



Supplementary Information

Renseignements supplémentaires

Written submission from Cameco Corporation

Mémoire de Cameco Corporation

In the Matter of the

À l'égard de

Cameco Corporation, Beaverlodge Project

Cameco Corporation, le projet de Beaverlodge

Application for the Licence Revocation and
Transfer of Properties to Saskatchewan
Institutional Control Program

Demande de révocation de permis et de
transfert de propriétés au programme de
contrôle institutionnel de la Saskatchewan

Commission Public Hearing

Audience publique de la Commission

January 30, 2025

30 janvier 2025

Table 1a- Summary of Beaverlodge Engagement Activities Completed Following Submission of Indigenous Engagement Report

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Date	Community/Interest Group	Comment
October 31, 2024	Representatives from YNLR, CanNorth Environmental	Follow-up discussion regarding comments on the LTMP received from the YNLR on September 26, 2024. CanNorth provided details on the technical assessment and statistics.
November 20, 2024	Fond du Lac First Nation Chief	Meeting with the recently elected Chief to provide an overview of the Beaverlodge properties, the application to release the remaining 27 properties into IC, the LTMP, the IC Program, and the CNSC hearing scheduled for January 30, 2025.
November 20, 2024	YNLR	Written response provided regarding YNLR questions on the LTMP.
November 26, 2024	AJES, YNLR, Representatives from Uranium City, Hatchet Lake First Nation, Fond du Lac First Nation, Black Lake First Nation, Cameco/ Orano community relations liaisons	Quarterly AJES meeting; discussion on the application to release the remaining 27 properties into IC, the LTMP, the IC Program, interventions and the CNSC hearing scheduled for January 30, 2025.
December 4, 2024	NSEQC	NSEQC meeting in La Ronge, SK; discussion on application to release the remaining 27 properties into IC, the LTMP, the IC Program, and the CNSC hearing scheduled for January 30, 2025. Information about the intervention process was also provided.

Letter from Michael Webster, Cameco Corporation, to Dana Kellett, Ya'thi Néné Lands and Resources, Subject: Beaverlodge Long-Term Monitoring Program – Response to Ya'thi Néné Lands and Resources Comments and Recommendations, dated November 20, 2024



November 20, 2024

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Dear Dana Kellett:

Beaverlodge Long-Term Monitoring Program – Response to Ya'thi Néné Lands and Resources Comments and Recommendations

Thank you for the comments and recommendations on the Beaverlodge Long-Term Monitoring Program (LTMP), received September 26, 2024.

The Beaverlodge LTMP was developed using over 40 years of environmental monitoring data collected on and downstream of the decommissioned properties. A technical assessment of the data, completed by a third-party subject matter expert, informed potential monitoring frequencies and locations. As part of that assessment, statistical evaluations were completed that considered both observed trends in the measured dataset and long-term modelled predictions.

In addition to the technical assessment, engagement with rights holders, stakeholders, and local community members informed the final LTMP. These activities included but were not limited to the June 2023 workshop, where local and regional land users, rights holders and other interested parties provided detailed information related to potential water and fish monitoring locations and frequencies.

During the September 11 and 12, 2023 community meetings in Uranium City, Cameco provided a presentation detailing the development of the LTMP. The presentation included details related to the technical assessment, a summary of feedback provided during the June workshop, and the updated draft LTMP based on recent engagement activities. The presentation outlined how community input was utilized to adjust the frequency of both the fish chemistry and water quality sampling components of the LTMP. Ya'thi Néné Lands and Resources (YNLR) representatives attended the September meeting and were provided a copy of the presentation on September 22, 2023.

An additional follow-up meeting was held with YNLR representatives on October 13, 2023. During this meeting, Cameco provided a presentation on the development of the LTMP, including the technical evaluation used to inform the LTMP, a summary of the comments heard through the

engagement activities, and the proposed monitoring locations and frequencies. The presentation also included an overview of other monitoring programs in the region, including the Eastern Athabasca Regional Monitoring Program (EARMP) and the Community-based Environmental Monitoring Program (CBEMP). Cameco subject matter experts were available and answered questions put forward by YNLR representatives.

Subsequent to these discussions, during the March 27, 2024 quarterly Athabasca Joint Engagement and Environment Subcommittee (AJES) meeting both Cameco and the third-party expert provided further details on the LTMP, including the background and technical information used to inform the monitoring program, and how community feedback was incorporated. To facilitate discussion during the meeting, the LTMP was provided to the YNLR in advance. Questions put forward by YNLR personnel were answered, and written feedback on the LTMP was encouraged.

During the May 27 and 28, 2024 public meetings in Uranium City, Cameco again presented on the development of the LTMP, how community input informed the final program, and other monitoring programs in the region. Presentations were also provided by the Saskatchewan Ministry of Energy and Resources (SkMER) and the Saskatchewan Health Authority (SHA). Community members, rights holders, and other interested parties attended the public meeting, including YNLR representatives. Community members raised several questions related to the LTMP, which were answered by Cameco personnel.

On September 26, 2024 Cameco received written comments and recommendations on the LTMP from the YNLR. Several themes were noted in the response, specifically related to the communication of LTMP results, engagement prior to adjusting the LTMP, the Healthy Fish Consumption Guideline, and requests for additional detail or background technical information.

Several recommendations were made related to the established Performance Objectives and Performance Indicators, which were established as part of the accepted Beaverlodge Path Forward. The Path Forward was accepted by the CNSC Commission in 2013, and as such, represented the framework that the LTMP is based on.

Comments and recommendations were also provided related to engagement activities, specifically the communication and reporting of results from the LTMP and engagement prior to program changes. While the management and implementation of the LTMP is at the discretion of the SkMER, Cameco will continue to encourage engagement with and participation by local community members in the program. To help facilitate that, funding will be provided to the SkMER for future engagement activities and to facilitate local community participation in the LTMP.

Other comments were related to the removal of the Healthy Fish Consumption Guideline, which is managed by the SHA. Results from the LTMP will help inform any potential changes to the implementation of the guideline, which we anticipate will follow the same process that took place during the May 2024 public meeting. At that time, the SHA proposed changes to the guideline for community input. Based on the feedback received, mainly that residents are not fishing in locations subject to the guideline, the proposed changes were not implemented by SHA.

In response to the comments and recommendations provided in late September, an additional meeting was held with YNLR representatives on October 31, 2024. During the meeting, clarifications were provided on LTMP engagement activities, and the third-party expert who developed the LTMP provided an overview of the statistical evaluation used to inform the LTMP and was available to answer questions. Additional questions and feedback were sought from YNLR representatives, which would be used to inform a written response.

During the meeting YNLR representatives did not raise concerns with the monitoring locations and frequencies of the LTMP; but focused the discussions on the benefit of including the references, methodology, and statistical evaluation used to inform the program for additional clarity. Specifically, a request was made to append this information to the LTMP to assist in record management.

As Cameco prepares the properties for transfer into the Institutional Control (IC) Program, the necessary documentation will be collated and provided to the SkMER. Cameco heard the concerns raised around providing additional detail in the LTMP, and in response to the recommendation of the YNLR representatives, the supporting information requested will be appended to the LTMP and provided to the SkMER for inclusion in the IC Registry, as part of the transfer process.

Cameco worked with Canada North Environmental Ltd. to prepare detailed responses to the individual comments and recommendations, which are provided in the attached.

We trust the information provided is satisfactory. Should you have any questions, please contact me at 306-956-6784.

Sincerely,



Michael Webster
Lead Reclamation Specialist, Beaverlodge
Cameco Corporation

Attachment

c: CNSC: R. Snider; R. Froess, UMMD Records
SkMOE: G. Bihun
SkMER: G. McKellar
Cameco – Saskatoon: Regulatory Records; B. Balicki; S. Shirley, K. Cuddington, A. Gent

YNLR Comment 1:

- | | | | |
|----|--|---|--|
| 1. | General comment applicable to the LTMP in its entirety | <p>For the reasons listed below, this report does not provide a suitable basis for a long-term monitoring plan. The Beaverlodge site had decades of mining activity prior to meaningful environmental standards and a huge footprint over a number of sites. Chemicals of concern include both stable and radiological elements. Cameco's modelling shows that the concentrations of uranium and selenium will remain well above water quality guidelines at some sites for several decades. This emphasizes the need for a strong monitoring program to ensure declining impacts on the local environment.</p> <p>The LTMP presented here is devoid of a statistical analysis of past monitoring programs that would support the proposed monitoring schedule. The program, particularly for fish, has very low statistical power and would be unable to detect changes in the concentration of chemicals of potential concern (COPCs) with any certainty.</p> <p>The LTMP focuses entirely on water sampling of a few elements and very infrequent monitoring of fish. A comprehensive plan should include monitoring of full water chemistry, the status of the aquatic biotic community in downstream waters, and the recovery of the whole Beaverlodge system.</p> <p>Most concerning is the LTMP report authors' opinion that the concentrations of the three main COPCs will continue to decline, in line with modelling, and that monitoring of water and fish can be reduced in the future. They provide no support for that opinion. Long-term monitoring programs must be vigilant about the possibility of increases in releases from remediated sites in the event of changing environment conditions, specifically changes due to climate change (increasing temperatures in summer and winter, precipitation extremes, wildfires, etc.). A robust monitoring program with frequent sampling and appropriate QA/QC needs to be capable of detecting changes in water chemistry. As proposed, this LTMP will not be able to detect genuine changes in water quality.</p> <p>The LTMP makes no contingency for the possibility of new COPCs as the Beaverlodge site recovers. Instead, it focuses only on U, Se, and Ra-226. Analyses for a broader range of COPCs in water, including hydrocarbons if present on the site, should be a routine component of the monitoring program. This would ensure the continued "safety" of the site in relation to the surrounding environment.</p> | <p>The long-term monitoring program needs to be reconsidered and presented with far more details. These details must be based on a rigorous analysis of previous work by knowledgeable people with experience in developing a long-term monitoring program.</p> <p>In addition, it is critical that the LTMP meaningfully consider suggestions from First Nations and Uranium City residents to monitor more fish species, and more frequently. The LTMP must include more input from the users of traditional lands and consumers of country foods.</p> <p>More recommendations are outlined below for specific issues with the LTMP.</p> |
|----|--|---|--|

As discussed during the October 31, 2024 meeting, the Long-Term Monitoring Program (LTMP) builds upon over 40 years of environmental monitoring that has been conducted in the Uranium City area. This monitoring data informed the Beaverlodge Path Forward, which was accepted by the Canadian Nuclear Safety Commission (CNSC) Commission in 2013. The accepted Path Forward informed the development of the Performance Objectives and Performance Indicators for the decommissioned properties, which represent the framework upon which the LTMP was built.

The long-term dataset has robustly characterized the aquatic environment on and downstream the Beaverlodge properties and has allowed the derivation of key Constituents of Potential Concern (COPC) as well as establishing the long-term trends in the immediate and downstream environments.

The responses to some of the concerns identified are discussed in greater detail in subsequent comments. In summary:

- A statistical analysis of historical data has been conducted that confirms the selected key COPC and the long-term environmental trends.
- The monitoring program will include the full list of analytes currently monitored as part of the Beaverlodge Environmental Monitoring Program.
- Potential changes to the LTMP, such as a reduction in frequency, will be managed by the Saskatchewan Ministry of Energy and Resources (SkMER). Potential changes would occur as monitoring confirms the area continues to naturally recover.
- Funding will be provided to the SkMER to facilitate future engagement activities and local community participation in the LTMP.
- The fish component of the LTMP builds off historical programs and community input. It was developed to support the ongoing maintenance and eventual removal of the Healthy Fish Consumption Guideline. Any changes related to the implementation of the guideline will be at the discretion of the Saskatchewan Health Authority (SHA).
- It is anticipated that potential changes to the Healthy Fish Consumption Guideline follow a similar approach to that presented by the SHA during the May 2024 public meeting. At that time, the SHA proposed changes for community input, and based on the comments received, the proposed changes were not implemented.

YNLR Comment 2:

2.

Page 1, paragraph 1

It is not clear from reviewing the LTMP how the Athabasca Basin communities will be informed of the future monitoring results coming from the proposed LTMP, how that compares to the reporting and communication for the properties while under CNSC oversight, and what opportunities may be available for input and consultation on any proposed changes to the program. This is important information to be provided to YNLR, so that they can fully understand the implications of the Beaverlodge properties being transferred into Saskatchewan's ICP.

The LTMP should clearly outline the reporting requirements for results, including how and when the results will be shared and with whom, and how that compares to the same current CNSC requirements related to the properties under the Beaverlodge Environmental Monitoring Program.

The management and implementation of the LTMP, including communication and reporting of results, will be at the discretion of the SkMER. Cameco continues to encourage SkMER engagement with local community members on the LTMP and monitoring results. To help facilitate that, funding will be provided to the SkMER to conduct future engagement activities.

YNLR Comment 3:

3.	Page 1, paragraph 2	<p>While the LTMP report references the objectives of managing the Beaverlodge properties as to ensure the properties and areas downstream are physically and radiologically “safe, secure and stable,” it is not clear from the LTMP how “safe, secure, and stable” are defined. The performance objectives include unrestricted public access and an assurance that the site is “safe.” Some areas have restrictions on access (e.g., maximum of 30–40 days) due to groundshine and gamma radiation. These issues should be included in a monitoring program.</p> <p>The LTMP program should support quantitative performance indicators, based on the statistical analysis of long-term trend data, in addition to those described here.</p>	<p>The ultimate objectives for the LTMP must also reflect how Athabasca Basin community members define “safe, secure, and stable,” and not rely solely on a western scientific technical understanding of what “safe, secure, and stable” means. This report should include a full description of what “safe, secure and stable” means in terms of the Beaverlodge LTMP, and detail how that definition encompasses community definitions of the same criteria.</p> <p>This LTMP needs to be comprehensive to monitor all components of the site. As presented here, the LTMP only includes water monitoring of three elements and fish, and no recommendations for monitoring the recovery of the terrestrial environment or the recovery of the aquatic community (e.g., status of benthos and forage fish species, adverse ecological effects) in receiving waters.</p>
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As noted in response 1, the Beaverlodge Path Forward established the Performance Objectives for the decommissioned properties. These objectives, approved by the CNSC Commission, have been defined as safe, secure, and stable/improving. Monitoring has been ongoing to ensure that the area remains physically safe and that the environmental conditions continue to recover.

The LTMP uses the Performance Indicators for water quality, that were developed based on 40 years of environmental data and an understanding of the sources from the decommissioned properties, to evaluate measured levels in surface water. In 2012 a Quantitative Site Model (QSM) was developed that provided predictions of water quality through the Beaverlodge Lake immediate and downstream environments as a function of time, including the influence of remedial activities. The Beaverlodge QSM was implemented within a probabilistic framework, to capture the uncertainty and variability that is inherent in natural systems. As a result, the QSM generates predictions that are represented as a distribution or range of results. The 5th percentile and 95th percentile predictions were adopted as predicted bounds and were defined as the Performance Indicators for evaluating future natural recovery.

The use of a model to generate the predictions allowed for the forecast of the timing of natural environmental recovery in the Beaverlodge area water bodies as well as the impact of implementing remedial measures. Detailed workshops were held with local First Nations, community members and regulatory agencies in 2012 to discuss the options for managing the site. Based on the results of the modelling and feedback received, additional special studies were undertaken and remediation activities implemented. An additional 8 years of environmental data were collected and Performance Indicators were updated in 2020 to reflect all of the available information to support the LTMP.

The purpose of the LTMP is to confirm future trends remain in line with expectations. Therefore, the monitoring of water (and comparison to Performance Indicators) and fish (to help inform the healthy fish consumption guideline) is appropriate.

On-going monitoring of the aquatic and terrestrial environment in the region will continue through the Eastern Athabasca Monitoring Program (EARMP)¹, Community-Based Environmental Monitoring Program (CBEMP), and the CNSC Independent Environmental Monitoring (IEMP)² program. These programs sample a variety of media including water, fish, berries, small game, large mammals, and birds.

YNLR Comment 4:

4.	Page 1, paragraph 3 The LTMP states that “the technical evaluation builds off over 40 years of environmental monitoring.” However, none of that monitoring data, analysis, or assessment is presented in the LTMP as an evidence basis for this monitoring plan. The data should be used to show the statistical power of water sampling and the ability of the LTMP to detect changes in water chemistry over time.	Very little of previous monitoring data or assessment reports are cited in this document to establish temporal trends. Relevant data should be summarized, with measures of uncertainty and predictions of declines or increases in the concentration of COPCs. The proposed LTMP needs to build off earlier data, with justification for only three COPCs being monitored, in a way that makes sense for reviewers.
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An example of the type of information used in the development of the LTMP was shared during the October 31 presentation and is reproduced below. The table draws on data presented in the annual reports and provides a summary of surface water data collected from Beaverlodge Lake over the 2018 to 2022 period. This information, as well as similar data from the vast network of regular surface water stations in the area, were used to confirm that the key COPC for the decommissioned Beaverlodge properties remain selenium, uranium, and radium-226.

In addition, information on trends in the water quality data were used in the development of the LTMP. The full monitoring period, dating back as far as 1981, was considered to provide a long-term perspective on the evolution of water quality in the area. An example of the type of information that was used in the development of the LTMP was shared during the presentation; this table is reproduced below, again looking at information from a station in Beaverlodge Lake. Non-parametric Mann-Kendall/Sen’s Slope tests were used to examine the water quality data for temporal trends. If a significant increasing or decreasing trend was identified, then the Sen’s slope of the trend was determined. Sen’s slope is a non-parametric estimate of slope, which represents change in concentration over time. Increasing or decreasing trends were considered significant at an alpha of 0.05, or a 95% confidence level. For the presented example, most parameters exhibited statistically significant decreasing trends within Beaverlodge Lake with no identified increasing trends for this location.

A summary of long-term surface water trends for key COPC at the outlet of the Ace Creek Watershed, the outlet of the Fulton Creek Watershed, and within Beaverlodge Lake are summarized below. Statistically significant decreasing trends were identified for all locations/key COPC with the exception of selenium at the outlet of Lower Ace Creek where levels are low and regularly below the detection limits, and radium-226 at the outlet of the Fulton Creek Watershed.

¹ <https://www.earmp.ca/>

² <https://www.cnsccsn.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/>

The increasing levels of radium-226 within the Fulton Creek Watershed are due to the flux of historically precipitated radium from sediments. This increase in concentration is occurring as predicted and is a result of improving water quality throughout the system as natural recovery occurs. Measured radium-226 values continue to trend within the modelled range and concentrations in Beaverlodge Lake meet the applicable SEQG.

As Cameco prepares the properties for transfer into the Institutional Control Program (IC Program), the necessary documentation will be collated and provided to the SkMER. In response to these recommendations, and others raised around providing additional detail in the LTMP, the supporting information requested by the YNLR will be appended to the LTMP and provided to the SkMER for inclusion in the IC Registry, as part of the transfer process.

Summary Statistics of Recent Period of Beaverlodge Lake Water Quality

Parameter	Units	2018 to 2022 Period								
		n	%<MDL	SEQG ¹	% Exc	Mean	SD	Minimum	Maximum	Median
Major Ions										
Bicarbonate	mg/L	5	0	-	-	82	1.1	80	83	82
Calcium	mg/L	5	0	-	-	20	0.84	19	21	20
Carbonate	mg/L	5	100	-	-	<1	0	<1	<1	<1
Chloride	mg/L	5	0	120	0	11	1.1	10	12	12
Hardness	mg/L	5	0	-	-	70	3.5	65	74	70
Hydroxide	mg/L	5	100	-	-	<1	0	<1	<1	<1
Magnesium	mg/L	3	0	-	-	4.7	0.29	4.4	4.9	4.9
Potassium	mg/L	5	0	-	-	1.1	0.055	1.0	1.1	1.1
Sodium	mg/L	5	0	-	-	17	0.84	16	18	17
Specific Conductivity (Field)	µS/cm	5	0	-	-	221	15	200	243	221
Specific Conductivity (Laboratory)	µS/cm	5	0	-	-	220	5.7	211	224	223
Sulphate ²	mg/L	5	0	218	0	28	1.1	26	29	28
Sum of Ions	mg/L	5	0	-	-	164	4.0	160	168	164
Metals and Trace Elements										
Arsenic	µg/L	5	0	5	0	0.22	0.045	0.20	0.30	0.20
Barium	mg/L	5	0	-	-	0.034	0.0015	0.033	0.036	0.034
Copper	mg/L	5	0	0.007	0	0.0010	0.00032	0.00060	0.0015	0.0010
Iron	mg/L	5	0	0.3	0	0.0051	0.0014	0.0031	0.0067	0.0056
Lead ²	mg/L	5	40	0.002	0	0.00010	0.00006	<0.0001	0.00020	0.00010
Molybdenum	mg/L	5	0	31	0	0.0033	0.00015	0.0031	0.0035	0.0033
Nickel ²	mg/L	5	0	0.0732	0	0.0017	0.00090	0.00080	0.0032	0.0014
Selenium	mg/L	5	0	0.002	85.7	0.0021	0.00012	0.0019	0.0022	0.0021
Uranium	µg/L	5	0	15	100	120	3.2	116	125	120
Zinc	mg/L	5	0	0.03	0	0.0030	0.0015	0.0014	0.0052	0.0032
Nutrients										
Ammonia as Nitrogen ³	mg/L	2	0	0.855	0	0.11	0.0071	0.10	0.11	0.11
Organic Carbon	mg/L	5	0	-	-	3.3	0.27	2.9	3.6	3.3
Nitrate	mg/L	5	80	13	0	0.040	0.045	<0.04	0.12	<0.04
Total Phosphorus	mg/L	5	100	-	-	<0.01	0	<0.01	<0.01	<0.01

Parameter	Units	2018 to 2022 Period								
		n	%<MDL	SEQG ¹	% Exc	Mean	SD	Minimum	Maximum	Median
Physical Properties										
Alkalinity	mg/L	5	0	-	-	67	0.71	66	68	67
pH (Laboratory)	-	5	0	6.0 to 9.5	0	7.9	0.086	7.8	8.0	7.8
Temperature Water	°C	5	0	-	-	10	2.7	7.6	14	9.9
Total Dissolved Solids	mg/L	5	0	-	-	133	13	116	147	137
Total Suspended Solids	mg/L	5	80	-	-	0.60	0.22	<1	1.0	<1
Radionuclides⁶										
Radium-226	Bq/L	5	0	0.11	0	0.024	0.0055	0.020	0.030	0.020

¹Saskatchewan Environmental Quality Guidelines (SEQG) for freshwater aquatic life except where noted.

²Lead, nickel, and sulphate guidelines were calculated using the site-specific mean hardness for the 2018 to 2022 sampling period.

³Site-specific mean temperature and pH from the 2018 to 2022 sampling period were used to derive guideline.

n = number of samples; MDL = method detection limit; Exc = percentage of values that exceed SEQG; SD = standard deviation; "-" = not applicable.

Values below MDL were set to half the MDL for calculations and statistical analyses. When all values were below MDL, means were presented equal to the MDL.

Bolded values indicate guideline exceedances.

Temporal trend analyses Beaverlodge Lake water quality

Parameter	Units	1981-2022				
		n	% <MDL	Sen's Slope	Mann-Kendall tau	Mann-Kendall p
Calcium	mg/L	77	0	0	0.02	0.843
Chloride	mg/L	76	0	-0.15	-0.57	< 0.001
Hardness	mg/L	56	0	0	0.14	0.175
Sulphate	mg/L	77	0	-0.25	-0.66	< 0.001
Arsenic	µg/L	72	29.2	0	-0.12	0.176
Barium	mg/L	29	0	0	0.08	0.576
Copper	mg/L	74	16.2	-0.000039	-0.24	0.004
Iron	mg/L	73	2.7	-0.00022	-0.26	0.001
Lead	mg/L	73	74	-	-	-
Nickel	mg/L	74	9.5	-0.000082	-0.21	0.008
Selenium	mg/L	62	1.6	-0.000043	-0.47	< 0.001
Uranium	µg/L	84	0	-2.2	-0.69	< 0.001
Zinc	mg/L	74	48.6	-	-	-
pH-Laboratory	pH Unit	84	0	0.0025	0.09	0.218
Total Dissolved Solids	mg/L	76	0	-0.38	-0.16	0.043
Total Suspended Solids	mg/L	83	73.5	-	-	-
Radium-226	Bq/L	84	1.2	-0.00049	-0.40	< 0.001

Blue shaded cells indicate statistically significant decreasing trends; - = trend analysis not completed as a large portion of measurements < MDL.

Temporal trend analyses of key COPCs

Location / Key COPC	Trend over 1981 - 2022
Outlet of Ace Creek Watershed	
Selenium	-
Uranium	↓
Radium-226	↓
Outlet of Fulton Creek Watershed	
Selenium	↓
Uranium	↓
Radium-226	↑
Beaverlodge Lake	
Selenium	↓
Uranium	↓
Radium-226	↓

COPC = constituent of potential concern; - = trend analysis not completed as a large portion of measurements < MDL.

Trend analyses are deemed significant at alpha = 0.05. Up and down arrows indicate statistically significant increasing and decreasing trends, respectively.

YNLR Comment 5:

5.	Table 2.1	<p>The technical evaluation to support the Beaverlodge LTMP proposes a frequency of every five years for water sampling.</p> <p>The LTMP also states that the objectives of the sampling program are to collect information to “support the removal of the healthy fish consumption guideline.” The intent of the program is to “discontinue (monitoring) after healthy fish consumption guideline removed.”</p>	<p>The quantitative indicators required to make such a decision need to be outlined here, based on sampling frequency and uncertainty.</p> <p>Proposing to analyze fish every 20 years cannot be supported without compelling evidence from a more rigorous program (as per comments provided elsewhere in this document) than the one proposed. Residents want more fish sampling, which makes sense given the extent of contamination and the elevated levels of selenium and uranium in surface waters. The impacts of high uranium levels on the health of the fish community also need to be monitored and assessed.</p>
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Thank you for the comment. To confirm, the LTMP is not proposing a fish monitoring frequency of 20 years. While the technical assessment supported sampling every 20 years, in response to comments received during engagement activities, the frequency was increased and will take place every 10 years.

It should be noted that although the goal of the fish monitoring program is to inform the management of the Health Fish Consumption Guideline, uranium is not expected to affect fish health. An article on uranium and fish physiology by CNSC and Environment Canada (Goulet et al. 2011) found that uranium toxicity is low relative to many other metals. This is supported by the development of the water quality guideline (CCME 2011). The toxicity values for fish ranged from 350 µg/L (an EC₁₀ for rainbow trout *Oncorhynchus mykiss*) to 14,300 µg/L (for white sucker *Catostomus commersoni*). The concentrations in Beaverlodge Lake are below this range.

CCME. 2011. Canadian Water Quality Guidelines: Uranium. Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life.

Goulet, R.R., C. Fortin, and D.J. Spry. 2011. 8 - Uranium. Editor(s): Chris M. Wood, Anthony P. Farrell, Colin J. Brauner, Fish Physiology, Academic Press, Volume 31, Part B, 2011, Pages 391-428. [https://doi.org/10.1016/S1546-5098\(11\)31030-8](https://doi.org/10.1016/S1546-5098(11)31030-8).

YNLR Comment 6:

6.	Table 2.1	<p>As mentioned in comment 5, the LTMP states that that the ultimate goal of the sampling program is to support the eventual removal of the healthy fish consumption guideline and drinking water advisories. However, selenium toxicity is also a concern for fish reproductive rates, which may result in population level effects for some fish species.</p>	<p>In addition to the safe consumption endpoints, the LTMP should consider including an objective of ensuring the resurgence of fish populations to healthy levels that support subsistence harvesters.</p>
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While selenium can bioaccumulate in fish tissue, it does not necessarily affect the health of individual fish or the ability of the population to sustain itself. Previous studies have looked at fish

populations on, and in the vicinity, of the decommissioned properties. These programs have considered both small and large-bodied fish species and assessed a variety of endpoints including age and length classes.

These studies include a program that assessed lake trout in Beaverlodge Lake and found a low incidence of external abnormalities and no indication of reproductive impairment in the lake trout population. This study concluded that there did not appear to be an effect on the health of the fish population.

An additional study looked at white sucker spawning immediately upstream of Beaverlodge Lake; this study found an abundant white sucker population with all expected age and length classes represented. The spawning run sampled contained over 1,000 adult fish and found that sampled white sucker exhibited no undue signs of stress associated with exposure to selenium or uranium.

These studies have shown that fish populations in Beaverlodge Lake did not show stress associated with contaminant exposure. As such, the LTMP focuses on collecting data to support the SHA in managing the Healthy Fish Consumption Guideline.

YNLR Comment 7:

7.	Page 4, paragraph 1	The LTMP states that “surface water is the best indicator of overall aquatic environment recovery. As a result, sediment and benthic invertebrate monitoring are not required as part of LTMP to meet program objectives.”	There needs to be a stronger argument here to suggest that sediment and benthic sampling are not necessary. Due to the nature of selenium biogeochemical cycling, there may be elevated biological and sediment concentrations that are contributing to biomagnification and bioaccumulation concerns for fish and humans, despite a very low concentration in the water column. Selenium cycles in aquatic habitats by moving in and out of sediment. Given the history of the site, the recovery of the receiving environment, including the status of benthos and the larger fish community, should be monitored. The LTMP should also include monitoring of background or reference sites to determine temporal trends of regional changes in the environment that might not be associated with the Beaverlodge site. The area is undergoing effects due to climate change, which may correspondingly result in changing releases from Beaverlodge.
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As detailed previously, monitoring data has demonstrated that that the recovery of the system is slow. The fish chemistry data from the area, over an approximately 30-year period (from 1990 to 2017), were shown in Appendix C of the LTMP report, and demonstrate that recovery is occurring slowly, particularly in Beaverlodge Lake.

Over 40 years of monitoring has demonstrated that the conditions on, and downstream of the decommissioned properties will continue to naturally recover. This data has been incorporated into the detailed modelling completed for the decommissioned properties.

Modelling, as well as measured results, have confirmed that surface water monitoring provides the most representative and accurate monitoring point to confirm natural recovery continues to occur, and that the objectives of the LTMP are being met. Any potential changes that may influence benthic invertebrate or sediment concentrations would first be observed in the measured water quality. As such, monitoring of benthic invertebrate and sediment quality is not necessary.

As the objective of the LTMP is to ensure natural recovery is occurring as expected through a comparison to established Performance Indicators, a reference location is not required. The Performance Indicators are built on the site characterization data that has been gathered over the past 40 years. The effect of climate change was considered in the development of the Performance Indicators. In the event that there are unexpected shifts in background conditions due to influences such as climate change, this would be captured in other monitoring programs that are taking place in the area such as the EARMP, CBEMP, and the CNSC IEMP. These programs include water, as well as sampling other media including berries, small mammals, large mammals, fish, and birds.

YNLR Comment 8:

8.	Page 4, paragraph 2	Any changes in sampling frequency need to be supported by a statistically robust sampling program with the ability to detect any decreases or increases in elemental concentrations with time.	This section of the LTMP needs to recognize that concentrations may decrease but may also increase with time (i.e., the models may be inaccurate). The monitoring program must be able to detect those changes.
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The foundation of the LTMP is the long history of environmental monitoring that has been conducted in the area, the modelling that was conducted to help understand future trends, and the accepted Performance Objectives and Performance Indicators.

As noted previously, any decision to adjust the sampling program would be made by the SkMER after sufficient data are available. While it is expected that the predictions made in the 2020 Environmental Risk Assessment will continue to be met, a framework has been established to facilitate additional sampling or analysis should measured values trend above the established Performance Indicator upper-bound. In support of this, a contingency program is provided in Appendix A to the LTMP.

YNLR Comment 9:

9.	Page 4, paragraph 3	The LTMP states that there is potential to “reduce surface water sampling frequency for each location to once every 10 years after 15 years of more frequent sampling.” However, there is no indication of if or how concerns from members of the Athabasca Basin communities will be considered prior to the reduction of sampling frequency. Based on Figure 2.2, such a reduction in sampling frequency would be based on only three sampling events, which is minimal given the history at the Beaverlodge properties.	Please provide further information on how concerns from members of the Athabasca Basin communities will be meaningfully and appropriately considered prior to any reductions in the sampling program.
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As noted previously, the management and implementation of the LTMP will be at the discretion of the SkMER. We fully expect that the SkMER will continue to engage on the properties once in the IC Program, including any potential changes being considered to the LTMP. Cameco continues to encourage that engagement and funding will be provided to the SkMER to facilitate future engagement activities related to the LTMP.

YNLR Comment 10:

10.	Page 5	The LTMP references “performance indicators,” and “recovery,” without providing a clear definition of recovery, a list of performance indicators, or a rationale for both.	<p>Please clarify what these “indicators” are. Are they quantitative values, based on past monitoring, or qualitative “pass/fail” decisions?</p> <p>Also, the term “evaluate natural recovery” needs a definition. Does it apply only to the decline of the three COPCs or the receiving environment as a whole?</p> <p>Please define performance indicators at some point early in the report.</p> <p>Please clarify why no performance indicators have been developed for certain stations and in particular BL-3, which appears to be the most downstream station in the Fulton Creek watershed, based on the maps provided.</p> <p>How are extreme concentration values due to natural variability differentiated from a new impact from the Beaverlodge site?</p>
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The Performance Objectives were established in the Beaverlodge Path Forward, which was accepted by the CNSC Commission in 2013. The Performance Indicators were presented to CNSC Commission and accepted in 2014.

By way of background, to determine if a property is meeting the Performance Objectives, site-specific indicators were established. The applicable indicators vary depending on the nature of the property, but generally include ensuring that the risks associated with residual gamma radiation and crown pillars are acceptable, mine openings to surface are closed and stable, boreholes (if present) are plugged, and the property is free from historical mining debris.

To verify if conditions on and downstream of the properties are stable/improving, a performance indicator related to water quality was established that considers modelled predictions. Trends, established from past and future water monitoring results, are compared to modelled predictions to verify that implemented remedial options have had the desired effects, and that natural recovery on and downstream of the decommissioned properties is continuing as expected.

YNLR Comment 11:

11.	Page 6, paragraph 1	The LTMP indicates that surface water sampling at select stations can be discontinued at the discretion of the province. There is no mention of if or how YNLR’s concerns would be considered, or whether proper consultation would occur prior to the discontinuation of sampling.	It is inappropriate for the provincial government to have sole discretion in discontinuation of any or part of the LTMP. YNLR must be properly consulted prior to any changes to the sampling program being made and must consent to the changes.
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Thank you for the comment. As noted previously, we fully expect the SkMER will engage local community members, rights holders, and other stakeholders prior to making any changes to the LTMP. In support of that, funding will be provided to the SkMER to facilitate future engagement activities.

YNLR Comment 12:

12.	Page 9 and Appendix C	<p>The 20-year interval for sampling is far too long, considering that there may be changes due to climate change. Mercury levels alone (in northern pike and possibly lake trout) may exceed guidelines, even though they may not be associated with Beaverlodge.</p> <p>The historical data presented in Appendix C are not strong enough to build a long-term monitoring plan. It is not clear from the presented data if the concentrations have been corrected by sex and age or length of the fish. The statistical power from the high uncertainty and small sample size is extremely low and warrants more frequent sampling.</p>	<p>Given the magnitude of resources available for remediating the site, the interest in the consumption of fish in a traditional fishery or sport fishery certainly warrants a robust sampling program to assure Indigenous rights-holders and the public that the fish are safe to eat. Mercury should be analyzed with the COPCs to ensure that recommendations to consume the fish are not exceeding mercury guidelines.</p> <p>Recommendations from First Nations and the public should be built into a rigorous sampling program.</p>
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As noted in the response to comment five, while the technical evaluation suggested a 20-year interval due to the long time for the system to undergo natural recovery, the frequency was adjusted based on feedback received during engagement activities. As such, sampling frequency in the LTMP was increased and includes a 10-year interval.

Monitoring completed in the region has demonstrated that mercury is unrelated to historical activities at the Beaverlodge properties. Further, available measured water quality data are all below the laboratory detection limit.

Other monitoring programs in the area, such as the EARMP and CBEMP, do include analysis for mercury in fish tissue; these programs are expected to continue in the future.

Given that, mercury analysis is not required in the LTMP.

YNLR Comment 13:

13.	Page 9, paragraph 5	<p>The LTMP states that “the fish sampling program would be discontinued when the healthy fish consumption guideline is removed in Beaverlodge, Martin, and Cinch Lakes.” However, this endpoint for sampling does not consider the potential for psychosocial impacts within the Athabasca Basin communities, or the fact that fish population dynamics (and not just fish tissue chemistry) may have been impacted by the Beaverlodge site activities.</p>	<p>The fish sampling program should be continued until the Athabasca Basin communities have confidence that the fish are safe to eat in amounts and for relevant fish tissues that are consistent with local subsistence/traditional diets, and that fish populations have recovered</p> <p>to levels that support the exercise of Aboriginal and Treaty Rights.</p>
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Thank you for the recommendation. Similar to previous responses, the management and implementation of the LTMP will be at the discretion of the SkMER. Potential changes to the Healthy Fish Consumption Guideline will be managed by the SHA.

The LTMP has been designed to provide both the SkMER and the SHA with the data required to support the long-term environmental stewardship of the properties in the IC Program.

We anticipate any potential changes to the LTMP will follow the same process observed during previous public meetings, where representatives present information and solicit feedback from

meeting participants. In support of that, Cameco encourages engagement with local community members, rights holders and other stakeholders on the LTMP, and funding will be provided to SkMER funding to facilitate future engagement activities.

YNLR Comment 14:

14.	Page 20, paragraph 3	The LTMP states that “questions were also raised related to sediment monitoring...Cameco responded by noting that sediment monitoring has been completed in the region. Water is the leading indicator for environmental recovery.”	Water is an important medium for monitoring, but sediment and benthic organisms integrate changes over time. A full LTMP should ideally monitor several components of air (e.g., dust, precipitation), water, and sediments. If the sites are considered “safe” before transfer to Saskatchewan agencies, why is travel and occupancy of the properties still restricted for land users?
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Surface water quality monitoring represents the most representative and accurate monitoring point to monitor natural recovery. Please see the response to comment seven for a more detailed response related to the monitoring of sediment and benthic invertebrates.

Additional programs in the area, including EARMP, CBEMP and the CNSC IEMP, consider a wider range of sample media including water, fish, small game, large mammals, berries and birds. These programs consistently demonstrate the importance of traditional foods, and that they represent a safe and healthy dietary choice for residents of the Athabasca Basin.

In regard to travel and occupancy, the properties pose minimal physical risk to public safety and are suitable for unrestricted public access. As such, access to the Beaverlodge properties is not restricted. Land use studies have been conducted and show that land users can continue to access the Beaverlodge properties to safely conduct traditional activities.

YNLR Comment 15:

15.	Page 24, paragraph 3	With respect to the proposed surface water monitoring program, the LTMP states that “monitoring can be discontinued once SEQG are being met for Se, U, and Ra-226 during two consecutive sampling events.” This criterion for discontinuation of monitoring seems arbitrary, and no rationale is provided for why this threshold was chosen.	The criteria for discontinuing sampling need to be more quantitative, with specific statistical benchmarks. For example, the program needs to show a high level of confidence (80%) to detect a 5% change in concentration. The administrators of the program should also be prepared to increase sampling frequency if concentrations increase, using the same standards. Additionally, any decisions regarding the discontinuation of monitoring should not be made without full, meaningful consultation with the Athabasca Basin communities.
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The main objective of the LTMP is to evaluate whether the available data are consistent with the expectations for natural recovery. Within this context it is expected that two rounds of sampling that meet Saskatchewan Environmental Quality Guidelines (SEQGs) would be sufficient. A location could only be discontinued once all parameters meet SEQGs.

Prior to making any changes to the LTMP we would anticipate that the SkMER engages with local community members, rightsholders and other stakeholders.

YNLR Comment 16:

16.	Page 25, paragraph 4	The LTMP states that “there is likely little benefit of monitoring fish tissue chemistry more often” than the proposed fish sampling frequency of every 10 years.	Please provide evidence for this. Residents and First Nations have recommended more species and more frequent analysis, which are reasonable requests, particularly for traditional users of the fishery.
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As discussed in the LTMP, the natural recovery of selenium levels in fish flesh is expected to be a gradual process. This was confirmed during the May 2024 public meeting, where the SHA presented data collected from the fall 2023 baseline fish chemistry program. Therefore, monitoring fish, which involves destructive sampling, on a more frequent basis would not provide the SHA with useful information to aid in amending the Healthy Fish Consumption Guideline.

Fish species selected for the LTMP were based on feedback received during engagement activities, including the June 2023 workshop and subsequent meetings. Additional factors included fish availability in each waterbody, representation of different feeding niches (piscivorous species (i.e., lake trout and northern pike) as well as those with benthic diets (i.e., white sucker and lake whitefish), and to align with fish identified in the Healthy Fish Consumption Guideline.

Other species mentioned by local community members included pickerel/walleye and burbot. While not included in the LTMP, two other piscivorous species are included which would capture similar exposure pathways.

Other monitoring programs conducted in the region, including EARMP, CBEMP and the CNSC IEMP, also sample several different fish species. Species sampled are based on community input, and additional species can be provided for independent analysis at any time through the EARMP program.

YNLR Comment 17:

17.	Page 25–26	It is not clear from the LTMP which parts of the fish will be submitted for chemical analysis.	Given that certain COPCs accumulate preferentially in different parts of fish (e.g., Ra-226 may be higher in bones than muscle tissue), and traditional harvesters may consume other parts of the fish beyond just muscle tissue, it is important that the LTMP sampling program collect fish samples for analysis that are relevant to the parts of the fish consumed by First Nation harvesters.
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The objective of the fish sampling component of the LTMP is to help support the removal of the Healthy Fish Consumption Guideline, which is based on selenium levels in fish flesh. As such, fish flesh (muscle) will be submitted for chemical analysis.

YNLR Comment 18:

18.	Page 26	This section rationalizes the analysis of fewer fish at fewer places. “The purpose of the fish component of the Beaverlodge LTMP is to identify when the healthy fish consumption guideline can be removed from the three waterbodies it pertains to [...] and therefore sampling is focused on these waterbodies”. The Athabasca Basin communities have a right to be residents, and First Nations want to know if fish are safe to eat, regardless of whether they are the select fish species from the minimal number of waterbodies that Cameco has selected for the LTMP.	The details of Cameco’s fish chemistry baseline program mentioned on page 26 should be published and used to aid recommendations at other sites, not just for selenium but for mercury as well. The nutritional benefits of fish consumption should also be communicated with Indigenous rights-holders and the public if COPC levels, including mercury, are low.
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As discussed in response to comment 12, mercury is not associated with the decommissioned Beaverlodge properties. It is agreed that there are many nutritional benefits of fish consumption and discussions should be held with SHA to ensure the communication reflects this, as has been done in the past.

The waterbodies selected for the fish chemistry sampling component of the LTMP were selected to support future decisions regarding removal of the Healthy Fish Consumption Guideline.

The baseline fish data collected in the fall of 2023 was collected in response to community feedback and was provided to the SHA to help inform the discussion around the Healthy Fish Consumption Guideline. This data was presented during the May 2024 public meeting in Uranium City, where the SHA was seeking feedback on potential changes to the Healthy Fish Consumption Guideline.

There are several programs in northern Saskatchewan that involve community members in sample collection. The EARMP data is publicly available on the www.earmp.ca website, and consistently demonstrates that traditional foods in northern Saskatchewan are safe for consumption and are a healthy choice for Athabasca Basin residents.

In 2023 the CBEMP was completed in the Uranium City area and involved local community members and YNLR Community Land Technicians. The program focused on collecting information from community members on the traditional foods they are consuming, as well as locations that are important to them, and which traditional foods should be sampled.

The 2023 CBEMP program included several recommendations, including that community members should follow the Healthy Fish Consumption Guidelines and that residents should not drink water from the waterbodies subject to the drinking water advisory. Results from the 2023 CBEMP program demonstrated that traditional foods and water are safe for human consumption, and that regular consumption of locally collected fish, meat and vegetation is encouraged for residents of Uranium City.

YNLR Comment 19:

19.	Page 27, paragraph 1	The document states that the LTMP is “for implementation when all Beaverlodge properties have been accepted into the IC Program.” However, it’s not clear in this document what monitoring, if any, has been occurring for the properties that have already been transferred from CNSC licensing to the Saskatchewan ICP.	Please provide detailed information on what monitoring has been occurring on the Beaverlodge properties that have already been transferred to the Saskatchewan ICP, and how that monitoring correlates to the proposed LTMP presented here.
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The first decommissioned Beaverlodge properties were transferred to the IC Program in 2009. To date, 43 properties have been transferred into the IC Program and inspections were completed as scheduled in 2014, 2019, and 2024. Inspection reports are publicly available on the Government of Saskatchewan website and have concluded that there are no concerns to public safety or the environment and that utilization of the properties was low.

With the planned transfer of the final set of Beaverlodge properties to the IC Program in 2025, Cameco has continued water quality monitoring downstream of properties transferred to the IC Program as part of the Beaverlodge Environment Monitoring Program (EMP). Cameco plans to follow the Beaverlodge EMP until all properties have been transferred to the IC Program. This will ensure a consistent start date for scheduling of water quality monitoring in the IC Program.

YNLR Comment 20:

20.	Figure 4.1	Figure 4.1 states that surface water will be evaluated such that “if COPCs are above SEQG or SEQG does not apply, are trends as predicted?”	If COPCs are above SEQG, effects to the biotic community should be investigated, particularly for uranium due to its chemical toxicity.
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When developing the LTMP, a variety of factors were considered including the long-term dataset, extensive watershed modelling, and predicted water quality on and downstream of the decommissioned Beaverlodge properties. Watershed modelling incorporates a variety of benchmarks, including the SEQGs. While the SEQGs form part of the assessment, when evaluating risk, being above an SEQG does not imply there are effects that require investigation.

The LTMP details a graduated approach that would enable SkMER to reduce sample frequency after 15 years of monitoring. At that point in time, should natural recovery continue as expected additional reductions in sample frequency could take place. After 30 years of monitoring, the LTMP outlines an approach that would enable the SkMER to discontinue monitoring. Several factors will be considered in that evaluation, including the SEQGs, Performance Indicators, and community feedback.

As noted previously, it is anticipated that the SkMER will engage with local community members and rights holders prior to making any changes to the LTMP sampling frequency.

YNLR Comment 21:

21.	Page A-1, final bullet point	The LTMP contingency plan states that “if levels/risks are unreasonable conduct further investigation, evaluation of risk, and/or development of plan to reduce risks.” This proposed wording is vague and could be left open to interpretation, resulting in inaction following concerning sampling results.	It is recommended that the LTMP include clear timelines and triggers for the development and implementation of further investigation and plans to reduce risks, should concerning results arise. The process for triggering additional investigation and/or risk mitigation must include meaningful consultation with Athabasca Basin communities.
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While it is expected that surface water values continue to naturally recover, Appendix A of the LTMP outlines the contingency plan to be followed to investigate consistent measurements outside of the predicted trends. Specifically, Figure A.1 outlines the proposed approach and timelines associated with the evaluation.

When interpreting the dataset, professional judgement will be required to consider a variety of factors that may influence the results (e.g., beaver activity). As shown in Figure A.1, a framework has been established to assist in the evaluation, which includes additional sampling the following year followed by additional annual sampling for 3-5 years, if necessary.

As noted previously, it is anticipated that the SkMER will engage with local community members and rights holders regarding LTMP results.

YNLR Comment 22:

22.	Figure B.1	It's unclear what is being shown in the figure. There is a solid blue line that is not in the legend. Other modelling by Cameco shows uranium levels far exceeding SEQG values well into the future at some sites.	Please clarify the legend and lines in the figures. Also, please explain the discrepancy between the LTMP findings and the Cameco modelling mentioned in the comment.
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Figure B.1 is intended to provide context regarding the LTMP sampling frequency (represented by the black arrows along the x-axis) compared to the expected natural recovery, to show that the LTMP monitoring will sufficiently capture data trends into the future. The examples provided in Figure B.1 are not intended to provide a comprehensive set of predictions for all stations and parameters but to serve as an example.

The solid dark and light blue lines in the figures (Performance Indicators) represent the 5th and 95th percentile model prediction for natural recovery in the bodies of water identified. The dashed dark and light blue lines (predictive bounds) are the 5th and 95th percentile predictions when predicted water quality is below the corresponding SEQG.

YNLR Comment 23:

23.	Figure B.1	Based on the graphs presented in Figure B.1, it appears as though the concentrations of radium-226 in water are anticipated to steadily increase over the next 100 years at three of the four waterbodies presented, before starting to decline. It is unclear how these predicted increases support the definition of the site being “safe and stable” to justify the transfer of control from CNSC licensing to Saskatchewan’s ICP.	Please provide clarity on how “safe and stable” is defined in relation to the predicted recovery of surface water for radium-226.
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As discussed in the responses to previous comments, the LTMP references the established Performance Objectives of being safe, secure, and stable.

As previously discussed, the increasing levels of radium-226 within the Fulton Creek Watershed are due to the flux of historically precipitated radium from sediments. This increase in concentration is occurring as predicted and is a result of improving water quality throughout the system as natural recovery occurs. Risk assessment results, considering the exposure to radium-226 as well as other uranium-series radionuclides, indicate that exposure to current and expected future levels do not pose a human health concern, assuming people continue to respect the advisories and use the site as indicated. Measured radium-226 values continue to trend within the modelled range and concentrations in Beaverlodge Lake meet the applicable SEQG.

The Performance Indicators (based on 5th and 95th percentile model predictions) are a key metric for evaluating the Performance Objectives developed for the site. As long as future trends are within the Performance Indicator bounds, the site meets the Performance Objectives.

YNLR Comment 24:

24.	Appendix C, paragraph 2	The additional information provided for the technical evaluation of the fish sampling program in Appendix C of the LTMP indicates that "the exact approach for setting/removing the healthy fish consumption guideline is up to the SHA."	Similar to previous comments, the removal of any healthy fish consumption guidelines must be done with proper and meaningful consultation with the Athabasca Basin Communities.
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As discussed in the response to comment 13, the LTMP has been designed to provide both the SkMER and the SHA with the data required to support the long-term environmental stewardship of the properties in the IC Program, and to remove advisories currently in place, as appropriate.

The Healthy Fish Consumption Guideline is managed by the SHA. Results from the LTMP will inform any potential changes to the implementation of the guideline, which we anticipate will follow the same process that took place during the May 2024 public meeting. At that time, the SHA presented results from the 2023 fish monitoring program and proposed changes to the guideline for community input. Based on the feedback the SHA received from community members, mainly that residents are not fishing in locations subject to the guideline, the proposed changes were not implemented.

As mentioned previously, Cameco encourages engagement with local community members, rights holders, and other stakeholders on the LTMP, and funding will be provided to the SkMER to facilitate future engagement activities.