing a report to the Commission in early 2023.
34. Regarding the conduct of inspections at the recently-licensed¹⁰ BWXT Medical facility, CNSC staff informed the Commission that it had established a 10-year compliance plan that considers BWXT Medical's co-location with Nordion.¹¹ CNSC staff provided details of its recent compliance activities at the Nordion and BXWT Medical facilities, and noted that, while there are synergies related to the co-location, both licensees are separate entities. Asked about inspector training, CNSC staff highlighted the importance of on-the-job training. CNSC staff added that inspectors share their inspection findings with other CNSC staff to identify trends and facilitate learning.
35. The Commission noted the public opinion polling conducted by Cameco and asked if other licensees had undertaken similar work. Licensee representatives provided the Commission with details on their respective public polling programs and recent related activities. The Commission considers public opinion polling to be a useful tool for assessing their public information efforts and encourages licensees to continue their work in this regard.
36. The Commission appreciated the information provided in response to its questions and the availability of CNSC staff, licensees, and intervenors for the UNSPF ROR.

⁹ The Canadian Council of Ministers of the Environment water quality guideline for fluoride is 0.12 mg/L while the Health Canada drinking water standard is 1.5 mg/L.

¹⁰ The Commission issued a licence to BWXT Medical for the operation of its facility on [October 8, 2021](#).

¹¹ The [BWXT Medical facility](#) was previously operated by Nordion and is located within the same building as the Nordion facility.

Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021

37. With reference to [CMD 22-M36](#) and [CMD 22-M36.A](#), CNSC staff presented its 2021 ROR for Uranium Mines and Mills (UMMs) in Canada (the UMM ROR). The UMM ROR provides information on the performance of the following 5 UMMs, all located in Saskatchewan:
- Cameco Corporation's (Cameco) [Cigar Lake Mine](#) (Cigar Lake);
 - Cameco's [McArthur River Mine](#) (McArthur River);
 - Cameco's [Rabbit Lake Mine and Mill](#) (Rabbit Lake);
 - Cameco's [Key Lake Mill](#) (Key Lake); and
 - Orano Canada Inc.'s (Orano) [McClellan Lake Operation](#) (McClellan Lake).
38. The UMM ROR includes the following:
- information on the CNSC's recent compliance and engagement activity;
 - a general overview of performance across the sector;
 - CNSC staff's assessment of performance for each facility across all 14 SCAs, with a focus on radiation protection, environmental protection, and conventional health and safety; and
 - comprehensive appendices containing data and supporting information.
39. In addition, CNSC staff's presentation provided:
- a summary of the key themes raised in interventions, including communication of incidents, ROR-specific engagement sessions, and environmental releases;
 - further information on an October 2022 inspector order related to a Cigar Lake waste rock pile exceeding the approved volume; and
 - errata to the UMM ROR that did not impact the conclusions of the ROR.
40. CNSC staff informed the Commission that Canadian UMMs had satisfactory performance in 2021. CNSC staff found that UMMs kept doses ALARA, protected the environment, and protected the health and safety of workers.

41. Representatives from Cameco and Orano provided the Commission with information on the activities of their respective organizations in 2021. The representatives highlighted their organizations' partnerships with each other and the safe management of the COVID-19 pandemic.
42. The Commission found the UMM ROR to be a well written and structured document. The Commission appreciated the inclusion of detailed information in the appendices of the report as well as CNSC staff's concise and well constructed presentation.

Interventions

43. With respect to the CNSC's [PFP availability for the 2021 UMM ROR](#), the FRC recommended that [up to \\$95,510 in participant funding](#) be provided to:
 - English River First Nation
 - Ya'thi Néné Land and Resource Office
 - Kineepik Metis Local #9
 - Nuclear Transparency Project
44. The Commission received written interventions regarding the UMM ROR from the Nuclear Transparency Project ([CMD 22-M36.1](#)), the Saskatchewan Mining Association ([CMD 22-M36.3](#)), the Athabasca Joint Engagement and Environmental Subcommittee ([CMD 22-M36.4](#)), and the Northern Saskatchewan Environmental Quality Committee ([CMD 22-M36.6](#)).
45. English River First Nation (ERFN) provided the Commission with an oral presentation and written intervention ([CMD 22-M36.2](#)). ERFN's intervention included a technical report providing comprehensive comments on the UMM ROR. ERFN noted various trends in effluent monitoring results and raised questions pertaining to environmental releases.
46. Kineepik Métis Local #9 provided the Commission with an oral presentation and written intervention ([CMD 22-M36.5](#)) that included information on its community and land use. Kineepik Métis Local #9 highlighted cultural differences and noted the importance of consultation and engagement.

47. The Ya'thi Néné Land and Resource Office (YNLR) provided the Commission with an oral presentation and written intervention ([CMD 22-M36.7](#), [CMD 22-M36.7A](#)) highlighting recent progress in engagement with the CNSC. The YNLR's intervention also raised concerns, including about the dissemination of information and engagement meetings.
48. With respect to concerns raised in the ERFN intervention, the Commission asked Cameco to address concentrations of molybdenum in treated effluent. A Cameco representative stated that a temporary increase in molybdenum concentration at Rabbit Lake was due to planned work activity and that it had since returned to normal. Another Cameco representative highlighted work that had been conducted to reduce the molybdenum concentrations prior to the reporting period included in the UMM ROR. The Cameco representative also noted that the provincial limit for molybdenum concentration had recently increased. Asked about the provincial molybdenum limit, a representative of the Saskatchewan Ministry of Environment confirmed that such limits are routinely updated based on new understanding and explained that limits must take into account the environmental impact of any required chemical treatment process.
49. The Commission asked intervenors to comment on the CNSC's IEMP. A representative of ERFN noted that the IEMP is an evolving program and that the ERFN was satisfied with the CNSC's dialogue regarding improvements. The ERFN representative provided information on how it has provided feedback to the CNSC regarding the IEMP and highlighted work to include more culturally relevant samples, such as moose meat.
50. Asked about engagement with the CNSC, an ERFN representative noted the importance of being heard. The ERFN representative expressed that ERFN appreciates its relationship with the CNSC and that it is satisfied with the current level of engagement. A Kineepik Métis Local #9 representative noted that it was in the early stages of establishing an "organic and authentic" relationship with the CNSC. The Kineepik Métis Local #9 representative also detailed community building efforts and information exchanged with other Indigenous Nations and communities. CNSC staff highlighted how it learns from its engagement activities, including with Kineepik Métis Local #9.

51. On the topic of the ongoing dissemination of information, CNSC staff acknowledged the concerns raised by the YNLR. CNSC staff expressed its commitment to resolving issues and provided information on its work to address the challenges of communicating in remote communities. Further, CNSC staff noted that it plans to re-evaluate the language it uses to ensure that information is understood. A Cameco representative detailed Cameco's engagement practices and informed the Commission that it continually engages with Indigenous Nations and communities independent of the ROR or licensing processes. An ERFN representative noted that ERFN was satisfied with how Cameco communicated information to answer its questions in advance of this meeting.
52. The Commission appreciates the perspectives and detailed information provided by Indigenous Nations and communities for the UMM ROR. The Commission encourages CNSC staff and licensees to continue to seek effective ways of addressing issues and continuously improving communication and engagement with Indigenous Nations and communities, as well as members of the public.

Discussion

53. The Commission asked for more information on how UMM licensees protect workers from radiological and conventional hazards. Regarding the reported increase in airborne radon concentration at McArthur River, a Cameco representative stated that the increase was due to a change in detection limit¹² resulting from the different equipment used by a new service provider. CNSC staff explained how dose from radon is quantified and noted the different contributions from radon gas and radon decay products. On the topic of occupational health and safety, CNSC staff provided the Commission with information on separate incidents at McClean Lake and detailed how the frequency of injuries affects the calculated accident severity rate. An Orano representative highlighted Orano's focus on employee care and added that COVID-19 had increased lost time from injuries, and the related severity rate, by delaying treatment and recovery.

¹² A detection limit, usually of an instrument, is the lowest value that can be reliably measured.

54. Asked if cumulative effects are considered in monitoring programs, CNSC staff confirmed that cumulative effects are accounted for in its assessments. CNSC staff provided details of the various documents, reports, and monitoring programs that it assesses and stated that it has no concerns related to cumulative impacts. CNSC staff added that its findings are documented in licensee-specific environmental protection review reports.¹³ A Cameco representative provided information on the Eastern Athabasca Regional Monitoring Program, which was established to address concerns of cumulative effects. Another Cameco representative added that monitoring programs collect samples from throughout the environment at a set frequency. Finally, a representative of the Saskatchewan Health Authority detailed various complementary monitoring programs that allow the assessment of cumulative effects.
55. The Commission asked for more information on releases to the environment from UMMs. CNSC staff explained that licensee environmental protection programs consider the most sensitive environmental pathways and noted that emissions rapidly diminish to background levels outside of the site boundaries. Regarding the implementation of a selenium removal process at McClean Lake, an Orano representative informed the Commission that the selenium removal circuit had been installed and commissioned.
56. On the topic of spills, CNSC staff confirmed that its assessments consider several factors, including the local geology and the contaminants present. CNSC staff stated that the number of spills at Orano's McClean Lake was sufficient to warrant incorporating follow-up into inspection planning. An Orano representative explained that each spill had a unique root cause, but that Orano was committed to improvement. A Cameco representative provided information on Cameco's remediation practices following a spill, including follow-up monitoring.
57. Asked about uranium release limits in water, CNSC staff explained that the CNSC does not apply Saskatchewan's uranium limit to be sufficiently protective and has applied a reduced interim objective. CNSC staff noted that CNSC [REGDOC-2.9.2, Controlling Releases to the Environment](#), which was under development, would

¹³ Information on environmental reviews is available on the [CNSC website](#)

- include an updated, facility-specific methodology to determining such release limits. A representative from the Saskatchewan Ministry of Environment explained the basis for the provincial limits and stated that the province did not have an issue with the CNSC's updated limit.
58. The Commission asked about any lessons learned from CNSC staff's conduct of remote inspections at UMMs. CNSC staff provided information on its experiences with conducting remote inspections and noted that such inspections, when compared to in-person, had resulted in a similar number of findings. CNSC staff highlighted aspects where remote inspections were useful, such as for document reviews. CNSC staff noted that it was now using a hybrid inspection approach, where it can apply the most useful aspects of both in-person and remote inspections.
59. Asked about the current status of ongoing projects mentioned in the UMM ROR, an Orano representative provided information on emerging mining technology that can be deployed from the surface. Regarding the memorandum of understanding (MOU) between the Province of Saskatchewan and the CNSC, CNSC staff indicated that work to update the MOU would be a priority in 2023. CNSC staff acknowledged that while the COVID-19 pandemic had delayed progress on updating the MOU, the delays had not impacted its relationship with the Province. Representatives of various government of Saskatchewan entities¹⁴ highlighted their continued collaboration with the CNSC.
60. The Commission asked for more information on the recent order issued against Cameco's Cigar Lake mine for exceeding the approved volume of a waste rock stockpile. CNSC staff provided information on the inspection that resulted in the exceedance and noted that Cameco disclosed the exceedance during the inspection. A Cameco representative stated that investigation was underway and that there is no impact to safety or the environment. The Commission expressed the opinion that, while it is reassured that the environment continues to be protected, the inspection finding raises concerns related to compliance with licence conditions. The Commission directs CNSC staff to provide an update to the Commission on this event at an upcoming meeting of

Action
By
June 2023

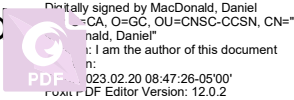
¹⁴ Including the Ministry of Energy and Resources, the Ministry of Environment, the Ministry of Labour Relations and Workplace Safety, and the Saskatchewan Health Authority.

the Commission. The Saskatchewan Ministry of Environment will also be invited to comment.

61. The Commission appreciated the availability of CNSC staff, licensees, intervenors, and Saskatchewan government representatives to answer Commission members' questions.

Closure of the Public Meeting

62. The public meeting closed at 12:59 p.m. EST on December 16, 2022. These minutes reflect both the public meeting itself and the Commission's considerations following the meeting.

**MacDonald,
Daniel** 

Recording Secretary

February 20, 2023

Date

**Saumure,
Denis** 

Registrar

February 20, 2023

Date

APPENDIX A

CMD	Date	e-Docs No.
22-M43	2022-11-21	6918249
Notice of Virtual Meeting of the Commission on December 15 and 16, 2022		
22-M44	2022-11-21	6865808
Agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held remotely on December 15 and 16, 2022		
22-M44.A	2022-12-08	6931613
Revised agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held remotely on December 15 and 16, 2022		
22-M44.B	2022-12-13	6934074
Revised agenda of the Meeting of the Canadian Nuclear Safety Commission (CNSC) to be held remotely on December 15 and 16, 2022		
22-M46	2022-12-07	6931720
Approval of the Minutes of Commission Meetings held on November 1, 2 and 3, 2022		
22-M36	2022-09-08	6809634
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from CNSC Staff		
22-M36.A	2022-12-07 2022-12-12	6931721 - English 6933192 - French
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Presentation from CNSC Staff		
22-M36.2	2022-11-14	6915092
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the English River First Nation		
22-M36.5	2022-11-14	6915153
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Presentation from the Kineepik Métis Local #9		
22-M36.7	2022-11-14	6915332
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the Ya'thi Néné Land and Resource Office		

CMD	Date	e-Docs No.
22-M36.7A	2022-12-12	6934072
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Presentation from the Ya'thi Néné Land and Resource Office		
22-M36.1	2022-10-31	6915079
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the Nuclear Transparency Project		
22-M36.3	2022-11-14	6915127
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the Saskatchewan Mining Association		
22-M36.4	2022-11-14	6915139
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the Athabasca Joint Engagement and Environmental Subcommittee		
22-M36.6	2022-11-14	6915279
Information Items Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2021 Written submission from the Northern Saskatchewan Environmental Quality Committee		
22-M45	2022-12-09	6932696
Status Report Status Report on Power Reactors Written submission from CNSC Staff		
22-M35	2022-08-15	6850909
Information Items Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021 Written submission from CNSC Staff		

CMD	Date	e-Docs No.
22-M35.A	2022-12-08 2022-12-15	6929974 - English 6936307 - French
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Presentation from CNSC Staff</p>		
22-M35.1	2022-10-31	6905908
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Written submission from the Algonquins of Pikwakanagan First Nation</p>		
22-M35.1A	2022-12-07	6931684
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Presentation from the Algonquins of Pikwakanagan First Nation</p>		
22-M35.4	2022-10-31	6905910
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Written submission from the Kebaowek First Nation</p>		
22-M35.2	2022-10-31	6905909
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Written submission from the Curve Lake First Nation</p>		
22-M35.3	2022-10-31	6906773
<p>Information Items</p> <p>Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2021</p> <p>Written submission from the Nuclear Transparency Project</p>		