### UNPROTECTED/NON PROTÉGÉ

## SUPPLEMENTAL/COMPLÉMENTAIRE

CMD: 19-H4.D

Date signed/Signé le : OCTOBER 30, 2019

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19-H4, 19-H4.A, 19-H4.B, 19-H4.12C

A Licence Renewal Un renouvellement de permis

Canadian Nuclear Laboratories Ltd.

Whiteshell Laboratories

Commission Public Hearing

Scheduled for:

October 2-3, 2019

Submitted by:

CNSC Staff

Laboratoires Nucléaires Canadiens Ltée

Laboratoires de Whiteshell

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Soumise par:

Le personnel de la CCSN

### **Summary**

This supplemental CMD presents CNSC staff's disposition of Manitoba Metis Federation's intervention, CMD 19-H4.12, received on September 30, 2019.

#### Résumé

Le présent CMD supplémentaire présente la réponse du personnel de la CCSN au mémoire de la Fédération des Métis du Manitoba, CMD 19-H4.12, soumis le 30 septembre 2019.

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# Signed/signé le

October 30, 2019

Haidy Tadros

### **Director General**

Directorate of Nuclear Cycle and Facilities Regulation

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#### **EXECUTIVE SUMMARY**

The current Whiteshell Laboratories (WL) licence, NRTEDL-W5-08.05/2019 [1], expires on December 31, 2019. Canadian Nuclear Laboratories (CNL) has applied to renew the licence for a period of 10 years, until December 31, 2029. Canadian Nuclear Safety Commission (CNSC) staff performed an assessment of CNL's application and performance since 2008. CNSC staff's assessment, as well as staff's conclusions and recommendations to the Commission are found in commission member documents (CMDs) CMD 19-H4 [2], CMD 19-H4.A, and CMD 19-H4.B.

CNSC staff received eleven interventions with regards to CNL's application to renew the decommissioning licence for the WL site. Interventions received by September 3, 2019 were addressed in CMD 19-H4.B. CNSC received Manitoba Metis Federation's (MMF) intervention on September 30, 2019. CNSC staff were directed by the Commission at the October 2019 public hearing proceeding in Lac du Bonnet to review and respond to the MMF intervention. MMF's intervention contained recommendations and comments that CNSC staff have addressed in Annex A of this CMD.

The new information does not change CNSC staff conclusions and recommendations found in CMD 19-H4 [2], CMD 19-H4.A, and CMD 19-H4.B.

#### 1. OVERVIEW

## 1.1 Background

CNL is authorized to decommission the Whiteshell Laboratories (WL), comprising both nuclear and non-nuclear facilities in accordance with CNSC issued Nuclear Research and Test Establishment Decommissioning Licence NRTEDL-08.05/2019 [1]. On November 15, 2018 CNL requested a 10-year renewal of the WL licence in order to continue on-going decommissioning activities. Canadian Nuclear Safety Commission (CNSC) staff performed an assessment of CNL's application and performance over the licence period from 2009 to 2018. CNSC staff's assessment, as well as conclusions and recommendations to the Commission are found in commission member documents (CMD) 19-H4 [2], CMD 19-H4.A, and CMD 19-H4.B. CMD 19-H4 [2] was made available for public comments. CNSC staff reviewed and prepared responses to the interventions received in CMD 19-H4.B.

# 1.2 Highlights

Eleven interventions were submitted to the Commission with regards to CNL's application to renew the decommissioning licence for WL. Interventions received by September 3, 2019 are addressed in Annex A of CMD 19-H4.B. The CNSC received Manitoba Metis Federation's intervention on September 30, 2019, therefore it was not included in CMD 19-H4.B. The Commission directed CNSC staff to review and respond to MMF's intervention. Manitoba Metis Federation's intervention contained recommendations and comments that CNSC staff have addressed in Annex A of this CMD.

### 2. OVERALL CONCLUSIONS AND RECOMMENDATIONS

CNSC staff's conclusions and recommendations consider an overall assessment of WL's compliance with the *Nuclear Safety and Control Act* (NSCA) and its Regulations during the licence period (2009-2018).

### 2.1 Conclusion

Review of Manitoba Metis Federation's intervention has not altered CNSC staff's overall conclusions documented in CMD 19-H4 and CMD 19-H4.B

#### 2.2 Recommendations

CNSC staff have no further recommendations.

# **ACRONYMS**

Acronym	Definition	
AOO	Algonquins of Ontario	
ALARA	As Low As Reasonably Achievable	
Bq/L	Becquerel per liter	
CMD	Commission Member Document	
CNSC	Canadian Nuclear Safety Commission	
CNL	Canadian Nuclear Laboratories	
CRL	Chalk River Laboratories	
ERA	Environmental Risk Assessment	
HLW	High Level Waste	
HHERA	Human Health and Ecological Risk Assessment	
IEMP	Independent Environmental Monitoring Program	
ILW	Intermediate-Level Waste	
ISD	In-Situ decommissioning	
LCH	Licence Conditions Handbook	
LLW	Low-Level Waste	
$\mathbf{M}^3$	Cubic Metre	
MMC	Manitoba Metis Community	
MMF	Manitoba Metis Federation	
MsV	Millisievert	
NRTEDL	Nuclear Research and Test Establishment Decommissioning Licence	
NSCA	Nuclear Safety and Control Act	
PFP	Participant Funding Program	
WL	Whiteshell Laboratories	
WMA	Waste Management Area	
WR-1	Whiteshell Reactor	

### **REFERENCES**

- [1] NRTEDL-W5-08.05/2019, Nuclear Research and Test Establishment Decommissioning Licence (e-Doc 5492696).
- [2] CMD 19-H4, Canadian Nuclear Laboratories Ltd., Whiteshell Laboratories Licence Renewal (e-Doc 5756806).

# ANNEX A - SUMMARY OF MANITOBA METIS FEDERATION'S INTERVENTION

ANNE	ANNEX A: SUMMARY OF KEY ISSUES RAISED BY MANITOBA METIS FEDERATION AND RESPONSES FROM CNSC STAFF			
COMMENT #	ISSUE	QUESTION/RECOMMENDATION	CNSC STAFF'S RESPONSE	
		FISH AND WILDLIFE		
1	In evaluating options for the decommissioning of the WR-1 Reactor, the Proponent has evaluated four alternatives. Of these, In-situ decommissioning (ISD) represents the highest risk to local aquatic systems, since contaminated materials will reside permanently within the local environment. Permanent storage of radioactive contaminated material must be monitored indefinitely. Once the containment system fails, decaying radioactive material will have a direct pathway for contamination of groundwater. Over time, this contamination will likely migrate to surface water (e.g., through seepage to the Winnipeg River <500 m), posing risks to aquatic wildlife and humans—including Metis harvesters—who	Recommendation 1a: CNL must clarify the location, frequency and timing at which surface water and sediment sampling will occur in the interim period during closure and institutional control phases. This data must be presented in text and in the form of a map with all proposed follow-up monitoring locations clearly marked. This must be accompanied by a description of the frequency of monitoring proposed for these stations. Moreover, CNL must consult with the Manitoba Metis Federation (MMF) regarding the location, frequency and timing of monitoring and sampling so that Metis traditional knowledge can be incorporated into the proponents plans during closure and institutional control phases.  Recommendation 1b: Water quality in trenches/ditches from the Waste	CNSC Response #35 in CMD 19-H4.B addresses this comment.  "As outlined in CMD 19-H4 the matter before the Commission does not include in situ decommissioning of the WR-1 reactor. The request for the proposed in-situ decommissioning will be considered in a separate Public Hearing of the Commission." (Note: Quotes from CMD 19-H4.B are only provided the first time reference is used).  CNSC Response #32 in CMD 19-H4.B addresses this comment.  "As part of REGDOC-3.1.2, Public Information and Disclosure, proponents are required to develop a Public Information Program and identify key audiences that fall under the program, and to develop strategies and approaches to address the concerns of the identified population. Indigenous groups are one key audience identified	

COMMENT #	ISSUE	QUESTION/RECOMMENDATION	CNSC STAFF'S RESPONSE
	consume these organisms. For example, based on predictions of mass loadings to the Winnipeg River, it is expected that Carbon-14 and Tritium are expected to be particularly high, with maximum groundwater concentrations (at the point of discharge) of 147 Bq/L and 3,760 Bq/L respectively, the latter of which is expected to occur within 68 years from post-closure. Due to the risks associated with contaminated groundwater, a robust monitoring program must be in place.	Management Area (WMA) must be monitored actively during closure and post-closure. The Proponent must provide additional details on locations and frequency of monitoring associated with the WMA. There should be clear adaptive management and contingency plans for responding to degrading water quality in these features, such as capture and additional treatment. CNL must consult with the MMF regarding these plans so that Metis traditional knowledge can be incorporated into the plans during closure and post-closure periods	and CNSC expects CNL to ensure information sharing and communication with interested Indigenous groups is completed effectively to improve knowledge and understanding of environmental safety and radiation protection."  CNL's response in CMD-19-H4.1C commits to continuing engaging MMF and other Indigenous communities.  CNL's Public Information and Disclosure Program is included in the WL Licence Conditions Handbook (LCH), and is subject to compliance verification by CNSC staff.
	The Proponent is planning to conduct surface water monitoring and surficial sediment monitoring to test for contaminants during closure and post-closure. However, it is unclear at what intervals this monitoring will occur. Moreover, the locations for water quality monitoring follow-up		CNSC staff will continue to ensure though compliance activities that CNL's Public Information and Disclosure Program remains effective, including commitments to collaborate on monitoring activities on and around the WL site.

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	programs are not sufficient. The nearest downstream surface monitoring location to the groundwater seep is 2 km			
	downstream from the site boundary. This is unlikely to detect any contamination, except from extreme			
	events, or to show any gradient or distribution of contamination.			
2	A key component of CNL's plans for the safe decommissioning of the WL site are the site-specific release criteria for the defined endstate.  "CNL will undertake considerations of the alignment of site clean-up and release criteria (for acceptable clearance levels of radiological and non-radiological contaminants) with subsequent land-use categories, and the definition of the endstate for WL lands following the successful	Recommendation 2: CNL must share additional details on the site specific release criteria for defined end-state. CNL should clearly state the approach for consulting with the MMC for their input on development of release-criteria and inclusion of Metis traditional knowledge and exercise of MMC's stewardship rights and responsibilities. If these release criteria have not yet been determined, CNL should provide information on how these will be developed. If these release criteria have already been determined, CNL should provide information on how it will consult with the MMF regarding them,	CNL's response in CMD-19-H4.1C commits to facilitating and engaging with the MMF and others on the development of the final end state criteria for the site.  CNSC staff will ensure through compliance activities that CNL follows through with their commitment to engage MMF on the release criteria for a defined end state.	

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	completion of physical decommissioning of the WL site" (CNL, 2019b, Section 3.7).	including a process for revision in response to concerns or information shared by the MMF.	
	It is expected that these release criteria will function as conditions for management of contaminant		
	release to a variety of media/receptors (e.g., air,		
	water, soil, vegetation, fish, wildlife). The MMF understands that CNL would be responsible for ensuring that any contamination is remediated to the extent that would allow them to achieve the release criteria. For this reason, it is critical for the MMF and the MMC to have a clearer understanding of and input into what the release criteria will be. This information is		
	necessary to evaluate the acceptability of ongoing risks to water, air, ground, wildlife, fish, vegetation and MMC community		
	members (and by extension, the suitability of CNL's plans for		

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	decommissioning)			
3	A critical aspect of CNL's plans for decommissioning the WL site is that sufficient waste storage space will be available for contaminated materials removed from site. It is expected that this storage location will be the Chalk River Laboratories site in eastern Ontario. However, no discussion or analysis of availability/suitability of storage is provided in the Application or Commission Member Documents (CMDs).	Recommendation 3: See issue column	The Chalk River Laboratories (CRL) operating Licence (NRTEOL-01.00/2028) and its associated Licence Conditions Handbook (LCH) condition 11.1 states the following "CNL shall not produce, in the course of the licensed activities, or accept from outside clients, waste for which there is no identified treatment, or storage, or disposal facility".  The CRL waste management areas specifically, B, H and D have storage capacity available for waste generated through the decommissioning, site operations activities and by off site clients. CNL are constructing additional concrete canisters at WMA G for the storage of WL spent fuel. In addition, CNL has launched an initiative to evaluate and assess approaches and strategies for the storage of Low-Level Waste (LLW) and Intermediate-Level Waste (ILW).  CNSC staff are satisfied with the measures presently in place for the safe	

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			storage of radioactive waste at CRL.	
4	As part of the existing licence for the CNL facility (NRTEDL-W5-8.04/2018), the Proponent engages in monitoring of fish tissue at upstream and downstream locations from the Project site. However, the Proponent is not planning to monitor fish tissues for contaminants during closure and post-closure. Many individuals from the MMC exercise their s. 35 harvesting rights to fish regularly along the Winnipeg River for game species such as walleye, lake whitefish, smallmouth bass, and northern pike, which they rely on for subsistence. Thus, the risk of health effects from consuming these contaminants is a serious concern for those who fish and their families. In previous engagement with the MMF, CNL stated that it did not expect the extent of fishing and reliance on harvested food by the MMC.	Recommendation 4: Due to the importance of fishing and fish consumption to the MMC, it is critical that monitoring of fish tissue occur and be designed accordingly so that the predictions of low contamination can be verified specifically for the Metis' increased reliance and exercise of their s. 35 rights. The Proponent must engage in monitoring of fish tissues during closure and post closure (institutional control) and have adaptive management plans in place to address unanticipated levels of contaminants in edible portions of fish in exposure areas. We recommend that the sampling locations currently used for monitoring associated with the existing licence be maintained. Monitoring should occur every year during closure and at least every 10-years during post-closure. CNL must also consult with the MMF regarding the development of the monitoring plans so that the distinct circumstances of the MMC and Metis	CNL's response in CMD-19-H4.1C commits to engaging with the MMF and others on Environmental Monitoring both individually as well as through the proposed Indigenous Advisory Committee.  CNSC staff will ensure through compliance activities that CNL continues to collaborate with MMF on fish monitoring activities on and around the Whiteshell site taking into account Metis Traditional knowledge	

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	The MMF undertook a consumption survey and provided additional information on the harvesting practices, extent, and reliance by the MMC in the Project area. It is unclear if CNL's monitoring plans and conclusions regarding contamination of fish and safety to human health have been updated in light of the higher-than expected reliance by the MMC and the distinct Metis needs and circumstances and the additional risk faced by MMC members.	harvesters are appropriately being considered and Metis traditional knowledge and stewardship rights are included in the plans.		
5	CNL undertakes ongoing environmental monitoring at the WL site through an Integrated Monitoring Program. This includes monitoring of effluent, environmental components, and groundwater, the results of which are reported to the CNSC annually. As users of the land with Crown recognized s.	Recommendation 5: CNL must consult with the MMF on ways to involve the MMC in designing, implementing and evaluating the Integrated Monitoring Program. This may include hiring Manitoba Metis Citizens for collection of environmental data. Additionally, Manitoba Metis Citizens and representatives from the MMF should be involved in the management	CNL's response in CMD-19-H4.1C commits to continuing engaging MMF and other Indigenous communities on this recommendation.	

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	35 harvesting rights, the MMC are at higher risk than the general public. Moreover, as stewards of the land, the MMC play an important role in protection of the lands and waters. For this reason, it is important that the MMF and MMC be meaningfully included in the collection, implementation and evaluation of the environmental monitoring completed through the Integrated Monitoring Program	structure (i.e., committee) for implementation of the Integrated Monitoring Program. This would help ensure that the Integrated Monitoring Program includes monitoring activities that are of priority to the MMC. Moreover, it would improve transparency related to environmental oversight at the WL site.		
HUMAN H	EALTH AND ECOLOGICAL RISI	K ASSESSMENT (HHERA)		
6	Monitoring of the WMA has indicated contamination in soils with cesium-137 outside the WMA perimeter and in drainage ditches. There is approximately 765 m³ of known contaminated soil. Small areas of contamination exist elsewhere.	Recommendation 6: There is no indication in the text where this soil will be stored, or if it will be transported offsite to another facility. Other areas of contamination have also been documented, but there is no indication of when these contamination issues will be addressed. CNL must outline if, and if so how these other areas of contamination were addressed as the storage and/or transport of contaminated soils can adversely affect	CNL's response in CMD-19-H4.1C commits to clarifying the proposed plan forward during future engagements.  CNL's Public Information and Disclosure Program is included in the WL Licence Conditions Handbook (LCH), and is subject to compliance verification by CNSC staff.  CNSC staff will continue to ensure	

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		human health and creates risk to Metis Citizens using the site and surrounding area.	through inspections that CNL's Public Information and Disclosure Program remains effective, including engagement with MMF on this event and the proposed plan forward.	
7	Attachment D, Page 36 — "All LLW, ILW,, and High Level Waste (HLW) will be retrieved, characterized, and repackaged(as necessary) for shipment to either Chalk River Laboratories (CRL) or other suitable, licenced storage/disposal facility."  This statement indicates that all sources of contamination will be removed from the WL site, which should be the goal for decommissioning. In other parts of the application, CNL indicates that LLW trenches will remain, and the WR-1 reactor (considered to be ILW) will also remain in situ. There is also mention in other documents of contaminated	Recommendation 7: CNL needs to be consistent throughout its reporting in making statements about what will and what will not remain at the end of the decommissioning process. If radioactive material remains on-site, it will restrict the use of the site by future generations of the MMC, and require monitoring well into the future as well as other measures to mitigate and accommodate impacts on the s. 35 rights, claims and interests of the MMC. CNL must revise is licence renewal application to clarify the activities that are actually at issue in this licence and remove references to future, proposed decommissioning activities that are not currently before CNSC for review and approval.	CNSC Response #3 in CMD 19-H4.B addresses this comment.  "CNSC staff confirm that ISD of WR-1 is not included in the current matter before the Commission.  There is an ongoing and separate process for the completion of an Environmental Assessment and licencing review for in situ decommissioning of WR-1. This process will include a public hearing of the Commission.  CNL's ongoing decommissioning activities and performance will continue to be reported through Regulatory Oversight Report and its meetings and discussed at public meetings."	

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	sediments near the Winnipeg River outfall remaining in situ. CNL has stated that it is in the process of preparing an in-situ decommissioning plan, however that decision is not currently before the CNSC for review. References in the current licence renewal proposal to the in- situ decommissioning are therefore confusing and irrelevant to CNSC's current decision regarding the adequacy and plan for this licence renewal application.		addresses this comment.  "The decommissioning strategy for the WL site is provided in the overview decommissioning plan Whiteshell Laboratories Detailed Decommissioning Plan Volume 1 – Program Overview. This document also includes the decommissioning strategy for specific facilities. Additional details regarding the decommissioning strategy for each facility is contained in the facility specific volumes (Volumes 2-12).  The CNL licence application and CMD indicates that they plan to safely accelerate decommissioning, reducing the original deferment period. CNSC has provided certain decommissioning documents to the public upon request"	
8	CNL states that an objective of the Waste Management Strategy for all CNL managed waste is to optimize waste management from the perspective of worker and public perception, risk reduction and lifecycle cost. The critical term	Recommendation 8: CNL must provide an analysis that indicates where risk to human health and the environment is reduced as decommissioning proceeds. This needs to take into account the unique circumstances of the MMC and Metis	CNL's response in CMD-19-H4.1C commits to evaluating the risks as part of the site-wide Environmental Risk Assessment.  When submitted, CNSC staff will assess the adequacy of CNL's site-wide	

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	here is the reduction of risk from physical and chemical hazards, however there is nowhere in the Licence Application or supporting documents where risk reduction is discussed or quantified.	harvesters who rely on the lands and waters of the WL site to exercise their s.35 harvesting rights and for substance purposes. Clean-up should be risk-based to show the benefits of addressing each component of decommissioning. The removal of hazardous waste and reduction of exposure to contaminant sources should reduce the chance of adverse health effects in humans and the environment. It is recommended that CNL and CNSC conduct an analysis to demonstrate these reduced risks.	Environmental Risk Assessment.	
9	The Commission Member Document outlines that, in its opinion, progress has been made in removing a number of sources of contamination from the WL site. As indicated above, the removal of this radiation and hazardous substances reduces the risks to human health and the environment. However, there are numerous places where CNL indicates proposed in-situ	Recommendation 9: CNL has stated its future plan is to leave 21 or 22 LLW trenches and the WR-1 reactor on-site at the end of the decommissioning project. CNSC must not consider and cannot give any weight to these statements regarding leaving any radioactivity on-site as it is beyond the current scope of the licence renewal. Moreover, such an approach would restrict the use of the site in the future and require indefinite institutional controls and monitoring by	CNSC Response #4 in CMD 19-H4.B addresses this comment.  "Following the safety case submission for in-situ decommissioning of the LLW trenches, which will include institutional control measures, CNSC will review the documentation against applicable regulatory requirements and the licensing basis. Should the in-situ decommissioning safety assessment demonstrate that it is outside of the current licensing basis, Commission	

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	decommissioning for various elements of the Project. This is inconsistent with the current licence renewal activities and must be clarified in CNL's application.	future generations.	approval would be required."
10	CNSC staff in the existing licence approved the complete removal of the WR-1 reactor core, other reactor components and contaminated equipment and the demolition of above grade structures and building. CNL has subsequently changed to insitu placement, which is not disposal but long-term storage of the most radioactive components of the reactor. While the MMF understands that CNL's in situ decommissioning plan is not before the CNSC in its licence renewal decision, the references to it in CNL's application are confusing and misleading. CNSC cannot give weight to these considerations and must require they be removed from the application.	Recommendation 10: We recommend that CNL revise and clarify that it is not seeking CNSC approval for the IDS plan through this licence renewal application and moreover CNSC must give no weight to these statements in CNL's application. The MMF's position is that CNL must continue with the plan to remove reactor components and building and return the site to as close to natural conditions as possible. These are the only activities currently before the CNSC for review and consideration. The presence of the reactor in situ will impact future uses of the site, require institutional control well into the future and monitoring by future generations. CNL must consult with the MMF regarding such an ISD approach given the significant impacts on the s. 35 rights, claims and interests	CNSC Response #35 in CMD 19-H4.B addresses this comment.

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		of the MMC that would result and that are outside the scope of the MMF's comments in this review.		
11	Based on monitoring of radiation doses to workers on the WL site, average and maximum effective doses to workers have increased slightly since 2014 as work has progressed, although doses are still far below the annual effectives dose of 50 mSv. This is understandable, as workers are exposed during demolition and transport of materials. These doses are indicative of doses to the public if they had full access to the site, but should decline as the sources of	Recommendation 11: CNSC and CNL will undoubtedly continue to monitor doses to workers, which should decline to the end of the 10-year licence and completion of decommissioning. CNSC and CNL should be required to provide safety reports to the MMF so that the MMF can monitor these and consider implications for MMC Citizens and harvesters who will access and use the site to exercise their harvesting and other rights following decommissioning activities. Doses that cannot be distinguished from background are one	CNSC staff are committed to on-going engagement and information sharing with the MMF and are open to exploring the MMF's different areas of interest and how best to communicate and share information related to the Whiteshell site, including information on safety reports and worker doses.  Through compliance activities CNSC staff will continue to ensure that CNL demonstrates that doses to workers and the public remain ALARA (As Low as Reasonably Achievable), as per	

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	radiation are removed or controlled.	indication that the site has returned to close to natural conditions.	regulatory requirements.	
12	An important component in understanding the potential impact of the Whiteshell site on the surrounding environment is whether the concentrations of certain nuclear-related radionuclides are present in the local environment. CNL monitors air, water, soil, etc. as part of the site licence but the CNSC also has the Independent Environmental Monitoring Program (IEMP), which surveyed the Whiteshell area in 2017. The IEMP is funded and staffed by the CNSC and the results are available on the IEMP website. This program is important because it helps to verify environmental data reported by CNL and can provide some estimate of radiation dose received by the public. Despite the term	Recommendation 12: Is it recommended that the IEMP be repeated with a larger number of samples, closer to the Whiteshell site. In addition, the MMF should be involved in the IEMP and determining monitoring activities, duration, and frequency similar to as was done with AOO. Sediments and fish should be collected downstream from the WL outfall, in deposition zones near the town of Lac Du Bonnet. An analysis should be conducted prior to the collections on the number and types of samples required to be able to detect nuclide levels above background levels (i.e., statistical power analysis). A repeated and improved IEMP is necessary to confirm exposure and dose to the public, and the MMC specifically, near the WL facility.	The IEMP takes a snapshot in time of the contaminants in the environment surrounding the facility. The IEMP investigates the environment outside of the facility, beyond the fence perimeter.  CNSC staff compare the measured contaminant levels to relevant guidelines regarding safe levels in the environment.  CNSC staff also compare the contaminant levels to available natural background levels — that is, radiation naturally present in the environment.  The concentrations of radioactivity (or nuclear substances) measured as part of the IEMP at WL were well below reference levels. These results are available on the CNSC website. Site specific sampling plans take into consideration the following where available:  - Completed Environmental Risk	

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***	"Independent" in the name, the IEMP is funded and staffed by the CNSC. It is therefore not truly "independent" in the sense of requiring third party monitoring or verification of results by Indigenous communities. Members of the IEMP collect samples (e.g., sediments, water, soil, vegetation, etc.) in the environment around facilities and analyse them for radiological and non radiological contaminants. CMD document 19-M24 indicates that the IEMP collaborated with the Algonquins of Ontario (AOO) in selecting sites of interest for collections around the Nuclear Power Demonstration facility in Ontario, with results provided to AOO in 2019. The Proponent should consider implementing a similar program with MMF at the next IEMP collection at Whiteshell, in light of the MMF's stated concerns regarding outstanding impacts on		Assessments (ERAs) for the site so that locations are representative of areas of potential exposure based on exposure pathways  - Licensees environmental monitoring program  - Publicly accessible land  The selection of sites for a sampling campaign takes into consideration any upcoming licensing renewals, direction from the Commission, public and concerns from Indigenous peoples and previous year's monitoring results.  CNSC is committed to continuing to engage with MMF and other interested Indigenous groups on IEMP activities moving forward. The CNSC is open to making funding support through its Participant Funding Program (PFP) available for collaborative activities regarding the IEMP. However, the PFP	
	the MMC, exercise of Metis		is not set-up to be a long-term capacity- building program that supports ongoing	

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	stewardship rights and obligations, and the need to incorporate Metis traditional knowledge into monitoring and decommissioning plans and activities. The number of samples collected by the IEMP was very small and the location of the samples is highly questionable. Air, soil, food, vegetation and sediment samples were		training development.  The CNSC is will continue to work with MMF and other interested Indigenous groups relating to information sharing and monitoring, where appropriate.
	collected some distance (several kilometres) from the WL facility. No samples were collected at, or near, the Whiteshell Laboratory to test or confirm CNL environmental sampling. Only one sediment sample was collected (upstream near Pinawa above the Seven Sisters Dam) and none were collected at the WL outfall. A total		
	of only three soil samples were collected. MMF has on multiple occasions recommended increased sampling and monitoring, in terms of locations, frequency, and species monitored. The CNSC concluded that the public and environment in		

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	the vicinity of Whiteshell Laboratories site are protected and that dose to the public would be approximately 0.1 mSv/year, about 1/10 of the public dose limit of 1 mSv/year. Given the small number of samples collected, the low resolution and location of the collections, the results and conclusions related to Whiteshell are very poor. It is also unclear if these conclusions took into account the increased use of and reliance on the Whiteshell site by members of the MMC.				
METIS RIC	GHTS, INTERESTS, TRADITIONA	AL KNOWLEDGE, AND LAND USE			
13	The Application for Renewal of the Decommissioning Licence (WLD-CNNO-18-0033-L) and Commission Public Hearing Document (CMD 19- H4.1) do not adequately acknowledge, recognize, or account for the rights, claims, and interests held by the Manitoba Metis Community (MMC) that are established and	Recommendation 13a): CNSC must require and ensure that CNL undertake meaningful consultation processes with the MMF. This includes that deliverables such as plans, applications, and assessments, reflect the unique collective rights held by the MMC, are developed in collaboration with the MMF, and revised to reflect the MMF's input and concerns. This should be	13 a) CNL's response in CMD-19-H4.1C commits to continue to engage MMF and other Indigenous communities to seek their input and answer their questions.  CNSC staff will continue to ensure through inspections and reviews that CNL's Public Information and Disclosure Program remains effective,		

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	protected under section 35 of the Constitution Act, 1982. Section 18.2.1.8.1 of the Commission Public Hearing document states that: "CNL conducted (and continues to conduct) engagement activities with First Nations and Metis communities in accordance with CNSC Aboriginal Engagement Regulatory Document REGDOC-3.2.2. CNL recognizes and encourages the ongoing engagement of Indigenous communities as valued stakeholders. Engagement activities are similar to those undertaken for public and stakeholder engagement; however, specific engagement activities for First Nations and Metis communities include letters, phone calls, meetings and email correspondence." However, the MMC's constitutionally protected rights to the territory in which WL is situated are a crucial distinction between the MMC and the general	addressed using a distinction-based approach that explicitly recognizes and accounts for the distinct rights, claims, and interests of the MMC as well as the significant history and connection to the land. The MMF must be consulted about the project, and how they would like to be engaged in these processes on an ongoing basis to ensure the rights, claims, and interests of the MMC are adequately considered and where required accommodated.  Recommendation 13b): In cases where impacts to the rights, claims and interests of the MMC cannot be avoided or mitigated, accommodations must be provided. The MMF must be consulted regarding the development of accommodation measures, where required, as part of fulfilling the duty to consult and accommodate. Such impacts to rights and interests could include, but are not limited to, instances such as a reduced ability to use or access the land in restricted access areas in and around WL, timing of	including engagement with MMF on the project.  13 b) As CNL's current licence renewal application is not proposing any changes to what was approved in 2002, CNSC staff do not foresee any novel impacts on Indigenous or treaty rights in relation to the licence renewal application and the Commission's decision. However, CNSC are committed to ongoing engagement and collaboration with MMF on areas of interest and concern.  Currently, MMF is being consulted and engaged in the EA process for the proposed WR-1 in-situ decommissioning Project, CNSC staff's CNL regulatory oversight report for 2018, and this licence renewal.	

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	public or other stakeholders. Although this wording suggests that the MMC were engaged through a more targeted approach, it is not clear if or how the described letters, phone calls, meetings, and e-mail correspondence was distinct from the approach taken with the general public and First Nations to account for the unique rights of the MMC In addition, in light of the constitutionally required duty to consult Indigenous communities whose rights, claims, or interests may be impacted by the proposed decommissioning activities, "encourage[ing] ongoing engagement" is entirely insufficient. Consultation is not optional. It is a constitutionally mandated duty on the Crown that must be fulfilled prior to approving any activities or allowing any actions that have the potential to impact Indigenous rights, claims, and	decommissioning activities that result in disruption to Metis harvesting practices or seasons, decisions related to remediation or reclamation that affect whether native species or plants relied on by Metis harvesters are reintroduced into the area, etc. Additionally, accommodations must be provided in the event that wildlife or plant materials are found to be contaminated, impacting the ability of the MMC to exercise their rights to harvest and consume wild and traditional foods and medicines.		

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	interests including those of the MMC.		
14	CNL is evaluating options for the decommissioning of underground services including the sewage system and storm drains as well as other general infrastructure such as the sewage lagoon and inactive landfill. In section 3.2.4 of the Commission Public Hearing Document (CMD 19-H4-1.), CNL states that "The primary impacts that would have affected the grounds and structures would be radiological contaminants and chemical contaminants (including hydrocarbons). CNL will engage CNSC staff, Manitoba Sustainable Development, and other stakeholders in a dialogue to confirm regulatory requirements relative to the decommissioning of these services and facilities, including the sewage lagoon and inactive landfill." Though the MMF is the	Recommendation 14: CNSC must require that CNL consult with the MMF regarding these impacts and plans regarding the same. The MMF must be consult about their preferences and to determine any mitigation and accommodation requirements with respect to decommissioning underground services. It is important that the rights, claims, and interests of the MMC, and their preferences for this process, are communicated and upheld through engagement with the MMF.	See CNSC staff's response to comment 13 a).

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	democratically elected self government representative of Metis citizens in Manitoba, and thus a government itself, there is no explicit mention of engaging the MMF in decisions surrounding decommissioning of underground services as such. As noted above, the MMF is not a "stakeholder." A clear requirement for ongoing consultation with the MMF is required.			
15	In applying for the renewal of the Nuclear Research and Test Establishment Decommissioning License for the Whiteshell Laboratories (WLD-CNNO-18-0033-L), CNL has not provided strong or adequate rationale for the proposed in-situ disposal of the 21-22 trenches onsite contaminated with LLW aside from discussing the feasibility of the disposal method. No consideration or assessment was provided for the potential increased impacts of in	Recommendation 15a): CNL must provide a more detailed rationale for the in-situ disposal of up to 22 LLW trenches on the WL site, including the identification and evaluation of possible alternative methods of LLW disposal, and any reasons why these may not be appropriate.  Recommendation 15b): CNL must consult with the MMF about acceptable methods of waste disposal where it is possible that any waste will be left onsite, as this poses a potential and	CNSC Response #4 in CMD 19-H4.B addresses this comment. See CNSC staff's response to comment 13 a)	

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	situ disposal on the MMC's rights, claims, and interests. From the perspective of land use and the broader rights, claims and interests of the MMC, it is preferable that all waste be removed and disposed of off-site to allow for full remediation of and access to the area for Metis harvesters and landusers into the future. Disposing of LLW in these trenches in-situ will subsequently affect the MMC's rights to access the area, and to safely exercise their rights to harvest in the area. Consultation regarding such an approach is clearly required.	unacceptable level of risk to the ability of MMC harvesters and land-users to access and use the site after decommissioning that requires assessment and consideration.		
16	CNL has stated, in describing their engagement with First Nation and Metis communities in section 18.2.1.8.1 Indigenous Engagement of the Commission Member Documents, that "Through its engagement activities, CNL seeks to inform communities while building awareness	Recommendation 16: CNL must consult the MMF and collaborate on developing a Communication Strategy for the 10-year licensing period that is adequate for both parties. This Communication Strategy should include a process which will be followed to inform the MMF on an ongoing basis about project milestones,	CNL's response in CMD-19-H4.1C commits to seeking a more formalized Communication Strategy with MMF.  CNSC staff will continue to ensure through compliance activities that CNL's Public Information and Disclosure Program remains effective, including engagement with MMF on the project.	

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17	The application does not explicitly state that the proposed safety and risk assessments to be undertaken at the site will account for traditional land uses such as harvesting and the consumption of wild foods from within and around the site. Similarly, in section V – Decommissioning of Remainder of Whiteshell Laboratories, sub-section e., the application states that, "As an early part of the WL Closure Project, four possible post-closure land-use categories are being defined and assigned to different areas of the WL site: industrial, agricultural, residential, and casual/parkland. Radiological clearance and release criteria, non-radiological contaminant remediation criteria, and soil cleanup criteria are being developed for each one of the four land-use categories are being used to determine release and	Recommendation 17: CNL must consult with the MMF regarding the land-use categories, release and remediation criteria and the MMF's future needs related to the WL site. The MMF has undertaken Traditional Knowledge studies concerning the WL site, and provided these results to CNL. The information from this study surrounding the traditional and ongoing land-use activities of the MMC in the area is available to CNL, as demonstrated by the summary offered in section 18.2.1.8.1.1 Traditional Knowledge and Land Use Studies in the Commission Member documents. This information must be considered by CNL, without making specific data public, and discussed with the MMF to determine appropriate release and remediation criteria that is in alignment with traditional use of the lands in and around the WL site and account for the rights, claims, and interests of the MMC.	See CNSC staff's response to comment 2.	

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	remediation criteria and do not account for traditional land uses and the consumption of wild foods from in and around the WL site, which will have distinct implications from the outlined industrial, agricultural, residential, and casual uses. The MMF has not been consulted regarding these proposed land-use categories, release and remediation criteria, or what its long term needs are for the Project site in order to allow it to continue to be used by members of the MMC and Metis harvesters to exercise their s. 35 rights and maintain their Metis customs, traditions, and way of life.			
18	The application does not identify any formal opportunities for involvement of the MMF or MMC in environmental monitoring initiatives throughout the 10-year licensing period. CNL/WL does explicitly extend the opportunity to submit moose samples in its	Recommendation 18a: CNL must engage with the MMF regarding the results of the Environmental Monitoring programs throughout the 10-year licensing period. Important issues requiring consultation include, but are not limited to, the safety of consuming wild foods from the area, the safety of	Through compliance activities CNSC staff will continue to ensure the effectiveness of CNL's Environmental Monitoring programs.  CNSC IEMP program investigates the environment outside of the facility, beyond the fence perimeter. CNSC staff	

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	Environmental Monitoring Program; however, this does not adequately integrate Metis traditional knowledge or the results of the Traditional Knowledge Study undertaken and presented to CNL, as moose was not identified as a commonly harvested species in the area.	gathering other natural materials in the area, and any environmental impacts that may affect traditional activities and land use in the area. The MMF should also be engaged to identify any other important related issues with respect to this recommendation.	compare the measured contaminant levels to relevant guidelines regarding safe levels in the environment. IEMP results for the WL site are available on the CNSC website.	
		Recommendation 18b: Metis Citizens should be hired as part of the Environmental Monitoring programs to ensure that their rights, claims, and interests are represented in this process. Metis environmental monitors should be identified by the MMF and given the opportunity to liaise with CNL and the MMF to ensure the results of environmental monitoring are communicated in a timely, comprehensive, and efficient manner.		
19	Though the application states that the 21 - 22 LLW trenches (proposed to be disposed of in-situ) will be restricted-access areas. The extent to which access will be restricted and the time period for	Recommendation 19: CNL must provide a detailed description of the scope and duration of access controls and restrictions to be enacted at the site, and specifically as related to the 21 or 22 trenches to be decommissioned in	See CNSC staff's response to comment 2.	

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	such restrictions is not made clear. Additionally, the application does not mention what, if any, access controls will be placed at the site during the decommissioning and demolition processes. Access controls and restrictions have the potential to impact Metis harvesters and land-users who are active in undertaking traditional activities in and around the site now and into the future.	situ, during the decommissioning and demolition phases. The MMF must be consulted about the most appropriate approach to access controls of this nature.	
20	Safety and Control Area Emergency Management and Fire Protection is discussed in section 13 of the Commission Member Document. However, plans for the next licensing period do not include a process or protocol concerning how the MMF will be notified in the event of an emergency at the WL site. The MMF has previously raised concerns regarding emergency preparedness and what actions CNL will take to inform the	Recommendation 20: The MMF must be consulted about an emergency notification and response protocol for the WL site. This could be included in any Communications Strategy or protocol reached with the MMF as recommended in Recommendation #16 above.	See CNSC staff's response to comment 16.

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	public and specifically Metis harvesters regarding contamination or other events. Given that Metis harvesters and land-users are active in the area around WL to harvest and consume wild foods and gather other natural materials, this information must be included in emergency management and preparedness measures as a risk management/risk communication measure for the MMF.			
21	The permit application specifies in several sections that excavations will be backfilled as required. With respect to section 3.2.2.2 Intermediate Level Waste Bunkers and section 3.2.2.3 Building 417, and Amine Waste Storage Tanks, the Commission Member Document states that "The backfill material will have a clay base and will be compacted in place to re-establish the hydraulic conductivity conditions of the native soil." Where the safety of	Recommendation 21: As Manitoba Metis Citizens harvest on and around the project site, as described in the Traditional Knowledge Study undertaken and delivered to CNL, the MMF must be consulted about remediation and specifically revegetation objectives for the site to ensure that conditions allow for continued harvesting practices, to the extent possible. Furthermore, CNL should incorporate site revegetation strategies into the closure of the site that are informed by this consultation with	See CNSC staff's response to comment 2.	

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	Manitoba Metis Community (MMC) can be assured and there is no risk of contamination, remediation of the site should extend beyond backfilling to include revegetation which will both stabilize the soil and return the site's capacity and productivity for Metis traditional uses, as documented in the MMF's Traditional Knowledge Study.	the MMF	