BEAVERLODGE PROJECT

Cameco

Energizing the World

Beaverlodge Project 2024 Annual Report

Year 39 Transition Phase Monitoring

Prepared for:
Canadian Nuclear Safety Commission
Compliance Report for Licence: WFOL-W5-2120.0/2025
& Saskatchewan Ministry of Environment
Compliance Report: Beaverlodge Surface Lease

Prepared and Submitted by:
Cameco Corporation

March 2025

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1.0 INTRODUCTION

This report is submitted in compliance with Canadian Nuclear Safety Commission (CNSC) Waste Facility Operating Licence WFOL-W5-2120.0/2025 issued to Cameco Corporation (Cameco) for the decommissioned Beaverlodge properties.

The report is also submitted in compliance with the Beaverlodge Surface Lease Agreement between the Province of Saskatchewan and Cameco Corporation, dated December 24, 2006.

Historically, the Beaverlodge Project Annual Report has been prepared to describe observations and activities at the decommissioned Beaverlodge properties, over a calendar year. This report has been prepared to also include Q1 of 2025 as the CNSC Commission is deliberating on Cameco's request for the CNSC to revoke the Beaverlodge licence. As a result, the scope of this report is from January 1, 2024 to March 31, 2025. Results of environmental monitoring programs (EMP) conducted for the decommissioned Beaverlodge properties during this period are provided in the report. In this report the EMP results for the first quarter of 2025 are provided alongside the 2024 annual average in the report. Note, conclusions should not be made based on a comparison of a single sample and an annual average, as the single sample does not capture the variation in concentration observed throughout the year. Where applicable, historical environmental data has been included and discussed as part of the overall assessment of the decommissioned properties. The status of current projects and activities conducted as of the end of March 2025 are provided, along with an overview of anticipated activities planned for the remainder of 2025.

2.0 GENERAL INFORMATION

2.1 Organizational Information

2.1.1 CNSC License/Provincial Surface Lease

The CNSC Waste Facility Operating Licence WFOL-W5-2120.0/2025 and the Province of Saskatchewan - Beaverlodge Surface Lease, December 24, 2006 are issued to:

Cameco Corporation
2121 - 11th Street West
Saskatoon, Saskatchewan S7M 1J3
Telephone: (306) 956-6200
Fax: (306) 956-6201

2.1.2 Officers and Directors

The officers and board of directors of Cameco as of March 31, 2025, are as follows:

Officers

Tim Gitzel	President and Chief Executive Officer
Grant Isaac	Executive Vice-President and Chief Financial Officer
Brian Reilly	Senior Vice-President and Chief Operating Officer
Rachelle Girard	Senior Vice-President and Chief Corporate Officer
David Doerksen	Senior Vice-President and Chief Marketing Office
Heidi Shockey	Senior Vice-President and Deputy Chief Financial Officer
Sean Quinn	Senior Vice-President, Chief Legal Officer, and Corporate Secretary

Board of Directors

Catherine Gignac, chair	Kathryn Jackson
Daniel Camus	Don Kayne
Tammy Cook-Searson	Dominique Minière
Tim Gitzel	Leontine van Leeuwen-Atkins

2.2 CNSC Licence

On May 27, 2013 the CNSC notified Cameco that the Commission had renewed the Waste Facility Operating Licence for a period of 10 years, from June 1, 2013 until May 31, 2023. The licence was revised in 2019 to accommodate the release of 20 properties from CNSC licensing. The licence was revised again in 2022 to accommodate the release of an additional 18 properties from CNSC licensing. Cameco's objective in managing the decommissioned Beaverlodge properties is to protect the health and safety of the public and environment, and to meet the requirements for transfer of the remaining properties to the Province of Saskatchewan's Institutional Control (IC) Program. Thus far, forty-three of the decommissioned Beaverlodge properties have been released from CNSC licensing to allow for IC transfer or free-release. It is anticipated that all remaining licensed properties will be transferred to the IC program or free released, as soon as feasible.

On May 10, 2023 licence WFOL-W5-2120.0/2025 was granted with an expiry date of May 31, 2025. This licence was granted to allow time for regulatory processes, public and Indigenous engagement, and document preparation for a CNSC hearing to support the final release of the decommissioned Beaverlodge properties and transfer to the IC program.

On February 5, 2024 an application was submitted by Cameco to the CNSC requesting revocation of the decommissioned Beaverlodge properties licence WFOL-W5-2120.0/2025 to facilitate the transfer of the final 27 Beaverlodge properties to the IC Program. A hearing was held January 30, 2025 regarding this matter. Funding was made available by the CNSC through its Participant Funding Program to support Indigenous Nations and communities, members of the public and stakeholders in presenting their views to the Commission at this hearing.

2.3 Provincial Surface Lease

The current provincial surface lease for the decommissioned Beaverlodge properties was issued to Cameco on December 24, 2006 with an expiry date of December 24, 2026. To date the Beaverlodge properties have been released from CNSC licensing and transferred to the IC Program, or free-released following a staged approach. In following this approach 43 properties have been released from CNSC licensing and transferred back to the management of the province of Saskatchewan.

Prior to the final set of decommissioned Beaverlodge properties being transferred to the IC Program the CNSC licence must be revoked. Provided that condition is met Cameco will surrender the Beaverlodge Surface Lease, and the properties will be managed in the IC Program with a Crown Reserve established for the applicable areas.

2.4 Beaverlodge History

The decommissioned Beaverlodge properties are located north of Lake Athabasca, northeast of Beaverlodge Lake, in the northwest corner of Saskatchewan at approximately N59°33’15” and W108° 27’15” (Figure 2.4).

In 1950, Eldorado Mining and Refining Ltd. began development of the Ace Shaft followed by the Fay Shaft in 1951. In 1953, the carbonate-leach mill began production, and a small acid-leach circuit was added in 1957 to handle a small amount of ore containing sulphides. Non-sulphide ore was sent directly to the carbonate circuit, while the sulphide concentrate was treated in the acid-leach circuit.

During mining, the primary focus was on an underground area northeast of Beaverlodge Lake where the Ace, Fay and Verna shafts were located. Production from these areas continued until 1982. Over the entire 30-year production period (1952 to 1982) the majority of the ore used to feed the mill came from these areas; however, a number of satellite mines, primarily in the Ace Creek watershed, were also developed and operated for shorter periods of time. During the mill operating period, tailings were separated into fine and coarse fractions. The fine fractions (approximately 60% of the tailings) were placed into water bodies within the Fulton Creek watershed, and the course fractions (remaining 40% of the tailings) were deposited underground for use as backfill.

During the early years of operation, uranium mining and milling activities conducted at the decommissioned Beaverlodge properties were undertaken using what were considered acceptable practices at the time. These practices, however, did not have the same level of rigor for the protection of the environment as is currently expected. Although the Atomic Energy Control Board (AECB) licensed the Beaverlodge activities, environmental protection legislation and regulation existed neither federally nor provincially and therefore was not a consideration during the early operating period. It was not until the mid-1970s, more than 22 years after operations began, that effluent treatment processes were initiated at the Beaverlodge site in response to discussions with provincial and federal regulatory authorities.

On December 3, 1981 Eldorado Nuclear Limited (formerly Eldorado Mining and Refining Ltd.) announced that its operation at Beaverlodge would be shut down. Subsequently mining operations at the Beaverlodge site ceased on June 25, 1982 and the mill discontinued processing ores in mid-August 1982. The AECB issued a decommissioning approval in November 1983, after which Eldorado Resources Limited (formerly Eldorado Nuclear Limited) initiated site decommissioning. To meet the accepted objectives of the regulatory approved decommissioning plan (i.e., safe, and stable condition, with activities based on good engineering practice of the day), buildings and structures were removed or dismantled, and all mine openings were sealed. Eldorado left the decommissioned

Beaverlodge properties in a safe and secure condition with the expectation that environmental conditions on and downstream of the properties would naturally recover over an extended period.

The decommissioning and reclamation work was completed in 1985. Letters were issued by AECB indicating that the properties had been satisfactorily remediated. Transition-phase monitoring was then initiated to monitor the status of the remediation efforts.

On February 22, 1988 the Government of Canada and the Province of Saskatchewan publicly announced their intention to establish an integrated uranium company as the initial step in privatizing their respective uranium investments.

On October 5, 1988 Cameco, a Canadian Mining and Energy Corporation, was created from the merger of the assets of the Saskatchewan Mining Development Corporation and Eldorado Resources Ltd. Following the merger, management (monitoring and maintenance) of the decommissioned Beaverlodge properties became the responsibility of Cameco, while the Government of Canada, through Canada Eldor Inc. (CEI), retained responsibility for the financial liabilities associated with the properties.

In 1990, the corporate name was changed to Cameco, with shares of Cameco being traded on both the Toronto and New York stock exchanges.

The management of the Beaverlodge monitoring program and any special projects associated with the properties is the responsibility of the lead, reclamation specialist, Beaverlodge within the Safety, Health, Environment and Quality (SHEQ) - Compliance and Licensing group at Cameco.

2.5 The Path Forward Plan

2.5.1 Institutional Control Program

In 2007, after significant consultation with stakeholders, including the CNSC, the mining industry, Indigenous organizations and communities in the major mining regions of the province, the Government of Saskatchewan proclaimed The Reclaimed Industrial Sites Act and its associated regulations to establish and enforce the IC Program. The IC Program establishes a formal process for transferring decommissioned mining and milling properties to provincial responsibility. This transfer can occur once remediation has been completed and a period of monitoring has shown the properties to be safe, secure and stable/improving.

2.5.2 The Beaverlodge Management Framework

The Beaverlodge Management Framework and supporting documents were developed in 2009 by Cameco and the Joint Regulatory Group (JRG), which included the CNSC, Environment and Climate Change Canada (ECCC), the Department of Fisheries and Oceans Canada (DFO), and the Saskatchewan Ministry of Environment (SkMOE). The intent of the Beaverlodge Management Framework is to provide a clear scope and objectives for the management of the decommissioned Beaverlodge properties along with a systematic process for assessing site-specific risks to allow decisions to be made regarding the transfer of decommissioned Beaverlodge properties to the IC Program. The framework has been reviewed by public stakeholders, including the Northern Saskatchewan Environmental Quality Committee (NSEQC), as well as residents and leaders of the Uranium City community. A simplified version is provided below in Figure 2.5 1.

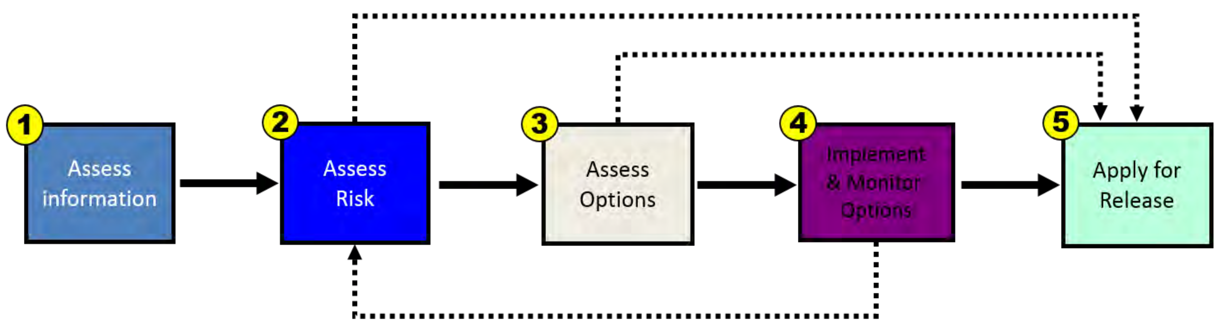


Figure 2.5-1 Simplified Beaverlodge Management Framework

The information gathered as part of Box 1 (of Figure 2.5 1) by Cameco and its consultants, combined with historical information, was used to develop the Beaverlodge Quantitative Site Model (QSM) in 2012 (Box 2 of Figure 2.5 1). The QSM was developed to assess ecological and human health risk from the 2012 baseline water and sediment quality established by information gathered in the first phase of the Management Framework. The QSM provides insight into the interactions between potential sources and transport in the Beaverlodge area watersheds, which established the predicted rates of natural recovery for the system. In addition, the QSM was developed with a feature that allows the simulation of potential remedial activities and compares results to the baseline option (natural recovery). This comparison allowed an assessment of the potential environmental benefits and other effects of implementing each remedial option alone or in combination with other options (Box 3 of Figure 2.5 1).

In 2020, the QSM was updated with the 2020 Beaverlodge Environmental Risk Assessment (ERA; CanNorth 2020). The performance indicators were updated alongside water quality predictions.

The Path Forward Report (Cameco 2012) describes specific remedial activities selected to improve local environmental conditions. In addition, the Path Forward Report also describes the monitoring expectations to assess the success of the implemented activities (Box 4 of Figure 2.5 1).

Once it was shown that the selected remedial activities have been successfully implemented, and once properties meet the site performance objectives of safe, secure, and stable/improving, Cameco initiated the process to transfer the eligible property to the IC Program for long-term monitoring and maintenance (Box 5 of Figure 2.5 1). The Beaverlodge Final Closure Report was submitted to the regulatory agencies in November 2023 to move the Beaverlodge properties to the final stage of the Management Framework.

A letter of intent has been provided by both SkMOE, to grant a Release from Decommissioning and Reclamation; and SkMER, to accept the properties to the IC Program for long-term monitoring and maintenance, once the properties are released from CNSC licensing.

On February 5, 2024 an application was submitted by Cameco to the CNSC requesting revocation of the decommissioned Beaverlodge properties licence WFOL-W5-2120.0/2025 to facilitate the transfer of the final 27 Beaverlodge properties to the IC Program. A hearing was conducted with the CNSC Commission on January 30, 2025 regarding this matter. At the time of preparation of this report a decision has not yet been released by the Commission.

2.5.3 Performance Objectives and Indicators

Criteria to determine the eligibility for release from CNSC licensing were presented to the Commission with the intent that each of the properties associated with the decommissioned Beaverlodge properties will be assessed through the Beaverlodge Management Framework. The performance objectives for the decommissioned Beaverlodge properties were later defined and presented to the Commission by CNSC staff during the 2014 update meeting as safe, secure, and stable/improving.

- Safe – The site is safe for unrestricted public access. This objective is to ensure that the long-term safety is maintained.
- Secure – There must be confidence that long-term risks to public health and safety have been assessed by qualified person and are acceptable.
- Stable/Improving – Environmental conditions (e.g., water quality) on and downstream of the decommissioned properties are stable and continue to naturally recover as predicted.

Site specific performance indicators were established as a measure to determine if a site is meeting the performance objectives. The applicable indicators vary depending on the nature of the property, but generally include ensuring that risks associated with residual gamma radiation and crown pillars are acceptable, mine openings to surface are secure, boreholes are sealed, and the site is free from historical mining debris. To ensure the performance objectives of safe and secure continue to be met, once the properties have been transferred to the IC Program, inspections will be scheduled as part of the IC monitoring and maintenance plan.

The stable/improving objective is also related to the performance indicators discussed in the previous paragraph; however, it is more relevant to monitoring water quality. In order to verify that conditions on and downstream of the properties are stable/improving, Cameco will continue to monitor the progress of natural recovery and the expected localized improvements from the additional remedial measures implemented at the properties until they are transferred to the IC Program. To ensure the performance objective of stable/improving continues to be met once properties have been transferred to the IC Program, a long-term monitoring program (LTMP) will be implemented at the time of transfer. Figure 2.5-2 is an illustration of the performance objectives and associated performance indicators. Further explanation of the performance indicators and the criteria to satisfy them are provided in Table 2.5-1.

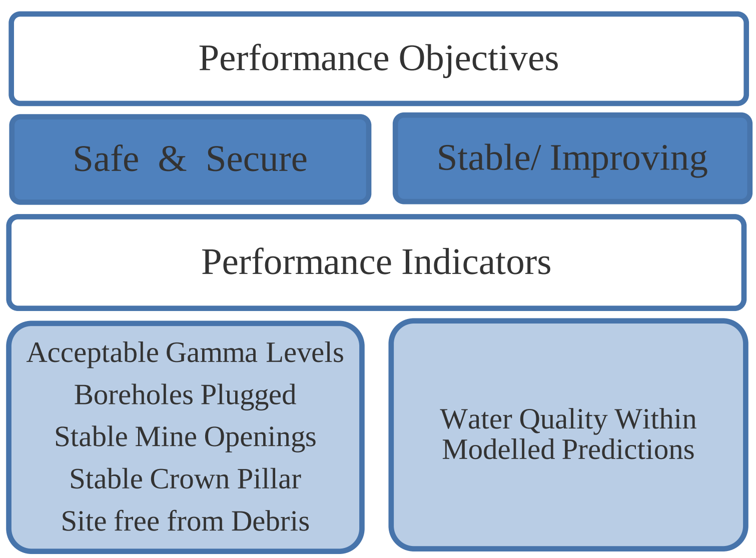


Figure 2.5-2 Performance Objectives and Indicators

Table 2.5-1 Beaverlodge Performance Indicators

Performance Indicators	Description	Acceptance Criteria
Acceptable Gamma Levels	Cameco will complete a site wide gamma survey which will indicate where additional material may need to be applied to cover existing waste rock or tailings. Following the application of the cover material, a final survey will be completed of the remediated areas verifying that the cover was adequate.	Reasonable use scenario demonstrating gamma levels at the site are acceptable.
Boreholes Plugged	Cameco will plug all identified boreholes on the site to prevent groundwater outflow to the surface.	All boreholes have been sealed.
Stable Mine Openings*	The current concrete caps on the vertical mine openings will be replaced with new engineered caps with established designs to improve the long-term safety of the site, where applicable.	Mine openings have been secured and signed off by a qualified person, where applicable. *
Stable Crown Pillar	Based on the surface subsidence in the Lower Ace Creek area, a crown pillar assessment will be completed for the four areas that have mine workings close to surface including Hab, Dubyna, Bolger/Verna, and Lower Ace Creek.	Crown pillar assessed, remediated (if required), and signed off by a qualified person.
Site Free From Debris	Inspection and removal of residual debris will be completed prior to releasing the properties from CNSC licensing and transferring them into the provincial Institutional Control Program.	Site free of former mining debris at the time of transfer to institutional control.
Water Quality Within Modelled Predictions	Water quality monitoring will be compared to model predictions to verify: 1. That remedial options expected to result in localized improvements are having the desired effects; and 2. That natural recovery on and downstream of the decommissioned properties is continuing as predicted.	Water quality data is stable/improving.

*Note: The performance indicator identified above as “Stable Mine Openings” was originally labelled as “Stable Caps on Vertical Mine Openings”. The scope and acceptable criteria for this performance indicator was expanded to include all mine openings.

2.5.4 Release of the Beaverlodge Properties to Institutional Control

To facilitate release from CNSC licensing and transfer to the IC Program, Cameco has advanced the properties in a staged approach. In 2009, Cameco successfully transferred five Beaverlodge properties to the IC Program. This occurred following the release from Decommissioning and Reclamation requirements by SkMOE, release from CNSC licensing, and acceptance into the IC Program by the Saskatchewan Ministry of Energy and Resources (SkMER).

In 2020, Cameco successfully transferred 19 properties to the IC Program, following release from decommissioning and reclamation by SkMOE, release from CNSC licensing and acceptance by the SkMER. One property and portions of some properties were free-released due to the absence of historical mining/milling activities and do not require any long-term monitoring or ongoing administrative controls.

On March 24, 2022, a CNSC public hearing regarding the transfer of an additional 18 properties to the IC Program was held and on September 7, 2022, the release from CNSC licensing was granted. The properties have been removed from the Beaverlodge Surface Lease Agreement and transferred to the IC Program in 2024.

SkMOE (August 7, 2024 G. Bihun to M. Webster) and SkMER (July 4, 2024 G. McKellar to R. Snider (CNSC)) have indicated their intention to grant a Release from Decommissioning and Reclamation Requirements and acceptance of the remaining 27 properties to the IC Program once released from CNSC licensing. On February 5, 2024 an application was submitted by Cameco to the CNSC requesting revocation of the decommissioned Beaverlodge properties licence WFOL-W5-2120.0/2025 to facilitate the transfer of the final 27 Beaverlodge properties to the IC Program.

A hearing was held on January 30, 2025 regarding this matter. At the time of preparation of this report a decision has not yet been made by the CNSC regarding Cameco’s request to release the final 27 properties and revocation of the licence.

A summary of all properties transferred or free released to date, as well as those remaining is provided in Appendix A.

3.0 SITE ACTIVITIES

The performance of the decommissioned Beaverlodge properties compared to the performance objectives is assessed through routine inspections conducted by Cameco personnel, third party consultants and/or members of the JRG. Additional studies and work are completed where required to gather information to support characterization of the properties, and aid in assessing the performance of specific components of the decommissioned properties. Results from the activities completed each year as well as updates on the status of the remediation projects at the decommissioned Beaverlodge properties are communicated through regular meetings with the public. The following section outlines activities related to the decommissioned Beaverlodge properties during the reporting period.

3.1 Routine Inspections and Engagement Activities

3.1.1 Joint Regulatory Group Inspections

The JRG is comprised of representatives from relevant federal and provincial regulatory agencies. The SkMOE represents the Province of Saskatchewan and is responsible for oversight of uranium mining and milling activities in the province, while the CNSC is responsible for regulating and licensing all uranium mining and milling operations in Canada and is the lead federal agency. The DFO and ECCC are additional federal regulators that provide oversight when requested or if necessary.

The JRG inspections are conducted to ensure conditions on the properties do not impact the health and safety of people; the continued protection of the environment; and that the requirements of the licence continue to be met. In 2024, one regulatory inspection was completed at the decommissioned Beaverlodge properties. The objective of the inspection was to complete a general assessment of the safety, security and stability of the decommissioned Beaverlodge properties, while focusing on the properties planned for transfer to the IC Program and to identify any remaining tasks to be completed prior to transferring properties. In addition, the inspection was completed to verify compliance with Cameco's approved licence documents, elements of *The Environmental Management and Protection Act*, 2010, and associated regulations.

The 2024 regulatory inspection was completed by SkMOE on May 29 and 30. A copy of the report titled *"OCC-151004 Beaverlodge Property Inspection May 29 to 30, 2024"* was provided to Cameco on July 9, 2024. The report identified no new action items, and no recommendations made in the report. There were a few minor items identified for completion prior to the properties being transferred to the IC Program. Cameco provided a response to the inspection report on October 11, 2024, describing how the items were addressed.

3.1.2 Geotechnical Inspection

The 2024 geotechnical inspection was completed by Cameco personnel using the Geotechnical Inspection Checklist. A summary of the results is provided below for each of the inspected areas:

- The Fookes Delta.
    - No development of new tailings boils or exposures.
    - There are no signs of excessive erosions on the cover material.
    - Earthen berms and erosion protection are still in place and limiting vehicular traffic from accessing the delta.
- The two outlet spillways at Fookes and Marie Reservoirs.
    - Both spillways are performing as expected with no erosion occurring in the spillway or on the rip-rap embankments.
    - A beaver dam previously noted at the Marie spillway remains active. The crest of the beaver dam appears to be similar to previous years.
- The Zora Creek Reconstruction Area
    - Channel embankments remain stable with the vegetation on the downstream portion well established and thriving.
    - The beaver dam located at the outlet of Zora Lake appears stable and remains intact.
- The Crown Pillar areas at Ace, Hab and Dubyna.
    - With the transfer of the Ace, Hab and Dubyna properties into the IC Program in 2024, the geotechnical inspections related to the crown pillars were not completed in 2024. The crown pillars will be inspected as part of the monitoring and maintenance requirements in the IC Program.

For detailed results, the full inspection report including a general map and photographic records is provided in Appendix B.

3.1.3 Community Engagement

Engagement activities are targeted towards rights bearing First Nation and Métis communities of the Athabasca Basin, which are located in the vicinity of the site. The closest community is the northern settlement of Uranium City (Uranium City), located 8 km west of the former mine/mill site and is the only community with year-round road access to the decommissioned Beaverlodge properties. Cameco has built strong relationships in the north through its northern strategy and its commitment to maintaining open channels of communication. The Beaverlodge Public Information Program (PIP) was developed in an effort to ensure that Cameco’s activities at the decommissioned properties are efficiently communicated to the public in a manner that complies with established regulations.

General updates on the decommissioned Beaverlodge properties are provided annually during a public meeting, typically held in Uranium City. Cameco engages directly with those interested in the project and presents project plan updates in an effort to elicit feedback and provide meaningful response. The primary audience is the residents of Uranium City and the Uranium City Métis Local #50. The residents of this community have become well versed in the activities occurring at the Beaverlodge properties through participation in regular engagement. The discussions vary amongst participants but often focus on community benefits from the Cameco operating sites that pertain to employment opportunities.

In June 2016, Cameco and Orano Canada Inc (Orano) signed the Ya'thi Néné Collaboration Agreement (CA) with the three First Nation and four municipal communities in the Athabasca Basin. The agreement reflects the five pillars within Cameco's northern and Indigenous sustainability and stakeholder relations strategy, which is focused on workforce and business development, community engagement and investment as well as environmental stewardship.

Engagement between Cameco and the Basin First Nations and communities under the CA occurs primarily through the Athabasca Joint Engagement and Environment Sub-committee (AJES; previously the Athabasca Working Group). The AJES is a joint committee of community and industry representatives, including technical support provided by the Ya'thi Néné Land and Resource Office (YNLR), that meets regularly and discusses the northern Saskatchewan operations, company activities and environmental-related matters of importance to the Athabasca communities. The AJES also provides a channel for the communities to share questions and concerns, in addition to traditional knowledge with the companies. While Beaverlodge does not fall under the CA, Cameco continues to keep the subcommittee updated and engaged regarding the decommissioned Beaverlodge properties.

In 2024, Cameco continued to provide updates regarding the Beaverlodge properties to AJES. Meetings were held on February 9, March 27, June 25, September 24, and November 26. During these meetings Cameco provided an update on the LTMP, the application to release the remaining 27 properties from CNSC licensing and transfer into the IC Program, the continuation of monitoring of the properties in IC, the CNSC hearing scheduled for January 30, 2025, and information on the CNSC participant funding program and the intervention deadline. For the March 27 AJES meeting specifically and in response to concerns raised, Cameco provided a presentation on the Beaverlodge LTMP including background on the technical evaluation used to derive components of the program and how community feedback was incorporated. The YNLR, as the technical support for the Athabasca Basin First Nation Communities, was provided a copy of the LTMP in advance of the meeting. Questions were answered during the meeting, and written feedback on the LTMP was encouraged.

Cameco provides information and responds to inquiries from the Northern Administration District communities, non-government organizations and other groups that may express interest in the decommissioned Beaverlodge properties through our websites and social media channels and direct engagement when appropriate. In addition, Cameco submitted information to Ya'thi Néné spring and summer newsletters in 2024, providing an update on the January 30, 2025, CNSC hearing for Beaverlodge, the deadline to apply for participant funding and the deadline for submitting interventions to participate in the hearing process. The Ya'thi Néné community newsletter was established in 2020 and is distributed in both print and online by subscribing with a focus on news and updates for the Athabasca Basin.

The annual public meeting was held in Uranium City on May 27 and 28, 2024. Cameco provided an update during the meeting on a number of activities, including the proposed transfer of properties to the IC Program, performance indicators and evaluation, an overview of the remaining properties, regulatory timelines, monitoring in the IC Program (LTMP), additional monitoring that occurs in the region (e.g. CBEMP, EARMP) and other ongoing engagement activities. Information was also provided on the regulatory timelines, including the planned January 2025 Commission hearing, the deadline to apply for participant funding and the deadline to submit interventions.

During the public meeting, presentations were also provided by the CNSC, SkMOE, SkMER, and the Saskatchewan Health Authority (SHA). Representatives from the CNSC provided information on the hearing process, the participant funding program and intervention deadline for the January 2025 hearing. Representatives from SkMOE provided a summary of the Ministry's process for removing the surface lease on the properties to facilitate transfer to the IC Program. The SkMER representative provided an overview of the IC Program, as well as its current and future work. The SHA provided a presentation of their interpretation of historical and recent fish chemistry results. The SHA requested feedback from the local land users regarding the Healthy Fish Consumption Guideline and whether the community wanted to see the guideline updated to be more specific regarding the number of fish that could be consumed on each body of water listed in the guideline. Meeting participants reaffirmed they are not consuming fish from these locations, and given that, did not recommend any changes to the current Healthy Fish Consumption Guideline at this time.

Participants in the 2024 public meeting included residents of Uranium City, representatives from Athabasca Chipewyan First Nation (ACFN), Metis Nation – Saskatchewan (MN-S), MN-S Local #50, YNLR, AJES, NSEQC, a Fond du Lac Elder and youth and representation from the other Athabasca Basin First Nations and communities.

Following the public meetings, a site visit to Fookes Delta was provided. The attendees of this site visit included the MN-S and representatives of the YNLR, NSEQC, AJES, ACFN, and representatives from the other Athabasca Basin First Nations and communities, as well as interested community members from Uranium City. To show respect and acknowledgement of the lands, the people, the traditional territory and Métis homeland, before starting the May 27 site visit, a drum ceremony was performed by a youth drummer and Elder from Fond du Lac First Nation, and a tobacco offering was made. In addition, Elders provided opening and closing prayers, offerings, and remarks during the May 27 and 28 site visits.

In 2024, Cameco provided an update to the NSEQC on the decommissioned properties at the February 27, June 4, and December 10 meetings. Cameco provided information on the planned release of the remaining 27 decommissioned properties and revocation of the CNSC license, the development of the LTMP, the scheduled Commission hearing, and information on the intervention process.

Cameco participated in the annual Athabasca Basin Community Tour from October 1 to 4, 2024. The tour included meetings in the communities of Uranium City, Stony Rapids, Wollaston Lake, as well as the First Nation communities of Fond du Lac, Black Lake, and Hatchet Lake. In each community, Cameco provided an update on the planned release of the 27 remaining decommissioned properties from CNSC licensing and transfer into the provincial IC Program as well as the December 10, 2024, deadline for interventions. Discussion was also provided on the continuation of monitoring on the properties in IC Program at the direction of SkMER through the LTMP.

The community visits were attended by local leadership and representatives of the YNLR, AJES, NSEQC, MN-S, MN-S Local members, and the MN-S Local #50 president (Uranium City). The attendees also included representatives from the other Athabasca Basin First Nations and communities, as well as interested community members including Elders and youth representatives, and the Cameco/Orano Community Relations Liaisons. In most communities, the day commenced with a drum ceremony, a prayer from an Elder, opening remarks from leadership, a closing prayer, and a tobacco offering was made.

In early 2024, the YNLR raised a question regarding the condition of the stainless-steel caps in place at the Beaverlodge properties. While the properties in question are already in the IC Program, in July 2024 Cameco and the design engineer inspected all stainless-steel caps to ensure they were performing as expected. While in Uranium City, a site visit was arranged with the YNLR land technician to visit the shaft caps to ensure all questions had been adequately addressed. The design engineer confirmed the shaft caps were performing as expected, and no additional questions or concerns regarding the shaft caps were raised.

In late September 2024, the YNLR provided written comments and recommendations regarding the Beaverlodge LTMP. In October, Cameco hosted a meeting with YNLR representatives and the third-party subject matter expert who assisted in the development of the LTMP. During the meeting, the YNLR comments were discussed and a written response to remaining comments was provided back to YNLR on November 20, 2024.

In 2024, the Beaverlodge website (www.beaverlodgesites.com) was updated to include additional details and resources on the Management Framework, documents relevant to the 2025 CNSC licence hearing, and information on the regional monitoring programs conducted in the Uranium City area such as EARMP and CBEMP.

In addition, the virtual tour video was updated in 2024 to include current information on the Beaverlodge properties and the proposed transfer of the remaining 27 decommissioned properties into the provincial IC Program. A Dené translation of the virtual tour video is also available on the Beaverlodge website.

Cameco continues to build strong relationships in the north through its PIP and its commitments to meaningful engagement.

3.2 2024 Remediation Activities to Prepare Sites for Transfer to IC Program

Cameco prepared a work plan and schedule, that was based on the Path Forward Report recommendations (Cameco 2012), which was presented to the CNSC at the 2013 re-licensing hearing. The Path Forward described remedial activities selected to improve local environmental conditions in order to meet performance objectives and described the monitoring requirements to assess the success of implemented activities. The work plan described specific site activities required to address residual human health and ecological risk, while demonstrating conditions on the properties are stable and/or improving. The remediation activities implemented at the decommissioned Beaverlodge properties included:

- Rehabilitating historic mine openings.
- Re-establishment of the Zora Creek flow path.
- Final inspection and cleanup of properties.
- Decommission identified boreholes.
- Crown Pillar Remediation
- Site wide gamma assessment.

Ultimately, the decommissioned Beaverlodge properties are managed to ensure they meet the performance objectives of safe, secure and stable/improving. By meeting these objectives, the decommissioned properties will be eligible for acceptance into the IC Program or free-released. All work undertaken since the development of the work plan and schedule is intended to support the Management Framework established to move towards the goal of transferring properties to the IC Program. The following sections provide an overview of remedial activities completed since development of the Path Forward to advance the properties towards transfer to the IC Program. Where work was done in 2024 it has been specifically noted in the text.

3.2.1 Rehabilitate Historic Mine Openings

While the original decommissioning of the mine site included sealing most historic vertical mine openings with concrete, final drawings detailing the closure methods were not created for each opening. To ensure Cameco meets the performance objectives of safe, secure and stable/improving, mine openings have since been verified to be secured and subsequently signed off by a qualified person, where applicable. All historic mine openings on the former Beaverlodge properties were assessed between 1999 and 2021 with additional remediation completed where required. All the properties meet the performance objective for stable mine openings.

Cameco hired Kova Engineering (Kova) to complete a field review of the 20 stainless steel mine openings in 2024. This field review was to inspect the general condition of the caps, the bedrock anchor locations, as well as checking for signs of excessive oxidation.

It was noted that black material was accumulating on the shaft caps along the welds. This was inspected and determined to be fine organic material that washed off with a soapy water mixture. Sediment build-up on the caps will not be an issue for the corrosion resistance of the cover material (316 stainless steel).

The bedrock anchor points were also inspected in 2025. A comparison to the As-Built records show there is no deterioration of the bedrock surrounding the anchor plates associated with the stainless-steel caps. Kova also inspected and provided the following information regarding the anchor bolts; Anchor bolts are largely redundant in the design of the covers and prevent the cover from shifting laterally; Any failure of a single anchor bolt would not cause an immediate need for remediation; The presence of ice on and around the baseplates was expected and is not expected to damage the mine opening covers, as stainless steel is a ductile material.Kova concluded that the covers were performing as expected at the time of the 2024 field review, and the covers are suitable for continued service. None of the observations noted above will impede the performance or function of the covers.

An overview of the remediation of mine openings is provided in Table 3.2-1.

Table 3.2-1 Mine Openings

Site	Opening	Property	Location		Status	Notes
Ace	Shaft	ACE MC	643697	6605390	Exposed	Stainless steel cover installed in 2016.
Ace	2157 Raise	ACE 1	643366	6605115	Exposed	Stainless steel cover installed in 2017.
Ace	2157 Finger Raise	ACE 1	643338	6605106	Exposed	Stainless steel cover installed in 2017.
Ace	130 Raise	ACE MC	643773	6605394	Exposed	Stainless steel cover installed in 2017.
Ace	195 Access Raise	ACE 1	643512	6605180	Buried	Leave “as-is”; Backfilled and buried by substantial waste rock below the Dorrclone.
Ace	195 Raise	ACE 1	643512	6605180	Buried	Leave “as-is”; Backfilled and buried by substantial waste rock below the Dorrclone.
Ace	105*2 Raise	ACE 1	643584	6605288	Buried	Engineered rock cover installed in 2018.
Ace	201 Raise	ACE MC	643615	6605277	Backfilled	Leave “as-is”. Removed concrete cap and excavated below, no indication of a raise opening. Raise area was backfilled, no further remediation planned at this location.
Dubyna	810394 Raise	JONES	647794	6608256	Exposed	Stainless steel cover installed in 2017.
Dubyna	820694 Raise	JONES	647820	6608451	Exposed	Stainless steel cover installed in 2017.
Dubyna	Dubyna Portal (Adit)	JONES	647806	6608229	Backfilled	Leave “as is”.
Eagle	Shaft	EAGLE 7	639549	6607252	Exposed	Concrete cap installed in 2001.
Eagle	Adit	EAGLE 1	640379	6607245	Submerged	Leave “as is”.
Fay	Shaft	URA 4	642668	6604711	Exposed	Stainless steel cover installed in 2020.
Fay	Custom Ore Raise	URA 4	642623	6604658	Buried	Engineered rock cover placed in 2020.
Fay	Custom Ore Bin	URA 4	642625	6604658	Buried	Engineered rock cover placed in 2020.
Fay	CB-1 Access Raise	URA 7	642558	6604563	Buried	Engineered closure design installed in 2021.
Fay	Surface Dump Raise	URA 4	642595	6604639	Exposed	Stainless steel cover installed in 2018.
Fay	Sorting Plant Raise	URA 7	642603	6604520	Backfilled	Located, Leave backfill as is.
Fay	Sorting Plant Bin	URA 7	642603	6604520	Backfilled	Beside the raise, Leave backfill as is.
Fay	Fine Ore Dump	URA 4	642682	6604715	Exposed	Stainless steel cover installed in 2020.
Fay	Pipe Drift Raise	URA 4			Buried	Leave “as-is”. Small diameter raise (borehole) for piping, backfilled in reservoir.
Fay	25373 Raise	URA 3	642253	6604665	Exposed	Stainless steel cover installed in 2017.
Fay	24094 Raise (Vent)	URA 4	642702	6604632	Exposed	Stainless steel cover installed in 2018.
Fay	Fay Ladder Access	URA 4	642606	6604655	Buried	Engineered rock cover placed in 2020.
Fay	Waste Haul Adit	URA 7	642638	6604450	Backfilled	Backfilled in 2017.
Hab	Vent Plant Raise	EXC 1	645542	6612182	Inaccessible	Leave “as-is”, Vent raise is in the adit (within mine workings).
Hab	13904 Raise	EXC 1	645229	6612203	Exposed	Stainless steel cover installed in 2017.
Hab	13905 Raise	EXC 1	645246	6612213	Exposed	Stainless steel cover installed in 2017.
Hab	13918 Raise	HAB 1	645292	6612236	Buried	No further remediation required- backfilled in Hab pit.
Hab	13927 Raise	HAB 1	645295	6612230	Exposed	Stainless steel cover installed in 2017.
Hab	13909 Raise	HAB 1	645308	6612255	Buried	No further remediation required- backfilled in Hab pit.
Hab	13929 Raise	HAB 1	645352	6612255	Buried	No further remediation required- backfilled in Hab pit.
Hab	13810 Raise	HAB 2A	645561	6611886	Exposed	Stainless steel cover installed in 2017.
Hab	Shaft	HAB 2	645568	6612133	Exposed	Stainless steel cover installed in 2018.
Hab	Heater Raise	EXC 1	645519	6612198	Exposed	Stainless steel cover installed in 2019
Hab	Haulage Adit (west)	EXC 1	645505	6612187	Backfilled	Leave “as is”.
Hab	Service Adit (east)	EXC 1	645519	6612200	Backfilled	Leave “as is”.
Martin	Adit (BVL)	RA 9	639081	6602968	Backfilled	Leave “as is”.
Martin	Adit (MRTN)	RA 6	638063	6602968	Backfilled	Leave “as is”.
Verna	Shaft	ACE 8	645470	6606022	Exposed	Stainless steel cover installed in 2018.
Verna	026594 Raise	NW 3 EX	645659	6606028	Exposed	Stainless steel cover installed in 2019.
Verna	026594 Finger Raise	NW 3 EX	645668	6606030	Exposed	Stainless steel cover installed in 2018.
Verna	Bored Raise	ACE 3	644806	6605250	Exposed	Stainless steel cover installed in 2017.
Verna	Verna Ladder Access	NW 3 EX	645669	6606035	Exposed	Stainless steel cover installed in 2018.
Verna	72 Zone Portal	NW 3	645836	6605771	Backfilled	Leave “as is”.
Verna	Shaft Adit	-	-	-	Backfilled	Leave “as is. Listed as sealed during operations (*Departure with Dignity 1987*)
Verna	46 Zone Portal	EMAR 21	645318	6607236	Backfilled	Leave “as is”.

3.2.2 Monitoring the Zora Creek Reconstruction

Final construction work on the Zora Creek Reconstruction was completed in 2016. A detailed description of the work conducted along with final As-built drawings was submitted to the CNSC and SkMOE in a report titled “Bolger Flow Path Reconstruction: 2016 Final As-Built Report” (SRK 2017) on March 10, 2017.

During the 2024 regulatory inspection, the Zora Creek flow path was inspected Saskatchewan Ministry of Environment, Cameco conducted an inspection of the Zora Creek Reconstruction as part of the geotechnical inspection. No notable changes to the condition of the channel were observed. Visual inspections will continue to be performed annually by Cameco personnel until the associated property is transferred to the IC Program. At which point inspections will continue as part of the IC Monitoring and Maintenance Program.

Water quality monitoring upstream and downstream of the Zora Creek Reconstruction project continued in 2024. A description of the 2024 water quality results for sample stations ZOR-01, ZOR-02, AC-6A, and AC-8 are provided in Section 4.3.1. Water quality from this area will continue to be monitored under the Beaverlodge EMP until the related properties are transferred to the IC Program. Once in the IC Program monitoring at AC-6A and AC-8 will continue as part of the IC Monitoring and Maintenance Program.

3.2.3 Final Inspection and Clean-up of the Properties

A site wide inspection of all the decommissioned Beaverlodge properties was performed by Kingsmere Resources (Kingsmere) from 2015 to 2017, resulting in a significant amount of debris being removed from the properties (Kingsmere 2018).

In addition, prior to properties being transferred to the IC Program, the regulatory agencies conduct a final inspection of the properties to ensure the clean-up and remediation is adequate. During this process, SkMOE identified a minor amount of debris near the Lower Fay Pit in 2024. This material was collected and disposed of in the Lower Fay Pit in accordance with regulatory approved methods and covered with rock that was scaled from the pit wall.

Table 3.2-2 includes the volume of waste disposed of to date and includes Bolger Pit, which is no longer in use.

Table 3.2-2
Summary of the materials (m^3) deposited to Bolger and Fay Pits since 2015.

	Bolger	*Fay*	***Total***
Debris	82	811	**893**
Core	1303	126	**1429**
Concrete	0	647	**647**
Total	**1385**	**1584**	**2969**

3.2.4 Decommission Identified Boreholes

A search of drilling records on file with the Government of Saskatchewan, followed by field investigations was conducted in 2010 (SRK 2011). This investigation resulted in numerous historic boreholes dating from the Eldorado operation (exploration drill holes) being identified and sealed. Since 2013, additional non-flowing historic boreholes have been discovered during regulatory inspections as well as during the final property inspections and have since been sealed. The total number of boreholes is 238, this includes 229 remediated (all with an associated year), 6 that were not remediated due to being recent non-Cameco exploration (HB 20, Hab 21, Hab 22, HAB 24, HAB 25, and HAB 26), 2 were not located (DB 01 and DB 06), and 1 was covered with debris (BH-43). This was corrected from the previous identified number of 242, while reviewing the list of boreholes. No new boreholes were identified in 2024. All boreholes identified on the Beaverlodge properties have been sealed, and the performance indicator has been met.

As a permanent record of borehole locations associated with the decommissioned Beaverlodge properties, Cameco maintains a master list that includes the GPS locations for each borehole in the Annual Report (Appendix C). As properties are transferred to the IC Program, this permanent record will be transferred to the Province of Saskatchewan.

3.2.5 Crown Pillar Remediation

Cameco retained SRK to assess the potential risk associated with crown pillars across all Beaverlodge properties, and provide recommendations for long term remediation/inspection of potential areas of concern. Results of the Beaverlodge Property – Crown Pillar Assessment (SRK 2015) identified one area that warranted physical remediation and two additional areas for future monitoring (Hab and Dubyna). It was recommended that the crown pillar associated with the Ace Stope Area undergo remediation to limit risks from settling related to the crown pillar failure. The majority of remediation was undertaken in 2016 and completed in 2019 with the closure of the 105#2 Raise (SRK 2019).

With the transfer of the Ace, Hab and Dubyna properties into the IC Program in 2024, the geotechnical inspections related to the crown pillars are no longer required. The crown pillars will be inspected as part of the IC Monitoring and Maintenance Program.

3.2.6 Follow-up to the Site Wide Gamma Assessment

Gamma surveys and risk assessments completed site wide and have shown that radiation exposure resulting from casual access on the decommissioned Beaverlodge properties is negligible and that the public dose limit would not be exceeded. There are no permanent workers associated with the Beaverlodge properties, and contractors performing remediation work on the properties typically spend limited time on the sites. Only one remediation project necessitated designation of the contractors as Nuclear Energy Workers (NEWs) and the associated dose monitoring and reporting and that project was completed in 2016.

Prior to a property being proposed for transfer to the IC Program, if there has been any disturbance of the site since the site wide gamma survey was completed, the area will be rescanned to ensure the readings are representative of the original scanned results.

In 2014 ARCADIS SENES Canada Inc (ARCADIS) completed the site wide gamma survey of the decommissioned properties. Following the survey, the Beaverlodge Site Gamma Radiation Risk Evaluation was provided to the regulatory agencies on August 4, 2015. The 2015 report included figures that showed the incremental dose rate measured on all of the Beaverlodge properties averaged over 1 hectare (ha).

Since 2015, additional remediation has been completed in numerous areas on the former Beaverlodge properties. As remediation activities resulted in minor disturbances to portions of the areas scanned in 2014, the areas were rescanned to confirm that gamma levels remained similar and continued to meet the established performance indicator related to gamma exposure on the former Beaverlodge properties.

In 2024, follow-up gamma surveys were completed in numerous areas disturbed by remediation activities. The 2024 results were consistent with those measured in the 2014 survey and the conclusions of the Beaverlodge Site Gamma Radiation Risk Evaluation in June 2015 remain valid. The information gathered from these surveys was shared with the CNSC and the Province of Saskatchewan.

3.3 Additional Studies/Work

3.3.1 CNSC Licence Hearing Preparation

The CNSC license WFOL-W5-2120.0/2025 for the Beaverlodge properties expires May 31, 2025. In preparation for the hearing, numerous documents were prepared to support Cameco’s request to have the licence revoked.

In 2023, Cameco was granted a two-year licence term (expiring May 31, 2025) to allow adequate time for regulatory processes, public engagement, and document preparation in support of a CNSC hearing to release of the remaining decommissioned Beaverlodge properties and their transfer to the IC Program. Cameco submitted a Final Closure Report regarding the final set of 27 decommissioned Beaverlodge properties for regulatory review on November 22, 2023. An application was submitted on February 5, 2024, requesting a hearing with the CNSC regarding the revocation of licence WFOL-W5-2120.0/2025. The hearing was conducted on January 30, 2025. At the time of preparation of this report a decision has not yet been released by the CNSC Commission. Cameco also made application to the Province of Saskatchewan that the properties be: (1) formally released from further decommissioning and reclamation activity by the SkMOE; and (2) accepted into the IC Program by the Saskatchewan Ministry of Energy and Resources (SkMER). Cameco has verified that the properties meet the performance objectives and, as such, are eligible for release from CNSC licensing.

Following consultation with stakeholders and Cameco's submission of responses to SkMOE, CNSC and SkMER comments regarding the application, the SkMER issued a letter of intent on July 4, 2024 stating that the prescribed conditions specified within Section 3 of the *Reclaimed Industrial Sites Act* are satisfied, and that the properties would be accepted into the IC Program once they were released from CNSC licensing.

SkMOE issued a letter of intent on August 7, 2024 stating Cameco has fulfilled their requirements and obligations as described in the approved decommissioning and reclamation plans with the Ministry, and that it is the intent of the Ministry to grant Cameco a release from decommissioning and reclamation requirements in accordance with Section 22 of *The Mineral Industry Environmental Protection Regulations, 1996*. The issuance of the letters by SkMER and SkMOE follows the same process undertaken in 2021 regarding the earlier release of properties from CNSC licensing.

Cameco prepared and submitted the Commission Member Document (CMD) in support of the request to have WFOL-W5-2120.0/2025 revoked on October 10, 2024. The CMD provided an overview of the application, described how the properties have met the regulatory accepted Performance Objectives and Indicators, and provided additional information on other matters of regulatory interest in support of the application to the CNSC to revoke the Beaverlodge licence.

An Indigenous Engagement Report was submitted on October 10, 2024. This report was prepared in accordance with CNSC REGDOC-3.2.2, Indigenous Engagement and supported Cameco's request for the remaining Beaverlodge properties to be released from CNSC licensing, making them eligible for transfer to the Province of Saskatchewan for long-term environmental stewardship under the IC Program. The Indigenous Engagement Report provided details on the Indigenous groups and other interested parties identified for engagement regarding the Beaverlodge project. The Indigenous Engagement Report also discussed the engagement that has been conducted historically to inform the development of the Beaverlodge Management Framework and Path Forward Plan (Path Forward) with the goal of preparing the properties for transfer to the IC Program. Also provided in the report was a summary of the current and planned Indigenous engagement activities in relation to the 2025 hearing.

To support the release of the remaining decommissioned Beaverlodge properties from CNSC licensing and their transfer to the IC Program, a comprehensive summary of the engagement activities conducted from 2009 to present was included in the Indigenous Engagement Report.

3.3.2 Road closures

Cameco has met with local land users on numerous occasions through 2023 and 2024 to discuss the existing road network that provided access to the former Beaverlodge Mining Properties. These discussions were conducted to determine what areas were being accessed land users to reduce the impact of road closures on conducting traditional activities.

Based on these discussions Cameco updated its plans and numerous proposed road closures were eliminated to allow continued access of areas for conducting traditional activities. Earthen berms were installed at several locations in 2024 that are designed to limit vehicular access to sensitive areas, such as the Fookes Delta, the Zora Creek Reconstruction area, the Fookes Outlet structure, the Marie Delta and the Lower Fay Pit. During the discussion with local land users it was determined that these areas are not used for conducting traditional activities.

The gate located at the entrance to the Beaverlodge Mill hill and the gate located on the road branching off from Ace Lake, providing access to the Zora Creek Stream Reconstruction area, have been removed.

3.3.3 Lower Fay Pit Closure

During the regulatory inspection conducted by SkMOE May 29 – 30 it was identified that there was some loose material on the northeast corner of the pit wall. The loose material was scaled from the pit wall and photographs were provided to SkMOE and SkMER to document the condition of the Lower Fay Pit.

3.3.4 Gamma Scanning

As discussed in section 3.2.6, additional remediation has been completed in numerous areas on the former Beaverlodge properties since the site wide gamma survey was conducted in 2014.

In 2024, follow-up gamma surveys were completed in numerous areas disturbed by remediation activities. The updated gamma results were provided to the regulatory agencies. The 2024 results were consistent with those measured in the 2014 survey and the conclusions of the Beaverlodge Site Gamma Radiation Risk Evaluation remain valid and the established performance indicator related to gamma exposure on the former Beaverlodge properties continues to be met.

3.3.5 Environmental Contingency Plan

The Beaverlodge Surface Lease stipulates that the site is to maintain an Environmental Contingency Plan and provide annual updates. An Environmental Contingency Plan is intended to provide information regarding the storage and use of Hazardous Substances and Waste Dangerous Goods (HSWDG) on a site. As the decommissioned Beaverlodge properties do not have any HSWDG located on site, an Environmental Contingency Plan is not applicable.

At the request of SkMOE Cameco prepared a Wildfire Prevention and Preparedness Plan for the decommissioned Beaverlodge properties. The plan was developed using the ministry's plan template provided on the Wildfire Prevention and Preparedness Plans webpage. Additional information was included with respect to Sections 5, 7, 10 and 11 of the templates; and included site maps showing the locations of notable site features, such as access roads, locked gates and bodies of water. The Beaverlodge 2024 Wildfire Prevention and Preparedness Plan was submitted to SkMOE on January 26, 2024.

The SkMOE maintains a checklist of compliance for industrial sites and compares it with various provincial requirements. The most recent SkMOE issued Environmental Compliance Management System (ECMS) for the Beaverlodge Project was for 2021 – 2022 and was received on March 28, 2022. The Beaverlodge ECMS confirms that the Beaverlodge properties are meeting all the relevant provincial requirements identified in the ECMS.

4.0 ENVIRONMENTAL MONITORING PROGRAMS

Cameco retains a local contractor (Uranium City Bulk Fuel Ltd.) to conduct the required water quality and radon in air sampling at various established station locations throughout the year. While collecting samples, employees from Uranium City Bulk Fuel Ltd., also perform cursory inspections and report any unusual conditions to Cameco.

Saskatchewan Research Council (SRC) and Bureau Veritas Labs (BV Labs) are used to analyze water samples. SRC is also used to analyze radon in air through track etch cup monitoring. SRC holds the Canadian Association for Laboratory Accreditation (CALA), and BV Labs Quality Program holds several accreditations granted by Canadian and United States regulatory organizations.

Internal QA/QC processes employed by SRC include the re-analysis of a minimum of 10% of the samples received and use of control samples and reagent blanks (SRC, 2021). The SRC laboratory is an accredited member of the Canadian Association for Laboratory Accreditation (CALA). In order for SRC to meet the necessary requirements of CALA, they must adhere to a rigorous QA/QC program and undergo routine surveillance and recertification audits. For BV Labs to maintain accreditation they must adhere to rigorous QA/QC protocols and undergo routine surveillance and recertification audits. BV Labs is accredited by Standards Council of Canada (SCC).

Accreditation certifications for SRC and BV Labs can be found in Appendix D.

4.1 Site Specific Objectives

The performance objectives of safe, secure and stable/improving have been established as benchmarks for entering the provincial IC Program. Performance indicators consisting of modelled water quality for several stations were developed to assess when the performance objective has been met for the associated properties. The predictions provide an expected range to which water quality trends will be compared when defining whether the station is stable or improving.

These predicted water quality concentrations were originally modelled as part of the development of the QSM and provided the foundation for assessing the outcome of remedial options presented in the Path Forward Report (Cameco 2012). With the path forward strategy accepted by the regulatory agencies, the water quality performance indicators were updated and incorporated in the 2013 Status of the Environment (SOE) report (SENES 2013). A revised SOE was submitted in October 2018 (relabeled as an Environmental Performance Report (EPR)) that included updates to the model based on data gathered since 2013 (CanNorth 2018). In 2020, the Beaverlodge ERA model and performance indicators were updated (CanNorth 2020). The current model utilizes an updated format with the ability to better assess a wide range of environmental variability. The model assumptions are based on the current understanding of environmental conditions informed by 40 years of monitoring.

Note that, as the performance indicators reflect mean annual values, it is not the expectation that all individual water quality results, or annual average results, will be within the predicted maximum and minimum bounds every year. The 2024 and the Q1 2025 water quality results and corresponding trends are evaluated and discussed below. As the CNSC license for the properties expires May 31, 2025, the Q1 2025 results are included in this report, at the request of the regulators, for the purpose of alignment with the duration of the license term.

Table 4.1-1 Comparison of Key Parameter Annual Averages to Modelled Predictions/Performance Indicators

Station	Water Quality Meets SEQG or is Within or Below Modelled Predictions			Comments
	Uranium	Radium-226	Selenium	
Ace Lake (AC-8)	✓	✓	✓	-
Beaverlodge Lake (BL-5)		✓	✓	U was above the upper bound prediction in 2024
Dubyna Lake (DB-6)	✓	✓	✓	-
Fookes Reservoir (TL-3)	✓		✓	Ra-226 was above the upper bound prediction in 2024
Greer Lake (TL-9)	✓	✓	✓	-
Lower Ace (AC-14)	✓	✓	✓	-
Marie Reservoir (TL-4)	✓		✓	Ra-226 was above the upper bound prediction in 2024
Meadow Fen (TL-7)	✓	✓	✓	-
Pistol Lake (AN-5)	✓	✓	✓	-
Verna Lake (AC-6A)		✓	✓	U was above the upper bound prediction in 2024

4.2 Water Quality Monitoring Program

This section provides a summary of water quality trends at each of the licensed monitoring stations at the decommissioned Beaverlodge properties. An initial comparison to the Saskatchewan Environmental Quality Guidelines (SEQG; Government of Saskatchewan 2024) will be made and if the data shows a stable trend below the SEQG, no detailed discussion will be provided. If the data is above the SEQG, a comparison to the modelled predictions will be made. As surface water quality guidelines are not intended to be applied within tailings management areas, discussion regarding water quality within the TMA is focused on the comparisons to the modelled predictions for stations TL-3, TL-4, and TL-7.

The water quality summary in this section focuses on three main constituents of potential concern identified for the decommissioned Beaverlodge properties: Se, U and Ra-226. Total dissolved solids (TDS) are also included as a general indicator of water quality.

The two watersheds influenced by historic mining activities are Ace Creek and Fulton Creek. Figure 4.2 provides an overview of the various stations at which water quality is monitored.

Within the Ace Creek watershed, the routine sampling stations (from upstream to downstream) include:

AN-5 Pistol Creek downstream of the decommissioned Hab mine site and upstream of the first confluence. This system flows through Mickey Lake into Ace Lake.

DB-6 Dubyna Creek downstream of the decommissioned Dubyna mine site and before the creek enters Ace Creek upstream of Ace Lake.

AC-6A Verna Lake outlet to Ace Lake.

AC-8 Ace Lake outlet to Lower Ace Creek.

AC-14 Lower Ace Creek at the outlet into Beaverlodge Lake.

The Fulton Creek watershed contains the bulk of the tailings deposited during operations. Within the Fulton Creek watershed, the regulatory approved sampling stations (from upstream to downstream) include:

AN-3 Fulton Lake at outlet into Fookes Reservoir (represents un-impacted or background condition).

TL-3 Outlet of Fookes Reservoir.

TL-4 Outlet of Marie Reservoir (which flows into Meadow Fen).

TL-6 Outlet of Minewater Reservoir (which flows into Meadow Fen).

TL-7 Outlet of Meadow Fen upstream of Greer Lake.

TL-9 Fulton Creek downstream of Greer Lake and before it enters Beaverlodge Lake.

Additional sampling stations located downstream of the Beaverlodge site include:

BL-3 Located in Fulton Bay, Beaverlodge Lake immediately opposite the Fulton Creek outlet.

BL-4 Beaverlodge Lake (central location).

BL-5 Outlet of Beaverlodge Lake.

ML-1 Outlet of Martin Lake.

CS-1 Crackingstone River at bridge.

CS-2 Crackingstone Bay of Lake Athabasca.

Figures 4.2.1-1 to 4.3-8 are graphical representations of the historical annual average concentrations of U, Ra-226, Se, and TDS at each station with comparisons to their respective SEQG values where applicable, as well as comparisons to the performance indicators that were presented in the ERA (CanNorth 2020). It should be noted that Se monitoring began at selected water stations in 1996, and that the lab detection limit for selenium changed in 2003. In addition, the SEQG value for Se was increased from 0.001µg/L to 0.002mg/L in April 2023.

Sections 4.2.1 and 4.2.2 provide the water quality results and trends at the water quality stations located within each watershed. Section 4.2.3 provides the water quality results and trends at the water quality locations in Beaverlodge Lake and downstream. Trends are identified through visual interpretation of the graphs and include the short-term (less than five years) and long-term trends.

Tables 4.2.1-1 to 4.3.1-2 show summary statistics and comparisons to historical results (previous 4 years) of parameters monitored at Beaverlodge water sampling stations.

The detailed water quality results for the current reporting period, January 2024 to December 2024, and those for the first quarter of 2025 are provided in Appendix E.

4.2.1 Ace Creek Watershed

During the operating period several satellite mines were developed by Eldorado within the Ace Creek watershed. Water quality is monitored at stations within the Ace Creek watershed as part of the Beaverlodge Environmental Monitoring Program (EMP). The results of the 2020 Beaverlodge ERA show that immediate and downstream environments associated with the Ace Creek watershed will continue to naturally recover over time. The water quality predictions for the various waterbodies within the Ace Creek watershed are based on aquatic and sediment studies and 40 years of water quality monitoring.

AN-5 Pistol Lake

Station AN-5 is located in Pistol Creek downstream of the decommissioned Hab satellite mine (Figure 4.2). Pistol Lake is a small non-fish bearing waterbody which typically exhibits higher variability in measured data than other areas within the Ace Creek Watershed. Due to the small size and depth of Pistol Lake, and the hydraulic connection between the flooded Hab underground workings and the surface water, measured data exhibits high variability correlated to seasonality and fluctuations in annual precipitation rates. Three of the four scheduled samples were collected at AN-5 in 2024. The scheduled March 2025 sample is expected to be collected in May as there was a lack of water flow in March and the sample location was inaccessible in April.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at AN-5 along with the predicted recovery are presented in Figures 4.2.1-1 to 4.2.1-4. The annual averages from 2020 to 2024 for the COPC are presented in Table 4.2.1-1.

The annual average U concentration was 138 µg/l, which is a decrease relative to the 2023 annual average. As discussed in previous annual reports, U concentrations have shown a distinct seasonal fluctuation. Uranium concentrations ranged from 99.0 µg/l to 162 µg/l in 2024. Overall, the long-term trend for U at AN-5 has shown a decrease in annual average concentrations post-decommissioning (Figure 4.2.1-1). The annual average U concentration is above the SEQG (15 µg/l) but within modelled predictions.

The predicted long-term trend is for Ra-226 at AN-5 to remain relatively consistent into the future, however seasonal fluctuations have occurred in the past and can influence annual average results. The annual average Ra-226 concentration in 2024 was 0.61 Bq/l, which is an increase relative to the 2023 annual average. As shown in Appendix E, results in 2024 were consistent with previous results and ranged between 0.48 Bq/l and 0.72 Bq/l. The 2024 annual average is above the SEQG (0.11 Bq/l) but is within modelled predictions for Ra-226 at AN-5.

Selenium concentrations at AN-5 remained at or below detection limits throughout 2024 and remained below the SEQG (0.002 mg/l).

TDS concentration trends are correlated to U concentration trends as U is a constituent of overall TDS, and as such TDS concentrations exhibit a seasonal fluctuation that affects the annual average.

DB-6 Dubyna Lake

Station DB-6 is located in Dubyna Creek, downstream of Dubyna Lake and the decommissioned Dubyna satellite mine, before the creek enters Ace Creek, and upstream of Ace Lake (Figure 4.2). All four scheduled samples at DB-6 were collected in 2024. The road to the sample site was washed out in June making the sample location inaccessible. As a result, the scheduled June sample was collected in July. The only sampling event scheduled for the first quarter of 2025 occurred in March, and the results of this sampling are discussed below.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at DB-6 along with the predicted recovery are presented in Figures 4.2.1-5 to 4.2.1-8. The results of the March 2025 sample are provided below each figure. The annual averages from 2020 to 2024 and the results of the March 30, 2025 sample for all parameters are presented in Table 4.2.1-2. In reviewing the historical results for the purpose of drafting the 2024 annual report, it was noted that in some instances the historic 2022 annual averages for DB-6 reported in the 2023 annual report were incorrect. These values have since been updated to reflect the correct historic 2022 annual averages in Table 4.2.1-2 of this report.

The annual average U concentration at DB-6 in 2024 was 88.5 µg/l and was within the modelled predictions. U concentration at DB-6 in March 2025 was 91 µg/l.

The long-term trend of Ra-226 concentrations at DB-6 has been relatively consistent and remained below the SEQG since decommissioning and within modelled predictions. Ra-226 concentration in March 2025 was 0.04 Bq/l.

The annual average Se concentration at DB-6 in 2024 was 0.0002 mg/l, which is near detection limit, but a slight increase relative to the stable long-term trend observed over the last decade. The trend in Se concentrations has also remained below the SEQG since the analytical laboratory detection limit for Se was lowered in 2003 and have remained within modelled predictions. Se concentration in March 2025 was 0.0003 mg/l.

The TDS trend has been relatively consistent since decommissioning. Although the TDS increased compared to 2023 it is within the normal range of historical results. TDS in March 2025 was 161 mg/l.

AC-6A Verna Lake

Water quality monitoring at this station began in May 2010, and is located at a road crossing between Verna Lake and Ace Lake (Figure 4.2). Flows from Verna Lake are largely dependent on spring snow melt and precipitation events, and as such, not all scheduled samples can be collected during low precipitation years. This station is downstream of the Zora Creek Reconstruction project and as such continued recovery is expected following project completion in 2016. Water quality from this area is monitored as part of the Beaverlodge EMP, scheduled for March and June each year. In addition, a project specific monitoring program is in place to evaluate the success of implementing the Zora Creek Reconstruction project. The project specific monitoring program builds on the EMP so that water samples are scheduled monthly from March to October.

In 2024, water samples from AC-6A were only collected in May, June, July, and August. Low flow conditions in this watershed resulted in a lack of water in the other months of scheduled sampling. Additional information regarding the recovery of Verna Lake following the Zora Creek reconstruction project is discussed in Section 4.3.1. The scheduled March 2025 sample is expected to be collected in May as there was a lack of water flow in March and the sample location was inaccessible in April.

A historical summary of annual average Ra-226, U, Se and TDS concentrations at AC-6A along with the predicted recovery are presented in Figures 4.2.1-9 to 4.2.1-12. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.1-3.

The annual average U concentration at AC-6A in 2024 was 276 µg/l. This is an increase from the annual average observed in 2023 and is above the SEQG and the modelled predictions. The increases in U concentrations at AC-6A are attributed to low flow through the watershed, relative to flow in previous years. When flow returns to normal levels, it is expected that U concentrations will decrease and return to the modelled predictions. Furthermore, the increase in U concentrations at AC-6A is not having a measurable impact at AC-8, which remains below the SEQG.

The annual average Ra-226 concentration at AC-6A in 2024 was 0.085 Bq/l. This is consistent with the results of the previous year and within modelled predictions and below the SEQG.

Se concentrations at station AC-6A observed no changes throughout 2024 and the annual average concentration was 0.0002 mg/l. Se continues to measure below the SEQG and is within modelled predictions.

The TDS concentrations observed at AC-6A in 2024 ranged from 184 mg/L to 221 mg/l in 2023 with an average of 196 mg/l.

AC-8 Ace Lake

Station AC-8 is located at the outlet of Ace Lake into Lower Ace Creek. Ace Lake is downstream of stations DB-6, AN-5, and AC-6A (Figure 4.2). Sample collection is scheduled once per year at AC-8 as part of the approved Beaverlodge EMP. As such, results discussed within the below text are of a single sample collected in 2024.

A historical summary of Ra-226, U, Se, and TDS concentrations at AC-8 along with the predicted recovery are presented in Figures 4.2.1-13 to 4.2.1-16. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.1-4.

The U concentration recorded at AC-8 in 2024 was 10 µg/l. This is below the SEQG and within modelled predictions. Overall, U at AC-8 has been exhibiting a decreasing trend following decommissioning and has been consistently below the SEQG since 2012.

The Ra-226 concentration recorded at AC-8 in 2024 was 0.01 Bq/l. This is below the SEQG and within modelled predictions. The Se concentration recorded at AC-8 in 2024 was the lab detection limit of <0.0001 mg/l and was below the SEQG and within the modelled predictions.

The TDS concentration recorded in 2024 was 77 mg/l. TDS concentrations have remained relatively stable at this station since decommissioning.

AC-14 Lower Ace Creek

Station AC-14 is located in Lower Ace Creek at the outlet into Beaverlodge Lake (Figure 4.2). All four scheduled samples were collected; however, the December sample was delayed until January 2025 due to unsafe ice conditions on Beaverlodge Lake preventing access to the sample location in December. The discussion and average calculations that follow, regarding 2024 water quality results, include the water samples collected in March, June, and September 2024 as well as January 2025. The March 2025 results are also discussed below.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at AC-14 along with the predicted recovery are presented in Figures 4.2.1-17 to 4.2.1-20. The results of the March 2025 sample are provided below each figure. The annual averages from 2020 to 2024 (scheduled) and the results of the March 30, 2025 sample for all parameters are presented in Table 4.2.1-5.

Uranium concentrations at station AC-14 generally follow an overall downward trend, with fluctuations related to water flow at the sample location, since decommissioning. Annual average U levels are currently above the SEQG, but it is predicted that concentrations will continue to follow a decreasing trend in the future. In 2024, the annual average U concentrations at AC-14 was 23 µg/l which is a decrease relative to the 2023 annual average (36 µg/l). In March 2025, uranium concentration was 15 µg/l.

The annual average Ra-226 concentration recorded in 2024 was 0.05 Bq/l. Annual average Ra-226 concentrations have been in a downward trend since decommissioning. Radium is within the modelled predictions; and has remained below the SEQG since 1990. In March 2025, radium concentration was 0.02 Bq/l.

The annual average Se concentration recorded in 2024 was 0.0001 mg/l. This is below the SEQG and within modelled trends. Selenium concentrations have been below the SEQG since the inception of sampling at this station. In 2003, a laboratory detection limit change from 0.001 mg/l to 0.0001 mg/l occurred, and as a consequence the concentrations before 2003 appear much greater as opposed to what is observed to date. In March 2025, selenium was 0.0001 mg/l.

TDS concentrations have remained relatively stable at this station since decommissioning, except for one outlier in 1991.

4.2.2 Fulton Creek Watershed

As previously discussed, surface water quality guidelines are not intended to be applied within tailings management areas, and thus they are not compared to water quality at stations TL-3, TL-4, TL-6, or TL-7. No predictions are provided for station AN-3 as this station is considered a reference area, un-impacted by historic mining activities.

The water quality predictions for the Tailings Management Area (TMA) are based on sediment studies and more than 40 years of water quality monitoring. The results of the 2020 ERA show that immediate and downstream environments will continue to naturally recover over time. Radium is anticipated to be steady or slightly increase in the Fulton Creek watershed until approximately 2150 and then decline gradually.

It is important to note that the predicted Ra-226 trends in the TMA do not result in a predicted increase of Ra-226 concentrations in Beaverlodge Lake, located immediately downstream of the TMA. As a result, Cameco does not anticipate that Ra-226 concentrations in the TMA will pose any risk to the natural recovery of the TMA and downstream environment in the future.

AN-3 Fulton Lake

Station AN-3 is located at the outflow of Fulton Lake prior to Fookes Reservoir and was not impacted by mining/milling activities in the area (Figure 4.2). Water quality at this station is typical of background water quality in the region. Since 1986, sampling has been conducted on an annual basis. The one scheduled sample for AN-3 was collected in 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at AN-3 are presented in Figures 4.2.2-1 to 4.2.2-4. The concentrations from 2020 to 2024 for all parameters are presented in Table 4.2.2-1.

As expected with a reference location, the long-term trend for concentrations of U, Ra-226, recorded at AN-3 have remained relatively stable and below their respective SEQG concentrations. The concentrations of Se at AN-3 have been at or below the detectable laboratory limits.

TL-3 Fookes Reservoir

Station TL-3 is located at the outlet of Fookes Reservoir, which received the majority of tailings during operation, and is the first sampling location within the recovering TMA (Figure 4.2). The two scheduled samples for TL-3 were collected in 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at TL-3 along with the predicted recovery as outlined in the 2020 ERA, are presented in Figures 4.2.2-5 to 4.2.2-10. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.2-2.

Overall, the average annual concentration of U has shown a generally decreasing long-term trend since 1991. The average U concentration measured in 2024 was 207 µg/l, which is within the bounds of the modelled predictions.

The average annual Ra-226 concentration recorded in 2024 was 1.8 Bq/l. This is above the modelled predictions for Ra-226 at this station. Station TL-3 has seen a wide range of Ra-226 results over the past 5 years, both above and below the predicted bounds.

Selenium concentrations at TL-3 have been gradually decreasing since decommissioning. In 2024, the average annual Se concentration was 0.0027 mg/l and has continued to remain below the lower bounds of the modelled predictions at TL-3.

TDS concentrations at TL-3 have continued to gradually decrease in the long-term.

TL-4 Marie Reservoir

Station TL-4 is located within the Fulton Creek drainage downstream of TL-3 and at the outlet of Marie Reservoir (Figure 4.2). The two scheduled TL-4 samples were collected in 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at TL-4 along with the predicted recovery are presented in Figures 4.2.2-11 to 4.2.2-16. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.2-3.

Annual average concentration of U in 2024 at TL-4 was 205 µg/l which is an increase relative to the 2023 annual average but remains within the modelled predictions.

The Ra-226 concentration was 1.9 Bq/l. This is slightly above the modelled predictions for Ra-226 at this station. It is suspected that the relatively low flows observed over the past three years, following a period of high flow have contributed to the measured results being above the modelled predictions. The increase in the Ra-226 measured over the last three years at TL-3 is also likely a contributing factor. It is anticipated that when a more stable flow regime returns that Ra-226 concentrations will be within the modelled predictions.

The annual average Se concentration recorded in 2024 was 0.0016 mg/l, which is consistent with the lower bound of the modelled predictions. Se concentrations have been in a long-term downward trend since decommissioning.

Annual average concentrations of TDS at TL-4 remain relatively consistent with previous results. The annual average concentration in 2024 was 213 mg/l which is an increase relative to the 2023 annual average

TL-6 Minewater Reservoir

Station TL-6 is located at the outlet of Minewater Reservoir (Figure 4.2), which was used temporarily for tailings deposition in 1953, then as a settling pond for treated mine water during the last 10 years of Beaverlodge operations. During decommissioning activities, the water level in Minewater Reservoir was lowered and efforts were made to relocate settled precipitate sludge to the underground workings. Although a large volume of precipitate was relocated, these efforts were not successful in removing all sludge, which is reflected by the water quality and the variability of the results observed to date.

This water quality station represents the outflow of a small drainage area and generally exhibits ephemeral flows dependent on local precipitation. As a result, not all scheduled samples are typically collected. Of the two scheduled samples, neither were collected in 2024 as there was no water flow during either of the scheduled sampling events.

The QSM showed that the contributions of loads from the Minewater Reservoir influencing the downstream Meadow Fen area are quite small, estimated at no more than 10%. As such, 2020 ERA model predictions were not generated for TL-6 (CanNorth 2020). Contributions from this station are incorporated in the model predictions at the downstream station (TL-7).

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at TL-6 is presented in Figures 4.2.2-17 to 4.2.2-20. The annual averages from 2020 to 2023 for all parameters are presented in Table 4.2.2-4. Note that the 2022 average and the 2024 average are both absent from the tables and figures as no water was available for collection at TL-6 in 2022 or 2024.

TL-7 Meadow Fen

Station TL-7 is located at the outlet of Meadow Fen (Figure 4.2) in the TMA. All four of the scheduled samples for the 2024 reporting period were collected. The March 2025 sample is also discussed below.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at TL-7 along with the predicted recovery are presented in Figures 4.2.2-21 to 4.2.2-26. The results of the March 2025 sample are provided below each figure. The annual averages from 2020 to 2024 and the results of the March 30, 2025 sample for all parameters are presented in Table 4.2.2-5.

The annual average U concentration recorded at TL-7 in 2024 was 204 µg/l, which is an increase relative to the 2023 annual average. This is likely attributed to increased concentration measured at TL-3 and TL-4. The U concentration in March 2025 was 244 µg/l. Uranium concentrations at TL-7 have experienced a long-term decreasing trend since decommissioning with values observed in recent years being significantly lower than those observed 40 years ago. The annual average U concentrations at TL-7 remain within modelled predictions.

The average Ra-226 concentration in 2024 was 1.8 Bq/l, which is within the performance indicator derived from the ERA predictions and a decrease relative to the 2023 annual average. The 2020 ERA predicted that mean annual Ra-226 concentrations in the Fulton Creek watershed would continue to increase due to the release of historically precipitated Ra-226 from sediment, gradually declining in the future as the system continues to recover.

This observed and predicted trend increase is due to submerged tailings in the watershed, increased solubility for the barium, Ra-226 sulfate co-precipitate as sulfate concentrations in the porewater and water column decline and increased solubility of calcium which is bound to Ra-226 in the sediments (ERA 2020).

The Ra-226 concentration in March 2025 was 3.0 Bq/l which is above the upper bound of modelled predictions but is still within the range of historical Ra-226 concentrations at TL-7. An attempt was made to resample TL-7 in April 2025, however, the sampling site was inaccessible. Resampling at TL-7has been rescheduled for May.

The annual average Se concentration at TL-7 recorded in 2024 was 0.0014 mg/l. Se concentrations have been in a downward trend since decommissioning. The annual average Se concentration was below the modelled predictions and continues to remain on the expected downward trend. Se concentration in March 2025 was 0.0018 mg/l.

The annual average TDS concentration recorded at TL-7 in 2024 was 188 mg/l, which is consistent with previous measurements. TDS concentrations have been in a long-term downward trend since decommissioning with values observed in recent years being significantly lower than those observed 40 years ago. TDS at TL-7 in March 2025 was 215 mg/l.

TL-9 Greer Lake

Station TL-9 is located downstream of Greer Lake immediately before the water enters Beaverlodge Lake (Figure 4.2). Sampling at this station began in 1981 and continued until 1985 at which time it was discontinued. Sampling resumed in 1990 in order to re-assess the water quality entering Beaverlodge Lake. All four scheduled samples were collected; however, the December sample was delayed until January 2025 due to unsafe ice conditions on Beaverlodge Lake preventing access to the sample location in December. The average calculations and discussion below, regarding 2024 water quality results, include the water samples collected in March, June, and September 2024 as well as January 2025. The March 2025 sample is also discussed below.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at TL-9 along with the predicted recovery are presented in Figures 4.2.2-27 to 4.2.2-32. The results of the March 2025 sample are provided below each figure. The annual averages from 2020 to 2024 (scheduled) and the results of the March 30, 2025 sample for all parameters can be found in Table 4.2.2-6.

The annual average U concentration at TL-9 in 2024 was 172 µg/l which is an increase relative to the 2023 annual average. However, U concentrations at TL-9 have experienced a downward trend since decommissioning and have remained within modelled predictions. The U concentration in March 2025 was 242 µg/l.

The annual average Ra-226 concentration in 2024 was 1.6 Bq/l. The 2024 annual average Ra-226 concentration is less than the lower bound of the performance indicator derived from the 2020 ERA. The comparison between measured data and the performance indicator is conducted to evaluate observed surface water trends, as "based on the employed model assumptions, it is not the expectation that water quality results will be within the derived bounds every year rather that trends in surface water quality will fall within the derived bounds". Thus, it is not expected that every annual average will fall within the performance indicator bounds but that the performance indicator should be used to evaluate observed long-term trends (ERA 2020).

The annual average Se concentration at TL-9 in 2024 was 0.0018 mg/l and has remained within the modelled predictions. Se concentration in March 2025 was 0.0021 mg/l.

The TDS concentrations at TL-9 are consistent with previous measured results and are inline with the downward trend observed since decommissioning. TDS at TL-9 in March 2025 was 217 mg/l.

4.2.3 Downstream Monitoring Stations

While Beaverlodge Lake is the receiving environment for water from the decommissioned Beaverlodge properties, it is also the receiving environment for other, non-Eldorado, former uranium mine sites and one former uranium mill tailings area (Lorado Uranium Mining Ltd. Mill site) within the Beaverlodge Lake watershed. The results of the 2020 ERA show that downstream environments will continue to naturally recover over time. Model predictions to assess natural recovery of Beaverlodge Lake have been applied to Station BL-5, collected at the outlet of Beaverlodge Lake.

As demonstrated in the 2020 ERA, predicted increases in Ra-226 concentrations in the TMA are not expected to substantially change concentrations within Beaverlodge Lake due to the size of Beaverlodge Lake and the lake's ability to buffer those predicted increases in Ra-226 from the TMA. Ra-226 concentrations in Beaverlodge Lake are below the SEQG, and predicted to remain below in the future.

BL-3 Fulton Bay

Station BL-3 is located in Fulton Bay of Beaverlodge Lake, approximately 100 metres from the Fulton Creek outlet (Figure 4.2). Sampling at this station was originally carried out during the operational mining and milling phase in order to monitor the near-field impacts of the operations on Beaverlodge Lake, however monitoring appears to have stopped following the shutdown of the mine/mill.

Sampling at this location re-commenced during the 1998-1999 reporting period and has continued since that time. Both scheduled samples were collected; however, the December sample was delayed until January 2025 due to unsafe ice conditions on Beaverlodge Lake preventing access to the sample location in December. The results of the January 2025 sample were anomalous with respect to historical results and the station was resampled in March 2025 to verify these results. The March 2025 sample results confirmed the January 2025 results were anomalous. Therefore, the discussion and average calculations that follow, regarding 2024 water quality results, includes the water samples collected in June 2024 and March 2025.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at BL-3 are presented in Figures 4.2.3-1 to 4.2.3-4. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.3-1.

Overall, U concentrations have generally been trending downward since sampling resumed post-decommissioning. The annual average U concentration recorded in 2024 was 124.0 µg/l. This is a relative increase compared to the 2023 annual average concentration but is within the historic range of concentrations at this station.

Generally, Se concentrations at BL-3 been trending downward since sampling resumed post-decommissioning. The annual average Se concentration recorded in 2024 was 0.0019 mg/L, is below the SEQG, and remains within historical trends.

Radium activity does not exhibit a clear trend however, all measured activity continues to remain below the SEQG.

The annual average TDS concentration was 146.0 mg/l and continues to follow the relatively stable, long-term trend observed at this station.

BL-4 Beaverlodge Lake Centre

Station BL-4 is located in the approximate center of the north end of Beaverlodge Lake (Figure 4.2). The one scheduled 3-depth composite sample was collected in June 2024.

A historical summary of annual average Ra-226, U, TDS, and Se concentrations at BL-4 are presented in Figures 4.2.3-5 to 4.2.3-8. The annual averages from 2020 to 2024 are presented in Table 4.2.3-2.

The long-term trend for U at BL-4 has been an overall decrease since decommissioning. The U concentration recorded at BL-4 in 2024 was 116 µg/l. This is above the SEQG but maintains consistency with the historical trends.

The Ra-226 concentration recorded in 2024 was 0.03 Bq/l and remains well below the SEQG. The annual average has ranged between 0.02 Bq/l and 0.04 Bq/l consistently since 2003.

The Se concentration recorded in 2024 was 0.0018 mg/l. The Se concentrations at BL-4 have exhibited a downward trend since 2008. The selenium concentration is below the SEQG.

The TDS concentration was recorded at 129 mg/l and continues to follow the relatively stable, long-term trend observed at this station.

BL-5 Beaverlodge Lake Outlet

Station BL-5 is located at the outlet of Beaverlodge Lake and is a measure of the water quality leaving Beaverlodge Lake (Figure 4.2). The one scheduled sample was collected in June 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at BL-5 along with the predicted recovery are presented in Figures 4.2.3-9 to 4.2.3-12. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.2.3-3.

The U concentration recorded in 2024 was 115 µg/l, which is an increase relative to the 2023 concentration, which saw a sharp decrease from the previous years. However, the 2024 U concentration is relatively consistent with the results of recent years. The 2024 U concentration is above the SEQG and is slightly above the upper bound of the performance indicators derived from the 2020 ERA. The comparison between measured data and the performance indicator is conducted to evaluate observed surface water trends, as “based on the employed model assumptions, it is not the expectation that water quality results will be within the derived bounds every year rather that trends in surface water quality will fall within the derived bounds”. Thus, it is not expected that every annual average will fall within the performance indicator bounds but that the performance indicator should be used to evaluate observed long-term trends (ERA 2020).

The Se concentration recorded in 2024 was 0.018 mg/l. This is below the SEQG and within the modeled predictions.

The Ra-226 concentration recorded in 2024 was 0.03 Bq/L which is below the SEQG and slightly below the modeled predictions.

The TDS concentration recorded in 2024 was 144 mg/l. TDS concentrations continue to remain consistent with the stable long-term trend observed at BL-5.

ML-1 Martin Lake

Station ML-1 is located at the outlet of Martin Lake (Figure 4.2). Two samples were collected in 2024, as scheduled.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at ML-1 are presented in Figures 4.2.3-13 to 4.2.3-16. The annual averages from 2020 to 2024 for all parameters is presented in Table 4.2.3-4.

The average U concentration in 2024 was 54 µg/l. This is above the SEQG but is within the historic range of results.

The average Ra-226 concentration in 2024 was 0.007 Bq/l. Radium continues to exhibit a relatively stable long-term trend and continues to be well below the SEQG.

The average Se concentration in 2024 was 0.0008 mg/l. Se concentrations have remained relatively stable, and concentrations have remained below the SEQG.

The average TDS concentration in 2024 was 140 mg/l. TDS continues to exhibit the relatively stable long-term trend observed at this station.

CS-1 Crackingstone River

Station CS-1 is located near the bridge in Crackingstone River approximately halfway between the outlet of Martin Lake and the outflow to Lake Athabasca (Figure 4.2). The one scheduled sample was collected in June 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at CS-1 are presented in Figures 4.2.3-17 to 4.2.3-20. The annual averages from 2020 to 2024 for all parameters is presented in Table 4.2.3-5.

The U concentration recorded at CS-1 in 2024 was 55 µg/l. The U concentration observed at CS-1 in 2024 was above the SEQG (15 µg/l) but was within the historical range of values previously observed at this station.

The Ra-226 concentration recorded at CS-1 in 2024 was 0.01 Bq/l. Radium at CS-1 remains below the SEQG (0.11 Bq/L) and is consistent with the generally stable trend observed historically at this station.

The Se concentration recorded at CS-1 in 2024 was 0.0008 mg/l, was below the SEQG and remains consistent with the relatively stable historical trend.

The TDS concentration recorded at CS-1 in 2024 was 118 mg/l. The TDS concentration remains consistent with the relatively stable historical trend observed at this station.

CS-2 Crackingstone Bay

Station CS-2 is located in Crackingstone Bay on Lake Athabasca (Figure 4.2), approximately 1 km from the mouth of the Crackingstone River. The one scheduled sample was collected in June 2024.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at CS-2 are presented in Figures 4.2.3-21 to 4.2.3-24. The annual averages from 2020 to 2024 for all parameters is presented in Table 4.2.3-6.

The recorded U concentration at CS-2 in June 2024 was 56 µg/l. This is above the SEQG and remains elevated compared to historical values. This is also a significant increase relative to the concentration measured in 2023 (17 µg/l), when water levels in Lake Athabasca were at near normal levels. In 2024, the water levels in Lake Athabasca were relatively low compared to normal water levels. As observed in 2023, when water levels in Lake Athabasca return to more normal levels, U concentrations in Crackingstone Bay may return to values more consistent with the concentrations measured in years of normal water levels.

In August 2022, Cameco performed an investigation in Crackingstone Bay to understand the spatial extent of the increased U concentrations. As U concentrations have not yet fully returned to historic levels Cameco duplicated the study in August 2023 to allow comparison to the 2022 data. As a result of elevated U concentrations in June 2024 the study was continued in August 2024. For more information regarding the investigations completed in Crackingstone Bay please see Section 4.3.3 Crackingstone Bay Investigation.

Selenium, Ra-226 and TDS concentrations have increased relative to their respective 2023 concentrations but both Se and Ra-226 concentrations recorded at CS-2 remained below their respective SEQG values.

4.3 Additional Water Quality Sampling

4.3.1 ZOR-01 and ZOR-02

The Beaverlodge Path Forward Report (Cameco 2012) describes the activities required to prepare the Beaverlodge properties for transfer to the IC Program. One of the potential remedial measures identified in the 2012 Path Forward Report was the flow path reconstruction of the Zora Lake outflow. This project was initiated in 2014 and completed in 2016. It involved relocating a portion of the Bolger waste rock pile that was placed in the valley separating Zora Lake from Verna Lake during mining operations. This project re-established the flow in Zora Creek which reduces the contact time between the remaining Bolger waste rock pile and the water flowing from Zora Creek into Verna Lake (Figure 4.3).

With the project plan to re-establish the Zora Creek flow path, monthly sampling to monitor water quality was implemented in August 2013 at the outlet from Zora Lake outflow (ZOR-01) and the outlet from the waste rock pile, which flowed into Verna Lake (ZOR-02). The ZOR-01 station represents the baseline for comparing water quality to ZOR-02, as ZOR-01 is upstream of the stream reconstruction.

In 2024, eight samples were collected at ZOR-01 from March to October and seven samples were collected at ZOR-02 from April to October. No sampling occurred in March 2024 at ZOR-02 due to a lack of water flow. The scheduled March 2025 sample for ZOR-01 and ZOR-02 is expected to be collected in May as there was a lack of water flow in March and the sample location was inaccessible in April.

A historical summary of annual average Ra-226, U, Se, and TDS concentrations at ZOR-01 and ZOR-02 are presented in Figures 4.3-1 to 4.3-8. The annual averages from 2020 to 2024 for all parameters are presented in Table 4.3.1-1 and Table 4.3.1-2.

Sampling completed at ZOR-02 prior to 2015 represents water quality as it flowed through the Bolger waste rock pile prior to entering Verna Lake. Sampling completed during 2015 at this station represents construction activities during relocation of the waste rock, and samples post-2016 represent water flowing through the newly created flow path.

Since sampling started in 2013, Ra-226, Se, and TDS annual average concentrations at ZOR-01 have remained relatively constant. For 2024, the Ra-226 and Se annual average concentrations have both remained below their respective SEQG values. The annual average U concentration in 2024 at ZOR-01 has increased relative to the annual average 2023 concentration and is slightly above the SEQG. This increase in the annual average is likely attributed to the sample that occurred in May, where the concentration of U increased from 5.6 µg/l in April to 23 µg/l in May. An increase of this magnitude, combined with the significant increase in TSS (<1 mg/l in April to 10 mg/l in May) could be attributed to sediment being disturbed during sampling, leading to elevated concentrations of U and TSS. In the context of the annual average U concentration, the abnormally high May concentration would skew the calculation and result in an artificial increase to the annual average.

The annual average U concentration at ZOR-02 in 2024 was 401 µg/l which is a decrease from the average concentration in 2023 (453 µg/l). This station exhibits some variability in average U concentration based on local precipitation and spring snowmelt as it is limited to a relatively small watershed. Uranium concentrations at ZOR-02 also experience a seasonal trend where U concentrations are higher in the late summer and fall compared to those observed in the spring and early summer. Due to these processes, a relative decrease in freshet and spring precipitation in the spring and early summer can result in U concentrations appearing greater than those of previous years, as was the case in 2023 and

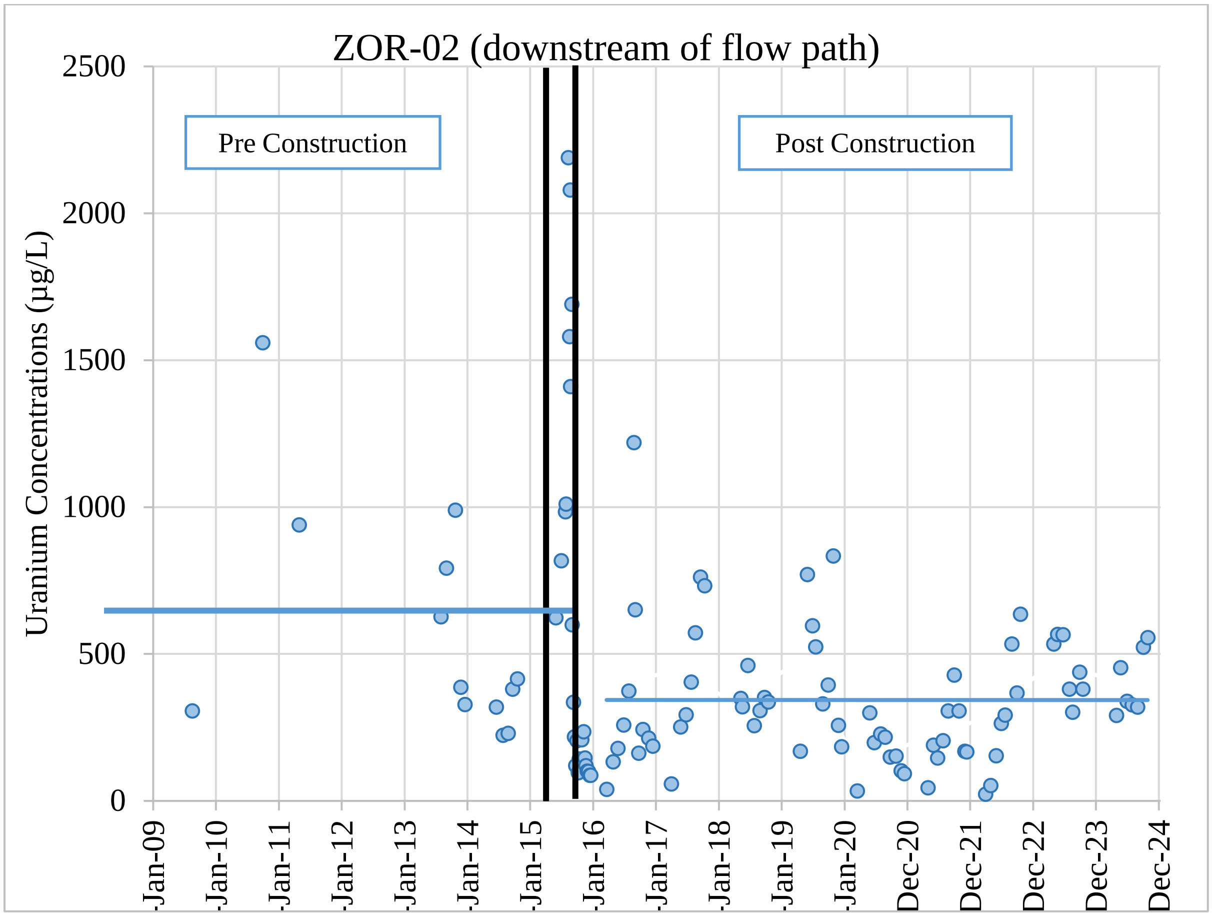
2024. Uranium concentrations at ZOR-02 ranged between 291 µg/l to 556 µg/l in 2024. Although the 2024 average U concentrations are an increase relative to those of recent years; water quality has still shown improvement since the stream reconstruction project was completed and is consistent with the overall downward trend observed at this station.

The annual average Ra-226 concentration at ZOR-02 was 0.22 Bq/L which is a slight decrease relative to 2023. Radium is above the SEQG (0.11 Bq/L) however it remains on an overall downward trend since monitoring began.

Selenium and TDS concentrations at ZOR-02 have also remained relatively stable, with Se remaining below the SEQG value.

Figure 4.3-9 shows the uranium results of water sample data collected at ZOR-02 through the various phases of pre-construction, construction and post construction. Also provided are general trend lines showing the relative improvement in water quality post-construction. The Pre-Construction trend line is the overall average U concentration for that period, while the Post-Construction (starting in 2016) is a linear trend line created using the annual U concentration averages.

Figure 4.3-9 - ZOR-02 Uranium Concentrations Pre and Post Construction



The fluctuations in U concentrations observed through construction and following construction are reflected in the concentration of U measured at the outlet of Verna Lake (AC-6A) which increased, as expected, immediately following construction but has seen improvement in subsequent years. Uranium concentrations measured at the downstream monitoring station (AC-8 located at the outlet of Ace Lake) have remained below the SEQG since 2012. A summary of annual mean U and Ra-226 data from 2010 to 2023 at ZOR-02, AC-6A, and AC-8 is presented in Table 4.3.1-3. As AC-6A flows into Ace Lake, data from the outlet of Ace Lake (AC-8) is presented for context, as the downstream water quality monitoring station meets SEQG.

4.3.2 Compliance Water Sample

In 2024, regulatory agencies did not collect or request additional duplicate samples during the inspection. Duplicate samples were taken in accordance with the Beaverlodge EMP and these results are outlined in the QA/QC section.

4.3.3 Crackingstone Bay Investigation

For the past five years, U levels have been elevated relative to the stable trend previously observed at CS-2. An investigation was originally conducted in August 2022 and then again in August 2023 to understand the spatial extent of the elevated U concentrations at CS-2. This investigation was repeated again in August 2024. Samples were collected at five locations on a linear transect starting at CS-2 and moving south towards Lake Athabasca at 250 m intervals out to 1000 m (stations CS-3, CS-4, CS-5, and CS-6). Figure 4.3.10 provides the sample locations and geographic coordinates used to conduct the investigation.

Water samples collected in June were influenced by the low-water levels in Lake Athabasca, which may have disrupted the effects of the mixing zone between Crackingstone Bay and Lake Athabasca. The increase in 2024 U concentrations, relative to 2023 concentrations, can be attributed to the changes in the Crackingstone Bay mixing zone.

In August 2024, the same investigation was conducted at CS-2 and stations extending to CS-6, to compare to the 2022 and 2023 results and monitor any change in the state of the mixing zone regime from June 2024. The concentrations from CS-2 to CS-6 for August 2024 were 22 µg/l, 8.4 µg/l, 0.3 µg/l, 0.2 µg/l, and 0.2 µg/l, respectively. Compared to the 2023 results, this marks an increase in concentration at CS-2 and CS-3 but a decrease in concentration at CS-4, CS-5, and CS-6.

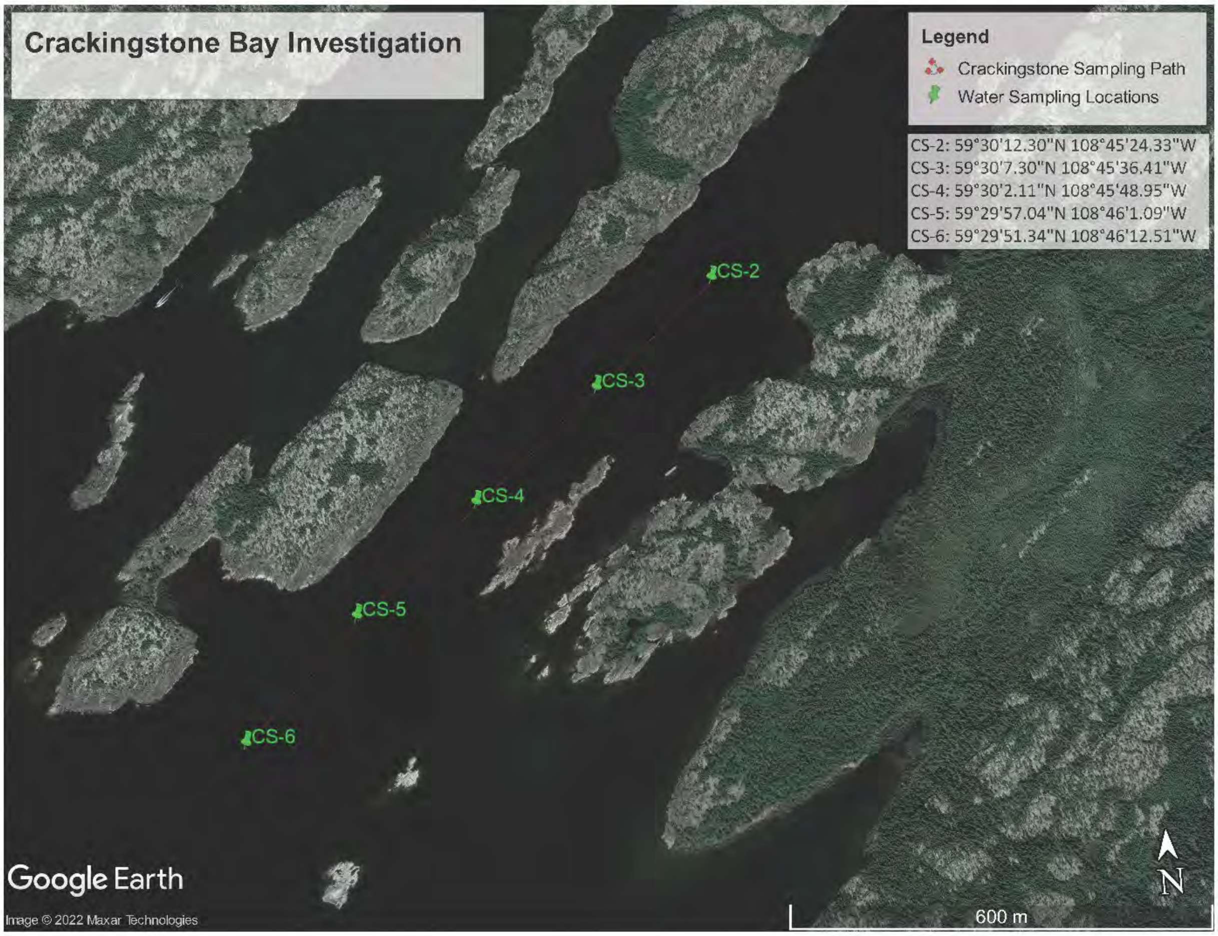


Figure 4.3.10 – Crackingstone Bay Sample Locations

4.4 QA/QC Analysis

As outlined in the Beaverlodge EMP, Cameco's QA/QC program involves the collection of field and trip blank, blind, and duplicate samples in order to assure that field sampling and laboratory analyses produce reliable and accurate results.

Field blanks are used to identify possible contamination arising from equipment, preservatives, sampling techniques, sample handling, and the general ambient conditions during sampling. Field blanks are collected by obtaining analyte-free water from the laboratory, transporting the water into the field, and taking it through all sample collection, handling and processing steps that the primary samples undergo. Field blanks are transported, stored and analyzed in the same manner as primary samples. Field blanks are compared to the trip blank to establish if contamination has occurred as a result of the field collection of samples.

Trip blanks are used to determine if any potential contamination is being introduced through transport, storage, sample bottles, preservatives or analysis. Samples of analyte-free water are sent from the laboratory to the field and then back to the laboratory along with primary and field blank samples. The trip blank sample seal remains unbroken in the field.

Blind replicate samples involve the collection of two homogenous samples of water from a single sampling location. The water samples are sent to the same analytical laboratory to test the lab's ability to duplicate results through their analytical methods. The blind replicate samples are labelled differently, as a result the identity of the field blind replicate sample is known only to the submitter and not to the analyst. Blind replicate samples test the lab's ability to provide consistent results. In the Beaverlodge EMP, blind replicate samples are conducted in September and December.

Duplicate samples involve collection of two homogeneous samples of water from a single sample location that are sent for analysis to two different labs to determine if the labs analyzing the samples obtain similar results. In the Beaverlodge EMP, duplicate samples are sent out in June to SRC and BV Labs.

In a case where results from the regular monitoring and results from the blind sample vary, SRC would be contacted to determine the source of inconsistency in the results. If there were discrepancies in the blank or duplicate laboratory results, it would be at the discretion of the lead, reclamation specialist, Beaverlodge to investigate the discrepancy and determine if corrective action is warranted.

Results with an absolute difference greater than 50% are subject to further investigation. If either value is greater than five times the entered detection limit and are outside their associated range of entered uncertainty (= Value +/- Entered Uncertainty) then samples are considered noncompliant and additional investigation is required.

4.4.1 Blank Samples

Station DB-6 field and trip blank samples were prepared, collected, and analyzed in September 2024. When results from DB-6 TB (trip blank) and DB-6 FB (field blank) were compared, iron and nickel had absolute differences of above 50% (Appendix F), these were 148% and 67%, respectively. The nickel values were less than or equal to five times the detection limit and therefore fell within the acceptable range of uncertainty. The iron field blank sample was greater than five times the detection SRC reanalyzed for metals for the field blank sample independently of being requested and reanalysis confirmed the original reported results were within the expected measurement uncertainty when compared to reanalyzed results. The contractor responsible for water sampling was then contacted to discuss a possible cause of the large absolute difference between the field blank and the trip blank. The discrepancy between samples was likely caused by sample contamination. Proper sampling technique was reviewed with the contractor to prevent any future sample contamination.

4.4.2 Blind Replicate Samples (Split samples)

A blind replicate sample was collected in September 2024 at station TL-7 (Blind-6). When results from Blind-6 were compared with the sample results for TL-7, there were no absolute differences greater than 50% observed. A second blind replicate sample was collected in January 2025 at AC-14 (Blind-1). The blind replicate sample was originally scheduled to be sampled in December 2024, however, due to unsafe ice conditions, the sample collection was rescheduled to January 2025. When results from AC-14 were compared to Blind-1, there were no absolute differences greater than 50% observed, meaning that the contract lab was able to replicate sample results.

4.4.3 Duplicate Samples (Side by side samples)

Duplicate samples at station TL-4 were collected in June 2024 and sent to SRC and BV Labs. Results from June indicated that iron, lead, radium 226, and zinc were each found to have absolute differences greater than 50%. Iron, lead, radium 226, and zinc had absolute differences of 53%, 86%, 61% and 143%, respectively. However, no discrepancies were found due to differing detection limits between SRC and BV Labs. Iron was analyzed at a detection limit of 0.0005 mg/l by SRC, whereas BV Labs analyzed iron at a detection limit of 0.06 mg/l. Lead was analyzed at a detection limit of 0.0001 mg/l by SRC, whereas BV Labs analyzed lead at a detection limit of 0.0002 mg/l. Radium 226 was analyzed at a detection limit of 0.01 Bq/l by SRC, whereas BV Labs analyzed radium 226 at a detection limit of 0.005 Bq/l. For zinc, SRC analyzed at a detection limit of 0.0005 mg/l, whereas BV Labs recorded the detection limit as 0.003 mg/l. Measurements were within five times the detection limit, so the discrepancy did not require retesting from the labs.

4.5 Air Quality

This section presents a summary of the results of historic and on-going radon (Rn-222) monitoring at five separate locations in and around the decommissioned mill site and at Uranium City (Figure 4.5.1-1).

4.5.1 Ambient Radon Monitoring

As part of the transitional phase monitoring program, Rn-222 levels have been monitored on and around the decommissioned Beaverlodge properties and at other locations in the region since 1985. In 2021, Cameco utilized the RadTrak2 model, supplied by Radonova, to monitor radon in the Uranium City area. In 2022, Cameco switched to the alpha track detector model which is supplied and analyzed by SRC. This change to a local supplier was a corrective action implemented because of the loss of samples in transit during 2020 to the Radonova lab, which was discussed in the 2021 annual report.

The annual average of Rn-222 at Ace Creek and Fookes Delta in 2024 were 270 Bq/m3 and 315 Bq/m3, respectively. The results for Ace Creek are a decrease relative to the 2023 average (290 Bq/m3) and the results for Fookes Delta were greater than those previously recorded at this station The increase in the Fookes Delta annual average can be attributed to the abnormally high result received in June 2024 (440 Bq/m3); upon request, the lab reviewed the analysis of the sample and confirmed the initial result. This increase was an isolated occurrence as the December 2024 result (190 Bq/m3) was more consistent with the historical results. The annual averages of Rn-222 at the Eldorado Town Site, Marie Delta and Uranium City in 2024 were 30 Bq/m3, 105 Bq/m3, and 14 Bq/m3, respectively. Only the December 2024 result was analyzed for the Eldorado Town Site as a result of the June 2024 track etch cup being lost in transport.

As per the Beaverlodge EMP, Rn-222 monitoring devices are collected and replaced semi-annually from five stations established throughout the area, illustrated in Figure 4.5.1-1 and listed below:

Eldorado Town Site

Ace Creek

Fookes Delta

Marie Delta

Uranium City

Table 4.5.1 presents a summary of the radon monitoring conducted at the five sites for the 2024 monitoring period. Where applicable, stations monitored in 1982 have been included in the summary table for comparison.

Figure 4.5.1-2 compares the most recent five years of data to operational levels. Generally, measured radon levels have remained relatively constant in recent years and are much lower than during operation. The exception being the elevated sample result from June 2024 from Fookes Delta. The cause of the elevated result is unclear. The geotechnical inspection completed in 2024 did not identify any newly exposed tailings or note any unusual conditions on the delta that may result in an increase in the radon measured at this station. The radon levels measured for the background stations display a rapid decrease to background levels as the distance from the former mine and mill site increases.

5.0 OUTLOOK

5.1 Regular Scheduled Monitoring

Representatives of Cameco continue to implement the Beaverlodge EMP until all the Beaverlodge properties have been released from CNSC licensing and transferred to the IC Program. The Beaverlodge EMP assesses:

- Water,
- Radon in air,
- Formerly flowing boreholes, and
- Geotechnical stability of features, where required

Additional water samples will continue to be collected at the sample locations ZOR-01, ZOR-02 and AC-6A until the Bolger 1 property is transferred to the IC Program. AC-6A will continue to be monitored as part of the IC Program to monitor the Zora Creek Reconstruction project through the Bolger Waste Rock Pile. The flow path reconstruction is discussed in more detail in **Section 3.3.2**.

5.2 Planned Public Meetings

Cameco has developed a PIP for Beaverlodge that describes communication with rights bearing First Nation and Métis communities and other interested groups. The PIP formalizes the communication process, ensuring that Cameco’s activities or plans at the decommissioned Beaverlodge properties are effectively communicated to the public in a manner that complies with established guidelines. It is based on the PLAN-DO-CHECK-ACT model outlined in internationally recognized management standards.

A hearing was held on January 30, 2025 regarding Cameco’s request for the CNSC to revoke the Beaverlodge licence to allow the properties to transfer to the IC Program. The current Beaverlodge licence expires on May 31, 2025. Once the CNSC renders its decision regarding the Beaverlodge licence, Cameco will develop appropriate engagement plans.

5.3 Planned Regulatory Inspections

A regulatory inspection has not been planned for 2025. The properties have been remediated to ensure they are passively safe and pose minimal risk to land users.

5.4 2025 Work Plan

All physical remediation work on the Beaverlodge properties has been completed. Environmental monitoring will continue to be conducted in accordance with the regulatory approved Beaverlodge Environmental Monitoring Program and will continue until the Beaverlodge properties have been transferred to the IC Program.

Should the CNSC licence be revoked in May 2025, future monitoring results will be reported to the Saskatchewan Ministry of Resources until the properties have entered the IC Program.

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TABLES

TABLES

Table 4.2.1-1 **Station AN-5 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.3	0.2	0.3	0.4	0.3	3	0	0.06	0.3	0.4
	Ba (mg/l)	0.10	0.10	0.12	0.12	0.11	3	0	0.026	0.092	0.14
	Cu (mg/l)	0.0014	0.0017	0.00050	0.0010	0.0011	3	0	0.00069	0.00030	0.0015
	Fe (mg/l)	0.205	0.178	0.183	0.349	0.38	3	0	0.50	0.065	0.96
	Mo (mg/l)	0.0027	0.0028	0.0020	0.0033	0.0036	3	0	0.0010	0.0030	0.0048
	Ni (mg/l)	0.0007	0.0008	0.0006	0.0006	0.0007	3	0	0.0001	0.0006	0.0008
	Pb (mg/l)	0.00013	0.00038	<0.00010	0.00015	0.0001	3	2	0.00006	<0.0001	0.0002
	Se (mg/l)	0.0001	0.0001	0.0001	0.0001	0.0001	3	1	0	<0.0001	0.0001
	U (µg/l)	78.0	125	99.3	157	138	3	0	33.9	99.0	162
	Zn (mg/l)	0.0020	0.00078	0.00070	0.00085	0.0007	3	0	0.00006	0.0007	0.0008
Major Ions	Alk (mg/l)	71.7	88.0	95.7	93.8	83	3	0	14	70	97
	Ca (mg/l)	24	26	28	30	26	3	0	5.1	22	32
	Cl (mg/l)	0.47	0.50	0.50	0.63	0.70	3	0	0.2	0.5	0.8
	CO3 (mg/l)	<1	<1	<1	<1	<1	3	3	-	<1	<1
	HCO3 (mg/l)	87.3	107	117	115	101	3	0	16.5	85.0	118
	Cond-L (µS/cm)	168	186	198	207	198	3	0	27.1	176	228
	K (mg/l)	0.93	1.1	1.0	1.3	1.1	3	0	0.20	0.90	1.3
	Hardness (mg/l)	82.0	90.0	96.0	102	91.3	3	0	16.3	77.0	109
	Na (mg/l)	2.5	2.7	2.9	3.4	3.2	3	0	0.50	2.7	3.7
	OH (mg/l)	<1	<1	<1	<1	<1	3	3	-	<1	<1
	SO4 (mg/l)	14	13	11	14	16	3	0	2.0	14	18
	Sum of Ions (mg/l)	135	157	166	170	156	3	0	26.2	132	184
Nutrients	C-(org) (mg/l)	13	12	9.5	12	12	1	0		12	12
	P-(TP) (mg/l)	0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.17	<0.040	<0.040	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.060	0.080	<0.020	0.090	0.040	1	0		0.04	0.04
	Po210 (Bq/L)	0.03	0.03	0.04	0.03	0.04	1	0		0.04	0.04
	Ra226 (Bq/L)	0.50	0.48	0.67	0.58	0.61	3	0	0.12	0.48	0.72
Physical Parameters	pH-L (pH Unit)	7.67	7.67	7.54	7.56	7.57	3	0	0.395	7.17	7.96
	TDS-d (mg/l)	112	124	137	145	151	3	0	14.4	134	159
	TSS (mg/l)	<1.0	2.0	1.0	4.5	1	3	1	0.6	<1	2
	Temp. (°C)	17.3	8.78	11.4	10.3	9.93	3	0	8.21	2.80	18.9

Table 4.2.1-2 Station DB-6 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics						2025*
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max	Result
Radionuclide	Pb210 (Bq/L)	0.10	0.11	<0.020	0.21	<0.020	1	1	-	<0.020	<0.020	
	Po210 (Bq/L)	0.006	0.008	0.01	<0.005	<0.005	1	1	-	<0.005	<0.005	
	Ra226 (Bq/L)	0.03	0.03	0.03	0.03	0.03	4	0	0.005	0.03	0.04	0.04
Major Ions	Alk (mg/l)	85	78	81	77	89	4	0	6.5	84	98	90
	Ca (mg/l)	33	29	31	29	33	4	0	1.7	31	35	35
	Cl (mg/l)	0.6	0.5	0.4	0.5	0.5	4	0	0.1	0.4	0.6	0.7
	CO3 (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	HCO3 (mg/l)	103	94.8	98.8	94.3	108	4	0	8.16	102	120	110
	Cond-L (µS/cm)	203	185	192	182	212	4	0	12.4	200	229	225
	K (mg/l)	0.83	0.77	0.88	1.0	0.93	4	0	0.17	0.70	1.1	1.1
	Hardness (mg/l)	101	88.5	94.8	91.5	104	4	0	5.48	97.0	110	109
	Na (mg/l)	1.9	1.7	1.7	1.7	1.8	4	0	0.17	1.6	2.0	2.0
	OH (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	SO4 (mg/l)	19	18	17	16	17	4	0	1.3	16	19	18
	Sum of Ions (mg/l)	163	148	154	148	168	4	0	12.2	157	185	172
Physical Parameters	pH-L (pH Unit)	7.74	7.74	7.59	7.48	7.56	4	0	0.318	7.26	7.85	7.28
	TDS-d (mg/l)	134	137	138	129	151	4	0	19.7	131	168	161
	TSS (mg/l)	2	2	1	<1	2	4	0	0	2	2	< 1
	Temp. (°C)	13.5	7.43	9.60	10.5	8.30	4	0	8.06	1.10	18.2	0.4
Metals	As (µg/l)	0.1	0.1	0.1	0.1	0.1	4	1	0	<0.1	0.1	0.1
	Ba (mg/l)	0.041	0.036	0.040	0.040	0.047	4	0	0.0061	0.041	0.054	0.053
	Cu (mg/l)	0.00068	0.0011	0.00055	0.0010	0.00033	4	2	0.00015	<0.00020	0.00050	0.0008
	Fe (mg/l)	0.025	0.032	0.11	0.065	0.057	4	0	0.023	0.026	0.077	0.081
	Mo (mg/l)	0.0020	0.0018	0.0016	0.0013	0.0015	4	0	0.000050	0.0014	0.0015	0.0014
	Ni (mg/l)	0.0002	0.0002	0.0002	0.0002	0.0002	4	0	0	0.0002	0.0002	0.0002
	Pb (mg/l)	<0.0001	0.0001	<0.0001	0.0001	<0.0001	4	4	-	<0.0001	<0.0001	0.0001
	Se (mg/l)	0.0001	0.0001	0.0001	0.0001	0.0002	4	0	0.0001	0.0001	0.0003	0.0003
	U (µg/l)	119	101	107	86.3	88.5	4	0	28.9	54.0	122	91
	Zn (mg/l)	0.00078	0.00075	0.00055	0.0017	0.00058	4	1	0.000096	<0.00050	0.00070	0.0024
Nutrients	C-(org) (mg/l)	9.8	10	9.3	10	9.7	1	0		9.7	9.7	
	P-(TP) (mg/l)	<0.01	<0.01	0.01	<0.01	<0.01	1	1	-	<0.01	<0.01	
	NO3 (mg/l)	<0.040	0.21	<0.040	<0.040	0.21	1	0		0.21	0.21	

*The results provided here are those of a single sample collected on March 30, 2025

Table 4.2.1-3 **Station AC-6A Statistical and 5 Year Mean Analysis**

						2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.2	0.2	4	0	0	0.2	0.2
	Ba (mg/l)	0.022	0.022	0.021	0.020	0.024	4	0	0.0010	0.022	0.024
	Cu (mg/l)	0.00048	0.00062	0.00040	0.00055	0.00050	4	1	0.00035	<0.00020	0.0010
	Fe (mg/l)	0.0077	0.0094	0.011	0.0096	0.014	4	0	0.011	0.0060	0.030
	Mo (mg/l)	0.0012	0.0011	0.00097	0.0012	0.0012	4	0	0.00021	0.00090	0.0014
	Ni (mg/l)	0.0001	0.0001	0.0001	0.0001	0.0001	4	3	0.00005	<0.0001	0.0002
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	4	4	-	<0.0001	<0.0001
	Se (mg/l)	0.0002	0.0002	0.0002	0.0002	0.0002	4	0	0	0.0002	0.0002
	U (µg/l)	292	248	204	252	276	4	0	69.8	202	370
	Zn (mg/l)	0.00074	0.00072	<0.00050	<0.00050	0.0005	4	3	0	<0.0005	0.0005
Major Ions	Alk (mg/l)	108	104	94.0	95.5	103	4	0	2.65	99.0	105
	Ca (mg/l)	43	41	38	40	41	4	0	0.50	41	42
	Cl (mg/l)	0.5	0.7	0.4	0.5	0.5	4	0	0.08	0.4	0.6
	CO3 (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1
	HCO3 (mg/l)	131	127	115	117	125	4	0	3.16	121	128
	Cond-L (µS/cm)	282	282	251	261	284	4	0	4.24	281	290
	K (mg/l)	0.96	0.87	0.77	0.80	0.90	4	0	0.14	0.80	1.1
	Hardness (mg/l)	144	139	125	132	138	4	0	2.50	137	142
	Na (mg/l)	2.4	2.2	2.0	2.1	2.2	4	0	0.10	2.1	2.3
	OH (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1
	SO4 (mg/l)	46	41	34	39	42	4	0	2.6	39	45
	Sum of Ions (mg/l)	233	221	197	206	220	4	0	0.500	219	220
Nutrients	C-(org) (mg/l)	8.0	9.5	7.4	9.0	8.3	1	0		8.3	8.3
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.14	<0.040	<0.040	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.18	0.070	<0.020	0.13	0.06	1	0		0.06	0.06
	Po210 (Bq/L)	0.01	0.007	0.01	0.005	0.006	1	0		0.006	0.006
	Ra226 (Bq/L)	0.099	0.097	0.087	0.085	0.085	4	0	0.013	0.070	0.10
Physical Parameters	pH-L (pH Unit)	7.86	7.91	7.80	7.97	7.77	4	0	0.169	7.58	7.94
	TDS-d (mg/l)	193	185	172	183	196	4	0	17.2	184	221
	TSS (mg/l)	2	1	<1	<1	1	4	3	0.5	<1	2
	Temp. (°C)	12.5	10.6	16.2	16.7	16.6	4	0	2.62	13.0	19.2

Table 4.2.1-4 Station AC-8 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.1	0.1	0.1	<0.1	<0.1	1	1	-	<0.1	<0.1
	Ba (mg/l)	0.021	0.019	0.021	0.020	0.021	1	0		0.021	0.021
	Cu (mg/l)	0.0005	0.0006	0.0004	0.0004	0.0005	1	0		0.0005	0.0005
	Fe (mg/l)	0.030	0.043	0.027	0.019	0.019	1	0		0.019	0.019
	Mo (mg/l)	0.0008	0.0008	0.0008	0.0008	0.0009	1	0		0.0009	0.0009
	Ni (mg/l)	0.0002	0.0002	<0.0001	0.0002	0.0001	1	0		0.0001	0.0001
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	U (µg/l)	12	8.9	8.6	8.1	10	1	0		10	10
	Zn (mg/l)	0.0014	0.0015	<0.00050	<0.00050	<0.0005	1	1	-	<0.0005	<0.0005
Major Ions	Alk (mg/l)	44	41	41	42	46	1	0		46	46
	Ca (mg/l)	14	12	13	14	14	1	0		14	14
	Cl (mg/l)	0.80	0.60	0.60	1.0	1.0	1	0		1.0	1.0
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	54	50	50	51	56	1	0		56	56
	Cond-L (µS/cm)	98.0	94.0	81.0	94.0	102	1	0		102	102
	K (mg/l)	0.7	0.7	0.7	0.7	0.7	1	0		0.7	0.7
	Hardness (mg/l)	46	38	43	46	46	1	0		46	46
	Na (mg/l)	1.4	1.3	1.2	1.4	1.4	1	0		1.4	1.4
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	5.6	5.8	4.7	5.0	5.1	1	0		5.1	5.1
	Sum of Ions (mg/l)	79	73	73	76	81	1	0		81	81
Nutrients	C-(org) (mg/l)	8.8	9.0	7.5	7.2	7.9	1	0		7.9	7.9
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.12	<0.040	<0.040	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	<0.02	<0.02	<0.02	<0.02	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	0.005	<0.005	<0.005	0.006	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	<0.005	0.01	0.01	0.01	0.01	1	0		0.01	0.01
Physical Parameters	pH-L (pH Unit)	7.63	7.67	7.62	7.48	7.07	1	0		7.07	7.07
	TDS-d (mg/l)	57	63	62	79	77	1	0		77	77
	TSS (mg/l)	<1	2	<1	<1	<1	1	1	-	<1	<1
	Temp. (°C)	18.4	15.9	18.1	16.4	18.9	1	0		18.9	18.9

Table 4.2.1-5 Station AC-14 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics						2025*
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max	Result
Radionuclide	Pb210 (Bq/L)	<0.02	<0.02	<0.02	0.03	<0.02	1	1	-	<0.02	<0.02	
	Po210 (Bq/L)	0.01	0.02	0.01	0.008	0.01	1	0		0.01	0.01	
	Ra226 (Bq/L)	0.030	0.033	0.060	0.043	0.070	4	0	0.036	0.040	0.11	0.02
Major Ions	Alk (mg/l)	49	48	48	47	54	4	0	7.4	47	64	50
	Ca (mg/l)	16	15	16	16	18	4	0	3.0	15	22	17
	Cl (mg/l)	0.93	0.90	1.1	1.3	1.4	4	0	0.40	1.1	2.0	1.4
	CO3 (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	HCO3 (mg/l)	60	59	59	58	65	4	0	9.1	57	78	61
	Cond-L (µS/cm)	109	111	112	119	124	4	0	16.0	108	146	120
	K (mg/l)	0.77	0.77	0.75	0.77	0.88	4	0	0.31	0.60	1.3	0.8
	Hardness (mg/l)	52	49	51	53	59	4	0	10	49	73	56
	Na (mg/l)	1.7	1.6	1.9	2.0	2.1	4	0	0.60	1.5	2.9	1.8
	OH (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	SO4 (mg/l)	6.7	6.8	7.6	8.1	7.7	4	0	2.0	5.6	10	6.0
	Sum of Ions (mg/l)	89.3	87.0	88.8	89.3	103	4	0	17.9	84.0	125	92
Physical Parameters	pH-L (pH Unit)	7.72	7.68	7.69	7.62	7.26	4	0	0.440	6.95	7.91	7.67
	TDS-d (mg/l)	79.0	81.3	76.8	90.7	98.8	4	0	9.91	88.0	112	90
	TSS (mg/l)	<1	2	1	1	2	4	0	0.6	1	2	< 1
	Temp. (°C)	12.3	11.3	8.60	15.3	7.68	4	0	6.89	1.40	15.0	0.7
Metals	As (µg/l)	0.2	0.2	0.1	0.1	0.2	4	0	0.08	0.1	0.3	0.1
	Ba (mg/l)	0.023	0.022	0.024	0.023	0.027	4	0	0.0053	0.022	0.034	0.025
	Cu (mg/l)	0.00058	0.00060	0.00067	0.00063	0.0015	4	0	0.0017	0.00040	0.0039	0.0005
	Fe (mg/l)	0.045	0.060	0.061	0.051	0.050	4	0	0.011	0.039	0.065	0.046
	Mo (mg/l)	0.00095	0.00090	0.00093	0.00090	0.0011	4	0	0.00017	0.00090	0.0013	0.0010
	Ni (mg/l)	0.0002	0.0002	0.0002	0.0002	0.0003	4	0	0.00008	0.0002	0.0004	0.0002
	Pb (mg/l)	0.0002	0.0004	0.0002	0.0001	0.0004	4	1	0.0004	<0.0001	0.0009	< 0.0001
	Se (mg/l)	0.0001	0.0001	0.0001	0.0002	0.0001	4	1	0.00005	<0.0001	0.0002	0.0001
	U (µg/l)	19	18	28	35	28	4	0	11	16	38	15
	Zn (mg/l)	0.0018	0.0012	0.00053	<0.00050	0.0035	4	1	0.0044	<0.00050	0.010	0.0006
Nutrients	C-(org) (mg/l)	9.0	9.0	7.6	7.5	7.7	1	0		7.7	7.7	
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01	
	NO3 (mg/l)	<0.040	0.15	<0.040	<0.040	<0.040	1	1	-	<0.040	<0.040	

*The results provided here are those of a single sample collected on March 30, 2025

Table 4.2.2-1 **Station AN-3 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.1	0.1	0.1	0.1	<0.1	1	1	-	<0.1	<0.1
	Ba (mg/l)	0.017	0.016	0.017	0.015	0.016	1	0		0.016	0.016
	Cu (mg/l)	0.0006	0.0008	0.0006	0.0007	0.0005	1	0		0.0005	0.0005
	Fe (mg/l)	0.015	0.028	0.017	0.011	0.0082	1	0		0.0082	0.0082
	Mo (mg/l)	0.0017	0.0018	0.0018	0.0020	0.0018	1	0		0.0018	0.0018
	Ni (mg/l)	0.0002	0.0003	0.0002	0.0003	0.0002	1	0		0.0002	0.0002
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	U (µg/l)	1.9	1.6	1.6	1.6	1.8	1	0		1.8	1.8
	Zn (mg/l)	0.0019	0.0021	<0.00050	0.00080	<0.0005	1	1	-	<0.0005	<0.0005
Major Ions	Alk (mg/l)	69	62	64	64	68	1	0		68	68
	Ca (mg/l)	20	18	18	20	19	1	0		19	19
	Cl (mg/l)	0.6	0.5	0.5	0.6	0.6	1	0		0.6	0.6
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	84	76	78	78	83	1	0		83	83
	Cond-L (µS/cm)	138	125	122	129	140	1	0		140	140
	K (mg/l)	0.7	0.7	0.7	0.7	0.7	1	0		0.7	0.7
	Hardness (mg/l)	68	60	62	68	65	1	0		65	65
	Na (mg/l)	1.9	1.8	1.7	1.8	1.8	1	0		1.8	1.8
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	4.1	4.3	3.9	4.0	3.7	1	0		3.7	3.7
	Sum of Ions (mg/l)	116	105	107	110	113	1	0		113	113
Nutrients	C-(org) (mg/l)	8.4	10	9.1	9.4	8.9	1	0		8.9	8.9
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.08	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	<0.02	<0.02	<0.02	<0.02	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	0.006	<0.005	0.006	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	0.006	0.008	<0.005	<0.005	0.007	1	0		0.007	0.007
Physical Parameters	pH-L (pH Unit)	7.87	7.83	7.88	7.78	7.60	1	0		7.60	7.60
	TDS-d (mg/l)	81.0	109	90.0	113	104	1	0		104	104
	TSS (mg/l)	<1	3	2	2	<1	1	1	-	<1	<1
	Temp. (°C)	23.0	16.3	19.6	18.0	13.8	1	0		13.8	13.8

Table 4.2.2-2 Station TL-3 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.5	0.5	0.8	0.6	0.7	2	0	0	0.7	0.7
	Ba (mg/l)	0.037	0.038	0.045	0.043	0.047	2	0	0.0035	0.044	0.049
	Cu (mg/l)	0.0017	0.0014	0.0016	0.0015	0.0015	2	0	0.000071	0.0014	0.0015
	Fe (mg/l)	0.017	0.026	0.050	0.032	0.031	2	0	0.034	0.0072	0.055
	Mo (mg/l)	0.0075	0.0081	0.0096	0.0096	0.0096	2	0	0.00064	0.0091	0.010
	Ni (mg/l)	0.0004	0.0004	0.0005	0.0005	0.0004	2	0	0	0.0004	0.0004
	Pb (mg/l)	0.00050	0.00060	0.00025	0.0013	0.0006	2	0	0.0004	0.0003	0.0008
	Se (mg/l)	0.0016	0.0020	0.0026	0.0026	0.0027	2	0	0.00014	0.0026	0.0028
	U (µg/l)	147	175	194	191	207	2	0	2.12	205	208
	Zn (mg/l)	0.0019	<0.00050	0.00085	<0.00050	0.0005	2	1	0	<0.0005	0.0005
Major Ions	Alk (mg/l)	114	115	124	125	122	2	0	1.41	121	123
	Ca (mg/l)	29	29	31	32	32	2	0	2.1	30	33
	Cl (mg/l)	1.8	1.9	1.8	1.8	1.9	2	0	0.0	1.9	1.9
	CO3 (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	HCO3 (mg/l)	139	140	151	153	149	2	0	1.41	148	150
	Cond-L (µS/cm)	252	258	273	271	282	2	0	12.7	273	291
	K (mg/l)	1.1	1.0	1.1	1.1	1.1	2	0	0.14	1.0	1.2
	Hardness (mg/l)	94.0	92.0	99.0	101	101	2	0	7.07	96.0	106
	Na (mg/l)	18	20	21	21	20	2	0	0.71	19	20
	OH (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	SO4 (mg/l)	17	21	21	20	19	2	0	0.71	18	19
	Sum of Ions (mg/l)	211	217	235	237	227	2	0	5.66	223	231
Nutrients	C-(org) (mg/l)	8.4	9.3	7.9	8.1	8.3	1	0		8.3	8.3
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.13	0.080	0.35	0.18	0.11	1	0		0.11	0.11
	Po210 (Bq/L)	0.060	0.060	0.070	0.10	0.12	1	0		0.12	0.12
	Ra226 (Bq/L)	0.90	1.2	1.7	1.7	1.8	2	0	0.071	1.7	1.8
Physical Parameters	pH-L (pH Unit)	8.01	8.01	8.08	8.13	8.18	2	0	0.205	8.04	8.33
	TDS-d (mg/l)	158	160	176	177	189	2	0	18.4	176	202
	TSS (mg/l)	<1	1	1	2	2	2	1	0.7	<1	2
	Temp. (°C)	16.7	9.50	13.1	11.7	8.05	2	0	10.1	0.900	15.2

Table 4.2.2-3 **Station TL-4 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.85	0.70	0.80	0.80	0.85	2	0	0.21	0.70	1.0
	Ba (mg/l)	0.075	0.073	0.087	0.090	0.097	2	0	0.018	0.084	0.11
	Cu (mg/l)	0.00085	0.00085	0.00070	0.00085	0.0008	2	0	0.0001	0.0007	0.0009
	Fe (mg/l)	0.038	0.040	0.047	0.034	0.026	2	0	0.013	0.016	0.035
	Mo (mg/l)	0.0087	0.0076	0.0077	0.0078	0.0090	2	0	0.0029	0.0069	0.011
	Ni (mg/l)	0.0005	0.0006	0.0005	0.0006	0.0007	2	0	0.00007	0.0006	0.0007
	Pb (mg/l)	0.0004	0.0003	<0.0001	0.0002	0.0003	2	1	0.0003	<0.0001	0.0005
	Se (mg/l)	0.0017	0.0014	0.0014	0.0014	0.0016	2	0	0.00021	0.0014	0.0017
	U (µg/l)	198	169	166	175	205	2	0	43.8	174	236
	Zn (mg/l)	0.0012	0.0011	0.00055	0.00060	<0.0005	2	2	-	<0.0005	<0.0005
Major Ions	Alk (mg/l)	132	129	132	131	124	2	0	7.07	119	129
	Ca (mg/l)	29	31	32	32	30	2	0	3.5	27	32
	Cl (mg/l)	2.1	1.9	1.8	1.8	1.9	2	0	0.14	1.8	2.0
	CO3 (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	HCO3 (mg/l)	161	157	161	160	151	2	0	8.49	145	157
	Cond-L (µS/cm)	289	273	277	274	283	2	0	26.2	264	301
	K (mg/l)	1.2	1.1	1.2	1.3	1.2	2	0	0.14	1.1	1.3
	Hardness (mg/l)	94.0	98.5	101	101	95.5	2	0	10.6	88.0	103
	Na (mg/l)	26	21	22	22	22	2	0	1.4	21	23
	OH (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	SO4 (mg/l)	21	18	17	17	17	2	0	2.1	15	18
	Sum of Ions (mg/l)	245	235	239	244	228	2	0	16.3	216	239
Nutrients	C-(org) (mg/l)	12	9.9	9.3	9.8	10	1	0		10	10
	P-(TP) (mg/l)	0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.040	0.10	0.050	0.14	0.10	1	0		0.10	0.10
	Po210 (Bq/L)	0.03	0.02	0.02	0.05	0.03	1	0		0.03	0.03
	Ra226 (Bq/L)	1.6	1.6	1.9	1.9	2.1	2	0	0.42	1.8	2.4
Physical Parameters	pH-L (pH Unit)	8.07	7.98	8.06	8.09	8.16	2	0	0.191	8.03	8.30
	TDS-d (mg/l)	171	173	175	182	213	2	0	10.6	205	220
	TSS (mg/l)	<1	3	<1	2	2	2	1	0.7	<1	2
	Temp. (°C)	16.5	9.80	10.4	8.80	9.40	2	0	12.4	0.600	18.2

Table 4.2.2-4 **Station TL-6 Statistical and 5 Year Mean Analysis**

		Previous Period			2024 Statistics					
		2020	2021	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	1.6	1.3	1.5		0				
	Ba (mg/l)	1.27	0.880	1.03		0				
	Cu (mg/l)	0.00070	0.0012	0.0011		0				
	Fe (mg/l)	0.43	0.63	0.35		0				
	Mo (mg/l)	0.0020	0.0050	0.0022		0				
	Ni (mg/l)	0.0005	0.0007	0.0006		0				
	Pb (mg/l)	0.00030	0.00070	0.0016		0				
	Se (mg/l)	0.0038	0.0033	0.0025		0				
	U (µg/l)	241	276	244		0				
	Zn (mg/l)	0.0020	0.00090	0.0012		0				
Major Ions	Alk (mg/l)	277	204	226		0				
	Ca (mg/l)	54	60	35		0				
	Cl (mg/l)	34	12	25		0				
	CO3 (mg/l)	<1	<1	<1		0				
	HCO3 (mg/l)	338	249	276		0				
	Cond-L (µS/cm)	743	512	580		0				
	K (mg/l)	2.4	1.2	2.2		0				
	Hardness (mg/l)	184	189	137		0				
	Na (mg/l)	94	42	85		0				
	OH (mg/l)	<1	<1	<1		0				
	SO4 (mg/l)	71	56	43		0				
	Sum of Ions (mg/l)	605	431	478		0				
Nutrients	C-(org) (mg/l)	38	39	33		0				
	P-(TP) (mg/l)	0.02	0.01	<0.01		0				
	NO3 (mg/l)	<0.040	0.12	<0.040		0				
Radionuclide	Pb210 (Bq/L)	0.070	<0.020	0.25		0				
	Po210 (Bq/L)	0.05	0.05	0.09		0				
	Ra226 (Bq/L)	7.7	6.3	6.0		0				
Physical Parameters	pH-L (pH Unit)	7.80	7.85	8.13		0				
	TDS-d (mg/l)	521	367	412		0				
	TSS (mg/l)	<1	2	<1		0				
	Temp. (°C)	20.4	15.2	14.3						

Note: No samples were collected at TL-6 in 2022 and 2024 due to a lack of water flow at the sample location.

Table 4.2.2-5 Station TL-7 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics						2025*
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max	Result
Radionuclide	Pb210 (Bq/L)	0.060	0.11	<0.020	0.070	<0.020	1	1	-	<0.020	<0.020	
	Po210 (Bq/L)	0.02	0.01	0.01	0.01	0.01	1	0		0.01	0.01	
	Ra226 (Bq/L)	1.7	1.5	2.0	1.9	1.8	4	0	0.25	1.4	1.9	3.0
Major Ions	Alk (mg/l)	132	120	135	125	124	4	0	5.89	116	130	140
	Ca (mg/l)	30	29	32	31	30	4	0	1.7	28	32	36
	Cl (mg/l)	3.1	2.3	1.9	3.0	2.6	4	0	0.29	2.3	3.0	2
	CO3 (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	HCO3 (mg/l)	162	147	165	153	152	4	0	7.14	142	159	171
	Cond-L (µS/cm)	294	266	288	275	282	4	0	20.9	257	308	321
	K (mg/l)	1.2	1.1	1.3	1.2	1.3	4	0	0.19	1.0	1.4	1.4
	Hardness (mg/l)	97.7	94.5	103	99.3	96.3	4	0	5.91	90.0	104	116
	Na (mg/l)	27	21	22	22	22	4	0	2.1	19	24	24
	OH (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	SO4 (mg/l)	21	18	17	17	16	4	0	1.5	15	18	18
	Sum of Ions (mg/l)	249	223	245	232	229	4	0	12.3	213	243	259
Physical Parameters	pH-L (pH Unit)	7.94	8.17	7.84	7.91	7.88	4	0	0.323	7.52	8.18	7.67
	TDS-d (mg/l)	188	165	179	191	188	4	0	27.9	163	228	215
	TSS (mg/l)	<1	2	1	2	1	4	3	0.5	<1	2	< 1
	Temp. (°C)	15.2	15.0	11.9	12.7	7.58	4	0	7.75	0.600	17.9	2.9
Metals	As (µg/l)	0.83	0.70	0.80	0.85	0.80	4	0	0.16	0.60	1.0	1.0
	Ba (mg/l)	0.16	0.24	0.51	0.39	0.35	4	0	0.065	0.25	0.39	0.20
	Cu (mg/l)	0.00070	0.00085	0.00060	0.00077	0.00053	4	1	0.00022	<0.00020	0.00070	0.0009
	Fe (mg/l)	0.028	0.036	0.084	0.12	0.045	4	0	0.037	0.019	0.10	0.093
	Mo (mg/l)	0.0091	0.0073	0.0071	0.0074	0.0081	4	0	0.0015	0.0065	0.010	0.010
	Ni (mg/l)	0.0004	0.0005	0.0005	0.0005	0.0005	4	0	0.00008	0.0004	0.0006	0.0006
	Pb (mg/l)	0.0002	0.0002	<0.0001	0.0001	0.0002	4	2	0.0002	<0.0001	0.0004	0.0002
	Se (mg/l)	0.0017	0.0011	0.0012	0.0014	0.0014	4	0	0.00032	0.0010	0.0017	0.0018
	U (µg/l)	201	165	161	172	204	4	0	42.6	151	249	244
	Zn (mg/l)	<0.00050	<0.00050	0.00057	0.00078	0.00073	4	0	0.00026	0.00050	0.0011	0.0014
Nutrients	C-(org) (mg/l)	10	9.9	8.6	10	9.6	1	0		9.6	9.6	
	P-(TP) (mg/l)	<0.01	0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01	
	NO3 (mg/l)	<0.04	0.08	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04	

*The results provided here are those of a single sample collected on March 30, 2025

Table 4.2.2-6 Station TL-9 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics						2025*
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max	Result
Radionuclide	Pb210 (Bq/L)	0.07	0.09	0.1	0.05	0.04	1	0		0.04	0.04	
	Po210 (Bq/L)	0.08	0.03	0.06	0.08	0.04	1	0		0.04	0.04	
	Ra226 (Bq/L)	1.7	2.1	2.3	2.1	1.8	4	0	0.39	1.3	2.2	1.8
Major Ions	Alk (mg/l)	138	137	137	101	112	4	0	28.8	91.0	152	141
	Ca (mg/l)	29	33	32	23	22	4	0	7.6	16	32	36
	Cl (mg/l)	3.2	2.5	2.1	2.7	3.3	4	0	0.51	2.8	4.0	2
	CO3 (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	HCO3 (mg/l)	169	167	167	124	137	4	0	35.0	111	185	172
	Cond-L (µS/cm)	286	297	285	227	253	4	0	53.6	213	327	333
	K (mg/l)	1.2	1.3	1.1	1.0	1.1	4	0	0.28	0.80	1.4	1.4
	Hardness (mg/l)	97.3	108	105	79.7	81.0	4	0	23.0	63.0	111	118
	Na (mg/l)	25	23	21	20	23	4	0	3.4	19	26	24
	OH (mg/l)	<1	<1	<1	<1	<1	4	4	-	<1	<1	< 1
	SO4 (mg/l)	19	18	16	14	16	4	0	2.4	13	18	19
	Sum of Ions (mg/l)	253	251	247	189	209	4	0	49.7	169	275	262
Physical Parameters	pH-L (pH Unit)	8.07	8.15	8.07	8.11	7.92	4	0	0.134	7.80	8.06	7.70
	TDS-d (mg/l)	176	172	183	152	169	4	0	38.7	139	226	217
	TSS (mg/l)	<1	3	1	2	2	4	1	0.8	<1	3	< 1
	Temp. (°C)	13.3	11.2	9.38	15.1	7.48	4	0	6.51	0.400	15.4	0
Metals	As (µg/l)	0.97	0.93	1.2	0.97	1.0	4	0	0.082	0.90	1.1	0.7
	Ba (mg/l)	0.43	0.44	0.64	0.58	0.55	4	0	0.14	0.43	0.72	0.35
	Cu (mg/l)	0.00063	0.00067	0.00075	0.00073	0.0011	4	1	0.0012	<0.00020	0.0029	0.0012
	Fe (mg/l)	0.038	0.052	0.041	0.050	0.026	4	0	0.0090	0.014	0.036	0.016
	Mo (mg/l)	0.0083	0.0081	0.0076	0.0059	0.0065	4	0	0.00098	0.0052	0.0074	0.0095
	Ni (mg/l)	0.0004	0.0005	0.0005	0.0004	0.0004	4	0	0.0001	0.0003	0.0006	0.0005
	Pb (mg/l)	0.00053	0.00053	0.00018	0.00037	0.00025	4	1	0.00017	<0.00010	0.00040	0.0002
	Se (mg/l)	0.0017	0.0016	0.0023	0.0021	0.0018	4	0	0.00036	0.0015	0.0022	0.0021
	U (µg/l)	187	181	170	118	153	4	0	32.3	115	194	242
	Zn (mg/l)	0.0013	0.0011	0.0012	0.00083	0.0020	4	0	0.0026	0.00060	0.0059	0.0025
Nutrients	C-(org) (mg/l)	11	11	9.4	11	10	1	0		10	10	
	P-(TP) (mg/l)	0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01	
	NO3 (mg/l)	0.16	0.15	0.27	0.17	0.080	1	0		0.080	0.080	

*The results provided here are those of a single sample collected on March 30, 2025

Table 4.2.3-1 Station BL-3 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.3	0.2	0.3	0.3	2	0	0.07	0.2	0.3
	Ba (mg/l)	0.039	0.038	0.038	0.04	0.044	2	0	0.011	0.036	0.051
	Cu (mg/l)	0.0012	0.0030	0.0021	0.0011	0.0015	2	0	0.00035	0.0012	0.0017
	Fe (mg/l)	0.0040	0.0091	0.0052	0.0041	0.0072	2	0	0.0082	0.0014	0.013
	Mo (mg/l)	0.0034	0.0032	0.0032	0.0032	0.0034	2	0	0.00035	0.0031	0.0036
	Ni (mg/l)	0.0018	0.0038	0.0029	0.0016	0.0019	2	0	0.00021	0.0017	0.0020
	Pb (mg/l)	<0.0001	0.0002	0.0002	0.0001	0.0001	2	1	0	<0.0001	0.0001
	Se (mg/l)	0.0022	0.0019	0.0021	0.0019	0.0019	2	0	0.00014	0.0018	0.0020
	U (µg/l)	124	116	115	114	124	2	0	4.95	120	127
	Zn (mg/l)	0.0017	0.0098	0.0058	0.0023	0.0045	2	0	0.0033	0.0022	0.0068
Major Ions	Alk (mg/l)	69	68	70	68	71	2	0	4.2	68	74
	Ca (mg/l)	21	19	21	21	22	2	0	2.1	20	23
	Cl (mg/l)	12	10	11	11	11	2	0	1.4	10	12
	CO3 (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	HCO3 (mg/l)	84	83	85	82	87	2	0	4.9	83	90
	Cond-L (µS/cm)	228	220	223	222	241	2	0	16.3	229	252
	K (mg/l)	1.1	1.0	1.2	1.2	1.2	2	0	0.14	1.1	1.3
	Hardness (mg/l)	74	66	74	74	76	2	0	8.5	70	82
	Na (mg/l)	17	17	17	18	17	2	0	1.4	16	18
	OH (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	SO4 (mg/l)	28	28	27	28	28	2	0	2.1	26	29
	Sum of Ions (mg/l)	168	162	167	168	170	2	0	12.7	161	179
Nutrients	C-(org) (mg/l)	3.7	3.6	3.5	3.5	3.7	1	0		3.7	3.7
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	0.5	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.020	0.22	<0.020	0.09	<0.020	1	1	-	<0.020	<0.020
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	0.005	1	0		0.005	0.005
	Ra226 (Bq/L)	0.05	0.07	0.05	0.06	0.07	2	0	0.02	0.05	0.08
Physical Parameters	pH-L (pH Unit)	7.90	7.88	7.94	7.51	7.60	2	0	0.0141	7.59	7.61
	TDS-d (mg/l)	121	143	141	136	146	2	0	14.1	136	156
	TSS (mg/l)	<1	2	<1	<1	1	2	1	0	<1	1
	Temp. (°C)	15.9	9.90	7.35	7.30	10.1	2	0	5.80	6.00	14.2

Table 4.2.3-2 **Station BL-4 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.2	0.2	1	0		0.2	0.2
	Ba (mg/l)	0.036	0.033	0.036	0.032	0.032	1	0		0.032	0.032
	Cu (mg/l)	0.00060	0.0015	0.0010	0.00070	0.0011	1	0		0.0011	0.0011
	Fe (mg/l)	0.0031	0.0058	0.0042	0.0050	0.0044	1	0		0.0044	0.0044
	Mo (mg/l)	0.0033	0.0031	0.0033	0.0030	0.0029	1	0		0.0029	0.0029
	Ni (mg/l)	0.00080	0.0032	0.0017	0.0013	0.0017	1	0		0.0017	0.0017
	Pb (mg/l)	<0.0001	0.0001	0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	0.0021	0.0019	0.0021	0.0019	0.0018	1	0		0.0018	0.0018
	U (µg/l)	121	116	120	107	116	1	0		116	116
	Zn (mg/l)	0.0018	0.0052	0.0032	0.0018	0.0023	1	0		0.0023	0.0023
Major Ions	Alk (mg/l)	67	66	67	66	67	1	0		67	67
	Ca (mg/l)	20	19	20	20	19	1	0		19	19
	Cl (mg/l)	12	10	10	11	10	1	0		10	10
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	82	80	82	80	82	1	0		82	82
	Cond-L (µS/cm)	224	217	211	219	227	1	0		227	227
	K (mg/l)	1.0	1.1	1.1	1.1	1.1	1	0		1.1	1.1
	Hardness (mg/l)	70	65	70	72	68	1	0		68	68
	Na (mg/l)	17	17	16	17	16	1	0		16	16
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	27	28	26	27	26	1	0		26	26
	Sum of Ions (mg/l)	164	160	160	161	159	1	0		159	159
Nutrients	C-(org) (mg/l)	3.5	3.3	3.6	3.4	3.6	1	0		3.6	3.6
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.12	<0.040	<0.040	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.080	0.12	<0.020	0.070	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	0.03	0.03	0.02	0.02	0.03	1	0		0.03	0.03
Physical Parameters	pH-L (pH Unit)	7.82	7.84	7.83	7.73	7.57	1	0		7.57	7.57
	TDS-d (mg/l)	116	137	142	137	129	1	0		129	129
	TSS (mg/l)	<1	1	<1	<1	1	1	0		1	1
	Temp. (°C)	14.4	7.90	9.90	12.4	15.2	1	0		15.2	15.2

Table 4.2.3-3 **Station BL-5 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.3	0.2	0.2	1	0		0.2	0.2
	Ba (mg/l)	0.036	0.032	0.036	0.032	0.032	1	0		0.032	0.032
	Cu (mg/l)	0.0003	0.0003	0.0003	0.0006	0.0005	1	0		0.0005	0.0005
	Fe (mg/l)	0.0030	0.0092	0.0032	0.0046	0.0071	1	0		0.0071	0.0071
	Mo (mg/l)	0.0033	0.0031	0.0031	0.0030	0.0029	1	0		0.0029	0.0029
	Ni (mg/l)	0.0002	0.0002	0.0002	0.0002	0.0002	1	0		0.0002	0.0002
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	0.0021	0.0019	0.0021	0.0018	0.0018	1	0		0.0018	0.0018
	U (µg/l)	120	115	114	105	115	1	0		115	115
	Zn (mg/l)	<0.00050	0.0023	<0.00050	0.0014	0.0016	1	0		0.0016	0.0016
Major Ions	Alk (mg/l)	66	71	66	66	67	1	0		67	67
	Ca (mg/l)	20	19	20	20	19	1	0		19	19
	Cl (mg/l)	11	10	11	10	10	1	0		10	10
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	80	87	80	80	82	1	0		82	82
	Cond-L (µS/cm)	221	219	209	219	226	1	0		226	226
	K (mg/l)	1.0	1.1	1.1	1.1	1.1	1	0		1.1	1.1
	Hardness (mg/l)	70	66	70	72	68	1	0		68	68
	Na (mg/l)	17	17	16	16	16	1	0		16	16
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	27	29	26	27	26	1	0		26	26
	Sum of Ions (mg/l)	161	168	159	159	159	1	0		159	159
Nutrients	C-(org) (mg/l)	3.6	3.3	3.3	3.5	3.6	1	0		3.6	3.6
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.48	<0.040	<0.040	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.08	0.04	<0.02	0.03	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	0.02	0.04	0.03	0.02	0.03	1	0		0.03	0.03
Physical Parameters	pH-L (pH Unit)	8.02	7.87	7.87	7.80	7.60	1	0		7.60	7.60
	TDS-d (mg/l)	128	142	144	134	144	1	0		144	144
	TSS (mg/l)	<1	2	<1	<1	<1	1	1	-	<1	<1
	Temp. (°C)	15.7	7.90	13.8	12.0	13.6	1	0		13.6	13.6

Table 4.2.3-4 Station ML-1 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.2	0.2	2	0	0	0.2	0.2
	Ba (mg/l)	0.037	0.036	0.043	0.039	0.040	2	0	0.0049	0.037	0.044
	Cu (mg/l)	0.00035	0.00040	0.00040	0.0024	0.0012	2	0	0.00092	0.00050	0.0018
	Fe (mg/l)	0.021	0.023	0.0075	0.019	0.013	2	0	0.0095	0.0066	0.020
	Mo (mg/l)	0.0010	0.0015	0.0021	0.0018	0.0019	2	0	0.00035	0.0016	0.0021
	Ni (mg/l)	0.0002	0.0001	0.0002	0.0003	0.0002	2	0	0.0001	0.0001	0.0003
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	0.0001	0.0003	2	1	0.0002	<0.0001	0.0004
	Se (mg/l)	0.00045	0.00080	0.0011	0.00090	0.0008	2	0	0.0001	0.0007	0.0009
	U (µg/l)	23	44	58	55	54	2	0	3.5	51	56
	Zn (mg/l)	0.00090	0.0022	0.00060	0.0031	0.0039	2	0	0.0044	0.00080	0.0070
Major Ions	Alk (mg/l)	55	54	65	60	62	2	0	4.2	59	65
	Ca (mg/l)	17	16	20	18	19	2	0	2.8	17	21
	Cl (mg/l)	3.5	5.4	7.7	7.0	6.7	2	0	0.78	6.1	7.2
	CO3 (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	HCO3 (mg/l)	67	66	80	73	76	2	0	4.9	72	79
	Cond-L (µS/cm)	135	151	186	174	183	2	0	20.5	168	197
	K (mg/l)	1.0	1.0	1.1	1.0	1.2	2	0	0.28	1.0	1.4
	Hardness (mg/l)	56	53	67	63	65	2	0	9.2	58	71
	Na (mg/l)	5.2	8.7	12	11	9.9	2	0	1.6	8.8	11
	OH (mg/l)	<1	<1	<1	<1	<1	2	2	-	<1	<1
	SO4 (mg/l)	8.9	15	18	17	16	2	0	2.1	14	17
	Sum of Ions (mg/l)	106	115	142	131	132	2	0	12.7	123	141
Nutrients	C-(org) (mg/l)	6.3	7.2	5.8	5.9	6.4	1	0		6.4	6.4
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	<0.020	<0.020	0.15	<0.020	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	0.005	0.005	0.006	0.006	0.007	2	0	0.001	0.006	0.008
Physical Parameters	pH-L (pH Unit)	7.77	7.70	7.89	7.71	7.39	2	0	0.113	7.31	7.47
	TDS-d (mg/l)	100	105	118	114	140	2	0	9.90	133	147
	TSS (mg/l)	<1	2	<1	<1	2	2	1	0.7	<1	2
	Temp. (°C)	14.0	15.0	12.2	12.6	8.50	2	0	11.5	0.400	16.6

Table 4.2.3-5 **Station CS-1 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.2	0.2	1	0		0.2	0.2
	Ba (mg/l)	0.042	0.038	0.042	0.038	0.039	1	0		0.039	0.039
	Cu (mg/l)	0.0012	0.00040	0.00080	0.00050	0.0006	1	0		0.0006	0.0006
	Fe (mg/l)	0.045	0.071	0.042	0.079	0.042	1	0		0.042	0.042
	Mo (mg/l)	0.0017	0.0015	0.0019	0.0020	0.0017	1	0		0.0017	0.0017
	Ni (mg/l)	0.0002	0.0002	0.0003	0.0002	0.0003	1	0		0.0003	0.0003
	Pb (mg/l)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	0.0008	0.0007	0.001	0.0007	0.0008	1	0		0.0008	0.0008
	U (µg/l)	44	37	54	46	55	1	0		55	55
	Zn (mg/l)	0.0028	<0.00050	0.0013	0.00080	0.0015	1	0		0.0015	0.0015
Major Ions	Alk (mg/l)	60	53	59	58	61	1	0		61	61
	Ca (mg/l)	18	16	18	18	18	1	0		18	18
	Cl (mg/l)	5.8	5.0	6.2	5.9	6.6	1	0		6.6	6.6
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	73	65	72	71	74	1	0		74	74
	Cond-L (µS/cm)	163	145	158	161	175	1	0		175	175
	K (mg/l)	1.0	0.90	1.0	0.80	1.0	1	0		1.0	1.0
	Hardness (mg/l)	61	53	61	62	62	1	0		62	62
	Na (mg/l)	8.7	7.9	9.5	8.9	9.4	1	0		9.4	9.4
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	14	14	15	14	15	1	0		15	15
	Sum of Ions (mg/l)	124	112	126	123	128	1	0		128	128
Nutrients	C-(org) (mg/l)	6.4	7.8	5.9	8.3	6.7	1	0		6.7	6.7
	P-(TP) (mg/l)	<0.01	0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.03	0.04	<0.02	<0.02	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	<0.005	0.02	0.005	0.01	0.01	1	0		0.01	0.01
Physical Parameters	pH-L (pH Unit)	7.74	7.75	7.87	7.62	7.46	1	0		7.46	7.46
	TDS-d (mg/l)	118	101	110	112	118	1	0		118	118
	TSS (mg/l)	1	7	2	5	3	1	0		3	3
	Temp. (°C)	16.4	15.4	13.2	14.7	17.6	1	0		17.6	17.6

Table 4.2.3-6 Station CS-2 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.1	0.2	1	0		0.2	0.2
	Ba (mg/l)	0.022	0.035	0.036	0.021	0.038	1	0		0.038	0.038
	Cu (mg/l)	0.0014	0.0030	0.00030	0.0012	0.0006	1	0		0.0006	0.0006
	Fe (mg/l)	0.032	0.083	0.062	0.047	0.048	1	0		0.048	0.048
	Mo (mg/l)	0.00075	0.0014	0.0015	0.00090	0.0017	1	0		0.0017	0.0017
	Ni (mg/l)	0.0020	0.0040	0.00020	0.0020	0.0003	1	0		0.0003	0.0003
	Pb (mg/l)	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	1	1	-	<0.0001	<0.0001
	Se (mg/l)	0.0003	0.0006	0.0008	0.0003	0.0008	1	0		0.0008	0.0008
	U (µg/l)	16	32	41	17	56	1	0		56	56
	Zn (mg/l)	0.0033	0.0061	<0.00050	0.0028	0.0052	1	0		0.0052	0.0052
Major Ions	Alk (mg/l)	39	50	51	38	60	1	0		60	60
	Ca (mg/l)	11	14	15	11	17	1	0		17	17
	Cl (mg/l)	4.5	4.8	5.4	4.2	6.5	1	0		6.5	6.5
	CO3 (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	HCO3 (mg/l)	48	61	62	46	73	1	0		73	73
	Cond-L (µS/cm)	102	134	138	102	174	1	0		174	174
	K (mg/l)	0.95	1.0	1.0	0.80	1.0	1	0		1.0	1.0
	Hardness (mg/l)	39	47	52	40	59	1	0		59	59
	Na (mg/l)	5.1	7.2	8.1	5.0	9.3	1	0		9.3	9.3
	OH (mg/l)	<1	<1	<1	<1	<1	1	1	-	<1	<1
	SO4 (mg/l)	7.6	12	13	7.8	14	1	0		14	14
	Sum of Ions (mg/l)	79.5	103	108	78.0	125	1	0		125	125
Nutrients	C-(org) (mg/l)	4.4	7.6	5.6	6.2	6.8	1	0		6.8	6.8
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.040	0.12	<0.040	0.10	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	<0.02	0.02	<0.02	<0.02	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	1	1	-	<0.005	<0.005
	Ra226 (Bq/L)	0.006	0.01	0.007	<0.005	0.01	1	0		0.01	0.01
Physical Parameters	pH-L (pH Unit)	7.68	7.68	7.77	7.51	7.52	1	0		7.52	7.52
	TDS-d (mg/l)	81.5	85.0	95.0	76.0	107	1	0		107	107
	TSS (mg/l)	<1	5	2	2	2	1	0		2	2
	Temp. (°C)	19.4	15.1	12.9	12.2	18.6	1	0		18.6	18.6

Table 4.3.1-1 Station ZOR-01 Statistical and 5 Year Mean Analysis

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.1	0.2	0.1	0.2	8	1	0.05	<0.1	0.2
	Ba (mg/l)	0.023	0.022	0.023	0.020	0.021	8	0	0.0048	0.0098	0.026
	Cu (mg/l)	0.0016	0.0015	0.0014	0.00060	0.0003	8	1	0.0001	<0.0002	0.0006
	Fe (mg/l)	0.0092	0.016	0.095	0.017	0.010	8	0	0.0058	0.0028	0.022
	Mo (mg/l)	0.00092	0.00082	0.00096	0.00077	0.00079	8	0	0.00018	0.00040	0.0010
	Ni (mg/l)	0.00023	0.00032	0.00030	0.00013	0.0001	8	1	0	<0.0001	0.0001
	Pb (mg/l)	0.00026	0.00024	0.00036	0.00011	<0.0001	8	8	-	<0.0001	<0.0001
	Se (mg/l)	0.0001	0.0001	0.0002	0.0001	0.0001	8	1	0.00004	<0.0001	0.0002
	U (µg/l)	15	12	14	13	16	8	0	4.8	5.6	23
	Zn (mg/l)	0.0031	0.0025	0.0029	0.00066	0.0005	8	7	0.0001	<0.0005	0.0008
Major Ions	Alk (mg/l)	101	92.8	91.6	85.3	92.4	8	0	21.5	41.0	112
	Ca (mg/l)	32	30	30	28	30	8	0	7.4	12	36
	Cl (mg/l)	0.3	0.4	0.3	0.3	0.3	8	0	0.04	0.2	0.3
	CO3 (mg/l)	<1	<1	<1	<1	<1	8	8	-	<1	<1
	HCO3 (mg/l)	123	113	112	104	113	8	0	26.3	50.0	137
	Cond-L (µS/cm)	218	207	208	195	205	8	0	49.2	92.0	247
	K (mg/l)	0.8	0.7	0.7	0.6	0.7	8	0	0.1	0.4	0.9
	Hardness (mg/l)	112	103	105	98.6	104	8	0	26.1	41.0	125
	Na (mg/l)	1.8	1.7	1.8	1.5	1.7	8	0	0.40	0.70	1.9
	OH (mg/l)	<1	<1	<1	<1	<1	8	8	-	<1	<1
	SO4 (mg/l)	18	16	16	15	16	8	0	4.0	6.6	19
	Sum of Ions (mg/l)	184	169	169	157	169	8	0	40.0	73.0	204
Nutrients	C-(org) (mg/l)	9.2	11	8.8	8.1	8.5	1	0		8.5	8.5
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	<0.04	0.09	<0.04	<0.04	<0.04	1	1	-	<0.04	<0.04
Radionuclide	Pb210 (Bq/L)	0.03	<0.02	<0.02	<0.02	<0.02	1	1	-	<0.02	<0.02
	Po210 (Bq/L)	0.008	<0.005	<0.005	0.006	0.02	1	0		0.02	0.02
	Ra226 (Bq/L)	0.02	0.02	0.02	0.03	0.03	8	0	0.01	0.007	0.04
Physical Parameters	pH-L (pH Unit)	7.92	7.88	7.88	7.88	7.76	8	0	0.415	6.90	8.13
	TDS-d (mg/l)	148	136	135	129	135	8	0	31.5	60.0	165
	TSS (mg/l)	1.4	1.9	7.0	1.0	2	8	4	3	<1	10
	Temp. (°C)	10.8	10.6	12.3	14.6	10.7	8	0	6.82	1.10	18.5

Table 4.3.1-2 **Station ZOR-02 Statistical and 5 Year Mean Analysis**

		Previous Period Averages				2024 Statistics					
		2020	2021	2022	2023	Average	Count	Count <DL	Std Dev	Min	Max
Metals	As (µg/l)	0.2	0.2	0.2	0.2	0.2	7	0	0.05	0.1	0.2
	Ba (mg/l)	0.023	0.023	0.026	0.025	0.025	7	0	0.0058	0.018	0.033
	Cu (mg/l)	0.0013	0.0018	0.0017	0.0020	0.0016	7	0	0.00039	0.0011	0.0023
	Fe (mg/l)	0.048	0.067	0.072	0.098	0.092	7	0	0.050	0.030	0.18
	Mo (mg/l)	0.0012	0.0012	0.0012	0.0013	0.0012	7	0	0.00021	0.00080	0.0014
	Ni (mg/l)	0.0002	0.0002	0.0002	0.0002	0.0003	7	0	0.0001	0.0002	0.0005
	Pb (mg/l)	0.0001	0.0002	<0.0001	0.0001	<0.0001	7	7	-	<0.0001	<0.0001
	Se (mg/l)	0.0002	0.0002	0.0002	0.0004	0.0003	7	0	0.00006	0.0002	0.0004
	U (µg/l)	164	218	290	453	401	7	0	108	291	556
	Zn (mg/l)	0.00062	0.0012	<0.00050	0.00051	0.0005	7	6	0.00008	<0.0005	0.0007
Major Ions	Alk (mg/l)	103	102	103	98.7	99.9	7	0	15.0	71.0	116
	Ca (mg/l)	38	38	41	45	44	7	0	9.8	30	58
	Cl (mg/l)	0.4	0.4	0.5	0.6	0.5	7	1	0.3	<0.3	1
	CO3 (mg/l)	<1	<1	<1	<1	<1	7	7	-	<1	<1
	HCO3 (mg/l)	125	124	126	121	122	7	0	18.3	87.0	142
	Cond-L (µS/cm)	254	254	267	295	299	7	0	59.8	211	379
	K (mg/l)	0.8	0.7	0.8	0.8	0.8	7	0	0.08	0.7	0.9
	Hardness (mg/l)	130	128	135	147	145	7	0	31.8	97.0	190
	Na (mg/l)	1.9	1.9	2.1	2.0	1.9	7	0	0.41	1.3	2.5
	OH (mg/l)	<1	<1	<1	<1	<1	7	7	-	<1	<1
	SO4 (mg/l)	32	31	37	50	49	7	0	16	33	74
	Sum of Ions (mg/l)	207	205	216	229	227	7	0	45.3	158	289
Nutrients	C-(org) (mg/l)	8.3	10	7.3	7.1	7.5	1	0		7.5	7.5
	P-(TP) (mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	1	1	-	<0.01	<0.01
	NO3 (mg/l)	0.19	0.33	0.58	0.82	0.38	1	0		0.38	0.38
Radionuclide	Pb210 (Bq/L)	0.11	0.050	0.050	0.040	0.11	1	0		0.11	0.11
	Po210 (Bq/L)	0.02	0.03	0.05	0.05	0.03	1	0		0.03	0.03
	Ra226 (Bq/L)	0.14	0.15	0.17	0.23	0.22	7	0	0.037	0.17	0.27
Physical Parameters	pH-L (pH Unit)	7.92	7.94	7.93	8.00	7.91	7	0	0.309	7.46	8.22
	TDS-d (mg/l)	177	171	182	194	202	7	0	40.8	140	253
	TSS (mg/l)	1	2	1	1	1	7	5	0.4	<1	2
	Temp. (°C)	10.3	9.37	10.3	12.1	9.13	7	0	5.10	3.20	14.9

Table 4.3.1-3 Zora Creek - Downstream Water Quality

Year	Flow Path (ZOR-02)		Verna Lake (AC-6A)		Ace Lake (AC-8)	
	U (µg/l)	Ra226 (Bq/L)	U (µg/l)	Ra226 (Bq/L)	U (µg/l)	Ra226 (Bq/L)
2010	1560.0	0.400	263.0	0.100	15.3	0.015
2011	940.0	1.200			16.5	0.015
2012			117.0	0.085	13.5	0.009
2013	624.8	0.368	201.0	0.140	11.5	0.020
2014	313.8	0.336	154.0	0.150	11.5	0.020
2015	595.2	0.667	389.3	0.109	13.5	0.030
2016	332.7	0.235	331.0	0.108	14.5	0.015
2017	424.5	0.311	279.3	0.115	12.5	0.025
2018	340.6	0.253	278.5	0.100	12.5	0.020
2019	451.1	0.232	271.5	0.090	12.5	0.025
2020	164.0	0.140	292.0	0.099	12.0	0.005
2021	218.1	0.154	248.3	0.097	8.9	0.010
2022	290.4	0.165	204.3	0.087	8.6	0.010
2023	452.6	0.231	252.0	0.085	8.1	0.010
2024	401.0	0.220	276.0	0.085	10.0	0.010

Table 4.5.1 **Radon Track Etch Cup Summary**

		Annual Average (Bq/m3) and Sample Number (n)									
	1982	2020		2021		2022		2023		2024	
		Average	n	Average	n	Average	n	Average	n	Average	n
Ace Creek TEC	395.9	203	1	267	2	270	2	290	2	270	2
Eldorado TownsiteTEC	136.9	31	1	38	2	35	2	30	2	30	1
Fookes Delta TEC	217.8	101	1	104	2	145	2	150	2	315	2
Marie Delta TEC	144.5	59	1	98	2	115	2	105	2	105	2
Uranium City TownTEC		7	1	12	2	14	2	14	2	14	2

FIGURES

FIGURES

Figure 2.4 Beaverlodge Location Map

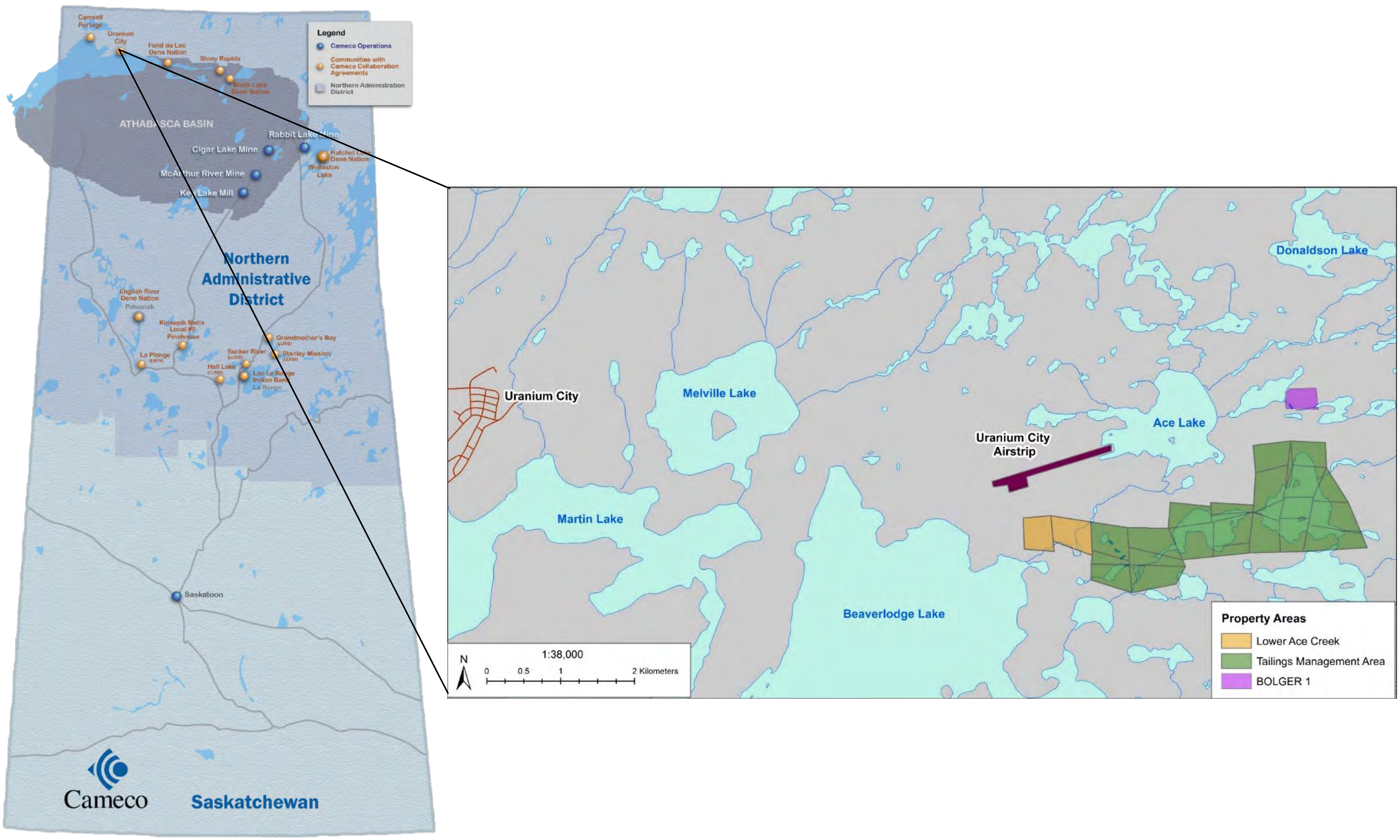


Figure 4.2 Regulatory Water Quality Monitoring Station Locations

Figure 4.2.1-1 AN-5 Pistol Creek below Hab Site

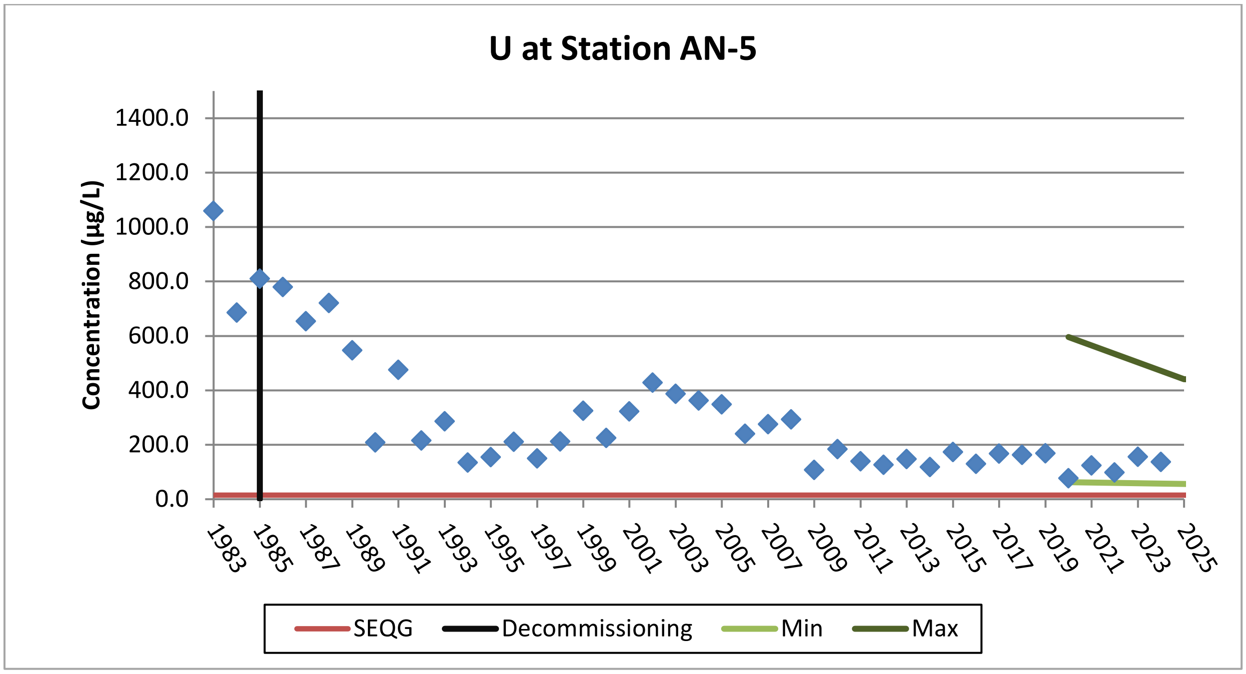


Figure 4.2.1-2 AN-5 Pistol Creek below Hab Site

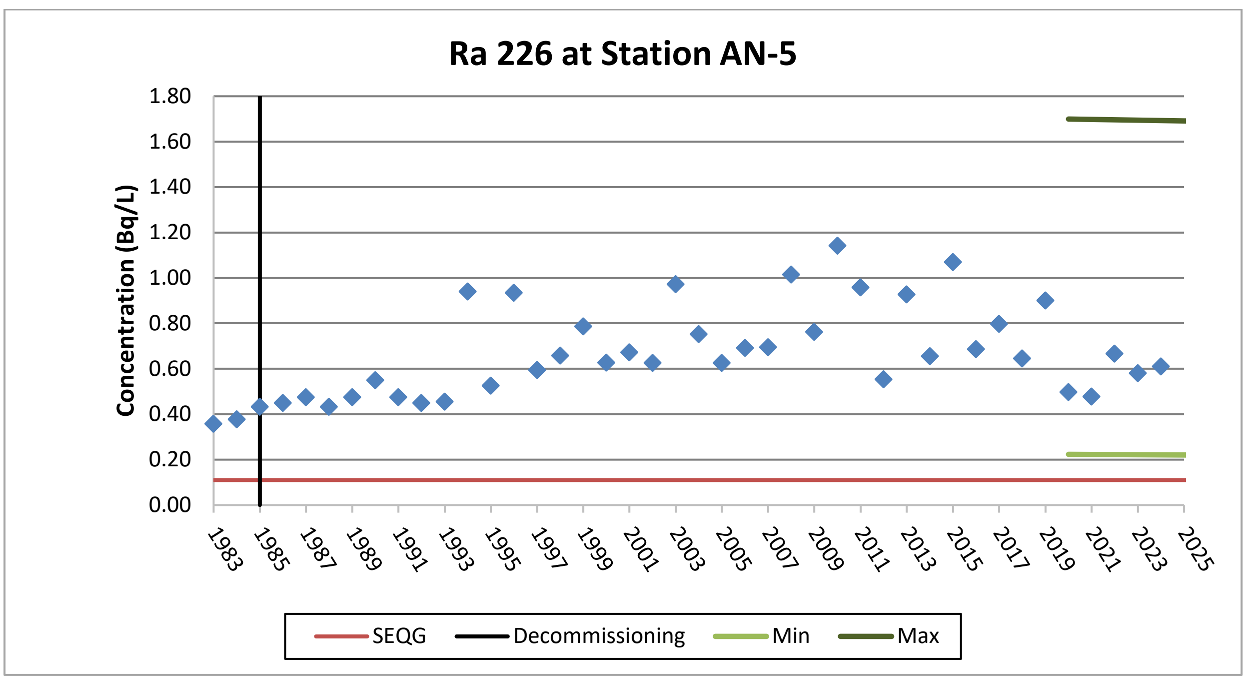
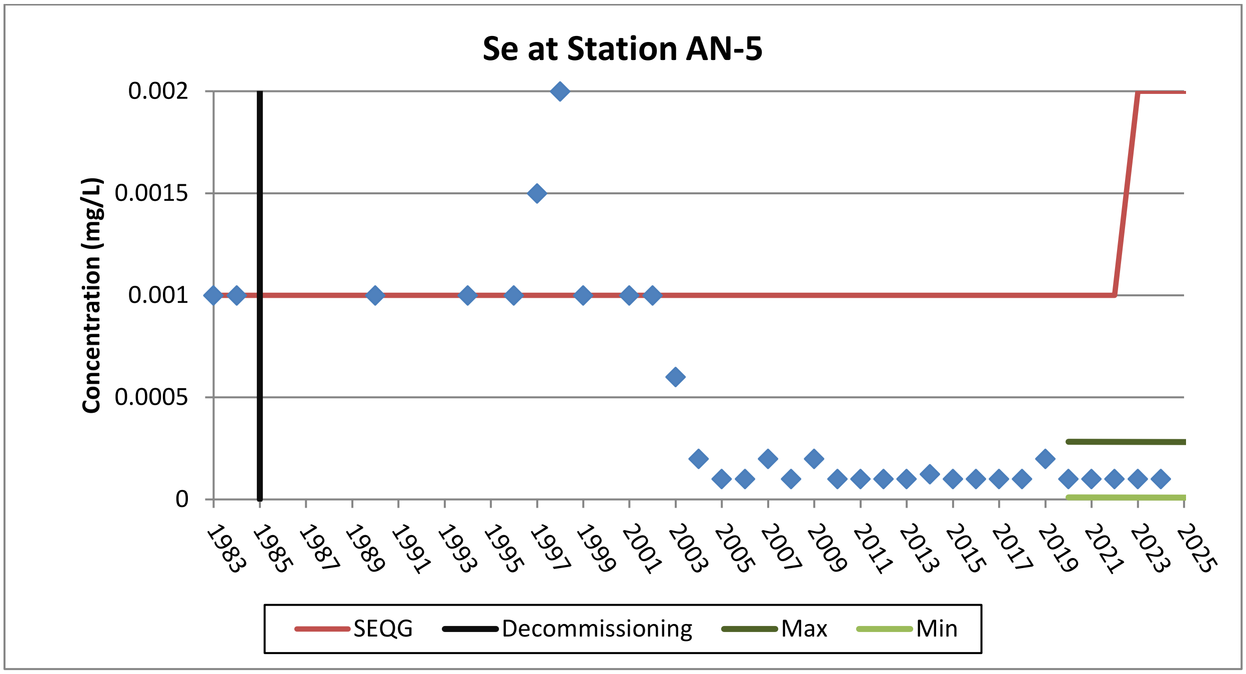


Figure 4.2.1-3 AN-5 Pistol Creek below Hab Site



Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.1-4 AN-5 Pistol Creek below Hab Site

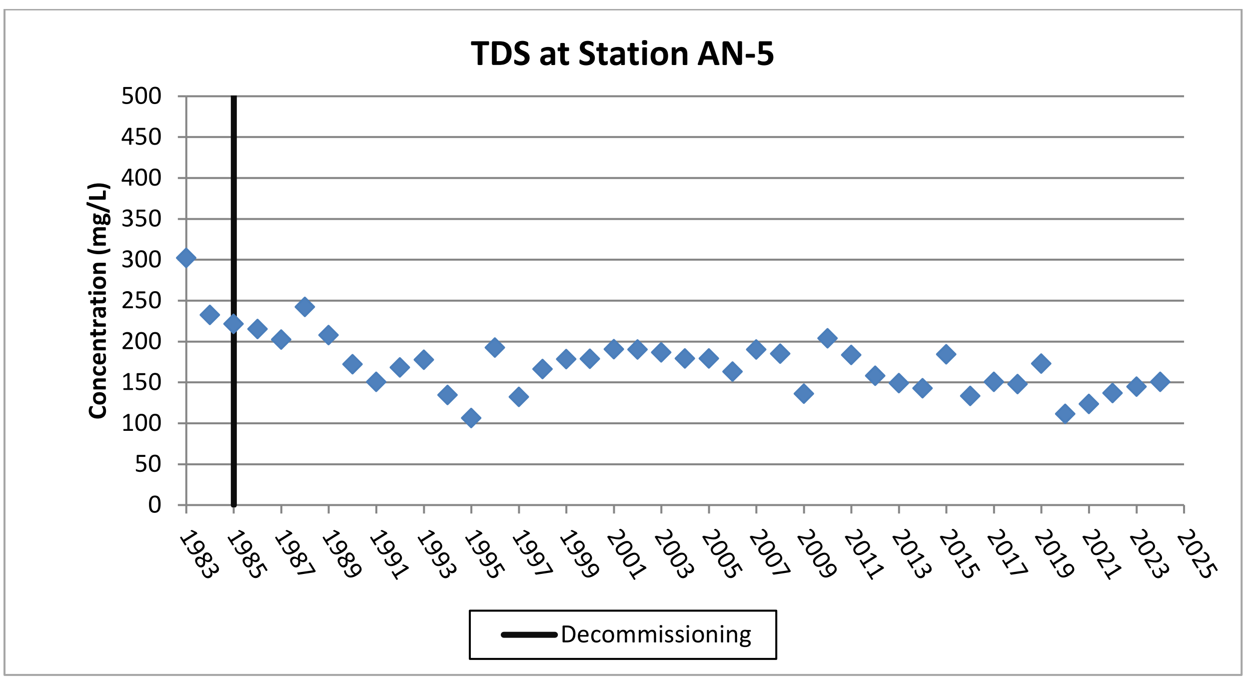
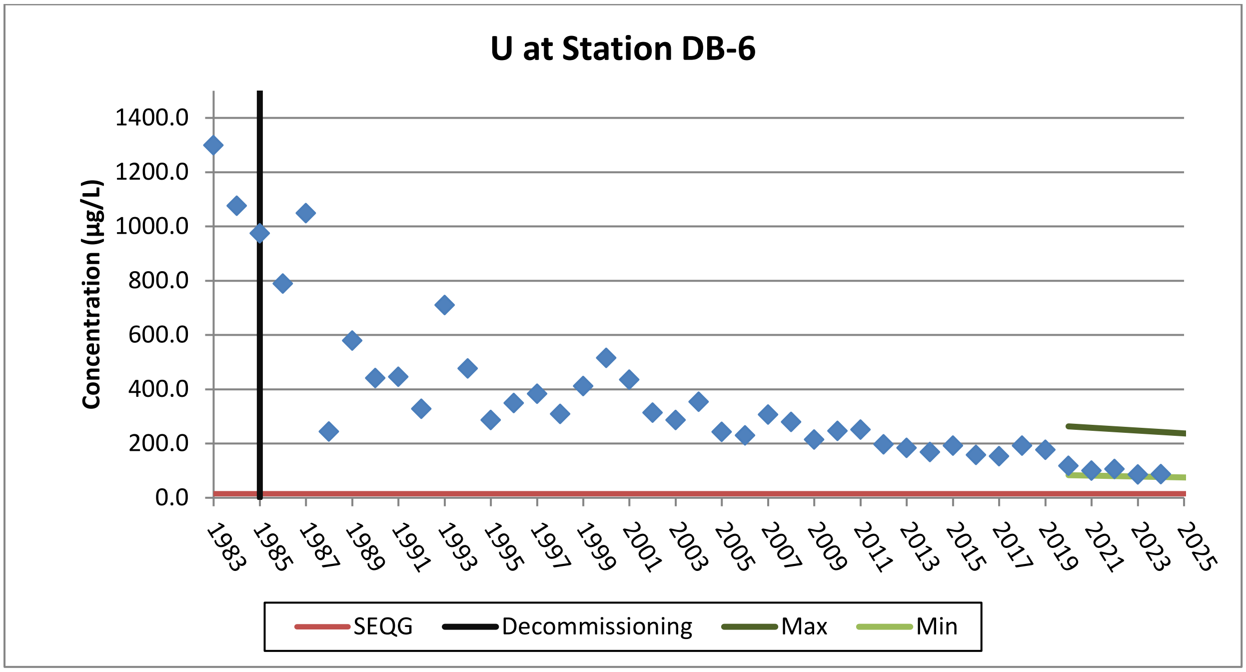
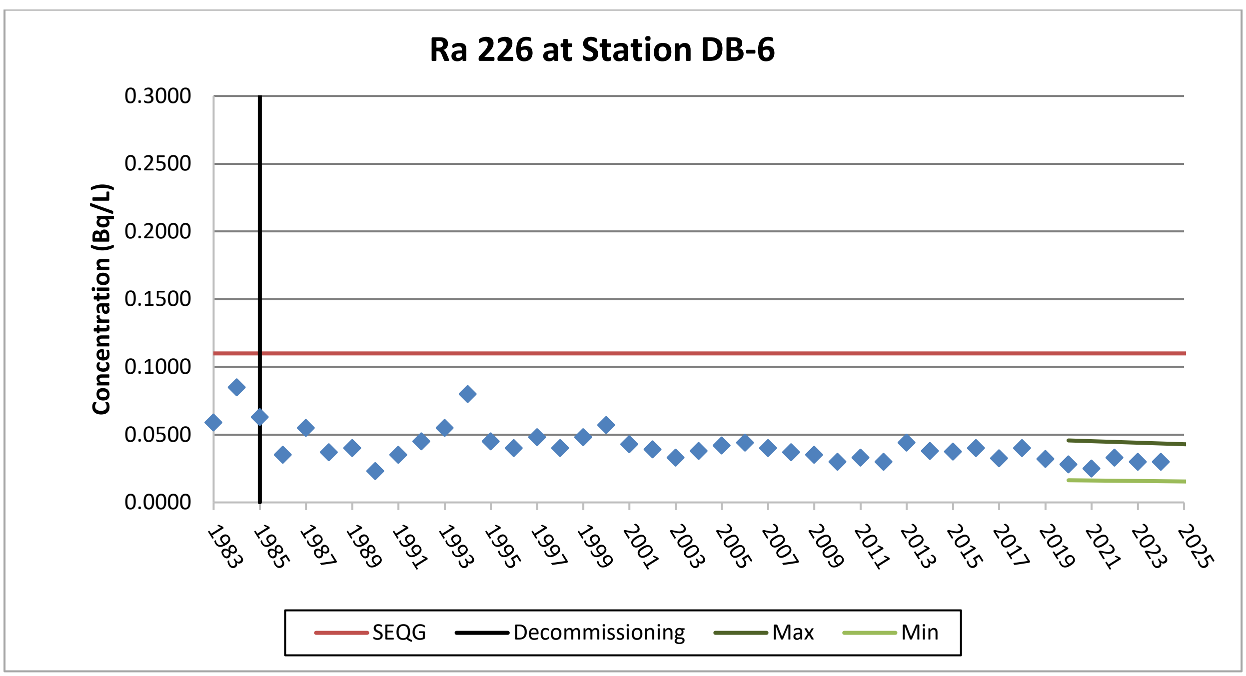


Figure 4.2.1-5 DB-6 Dubyna Creek



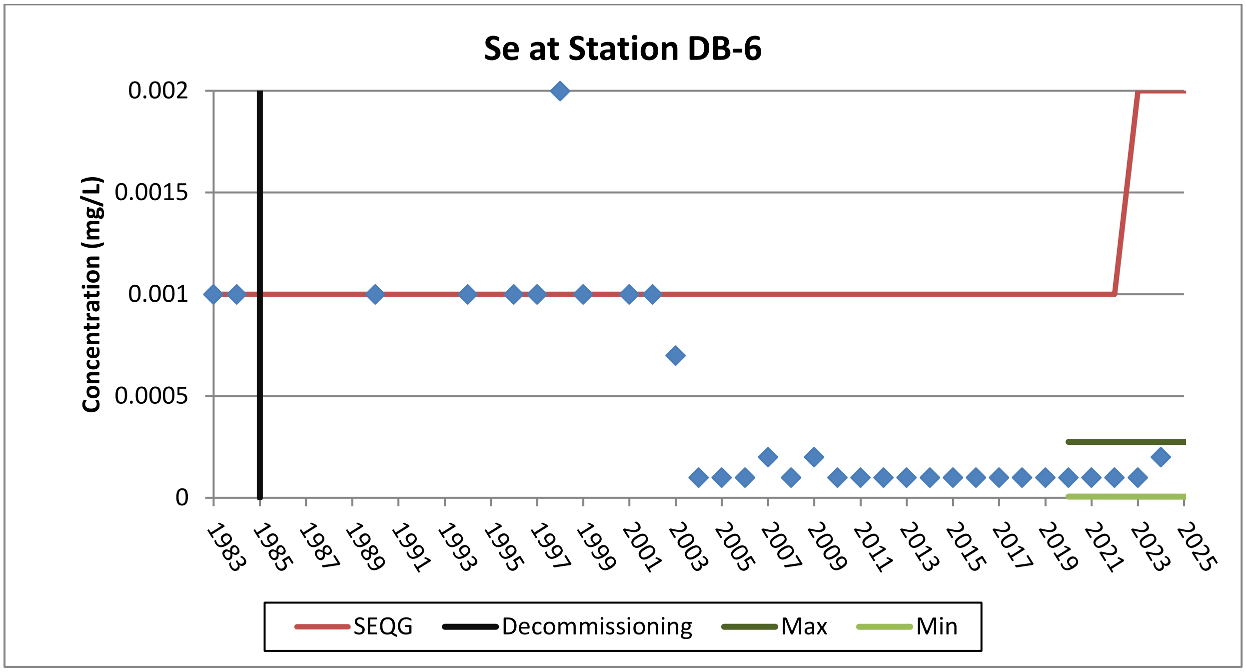
Note: The result of the March 25, 2025 sample was 91 µg/l.

Figure 4.2.1-6 DB-6 Dubyna Creek



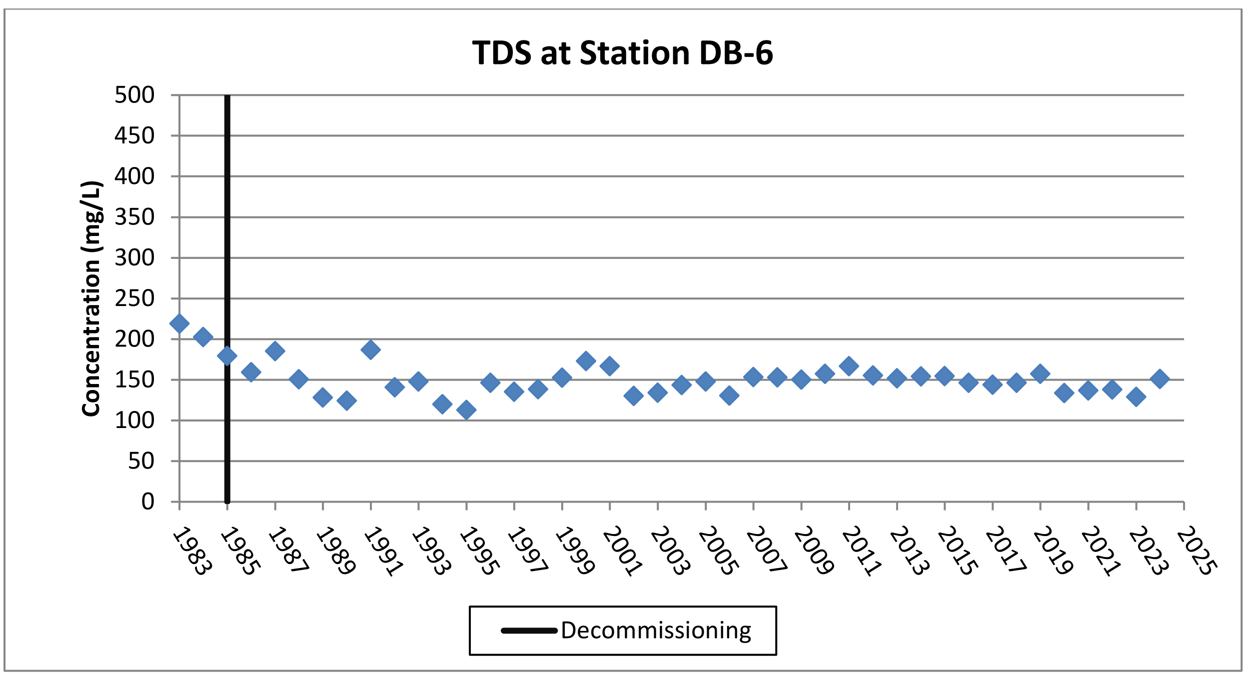
Note: The result of the March 25, 2025 sample was 0.04 Bq/l.

Figure 4.2.1-7 DB-6 Dubyna Creek



Note 1: Method detection limit changed from 0.001 mg/l to 0.0001 mg/l in 2003. SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.
Note 2: The result of the March 25, 2025 sample was 0.0003 mg/l.

Figure 4.2.1-8 DB-6 Dubyna Creek



Note: The result of the March 25, 2025 sample was 161mg/l.

Figure 4.2.1-9 AC-6A Verna Lake Outlet to Ace Lake

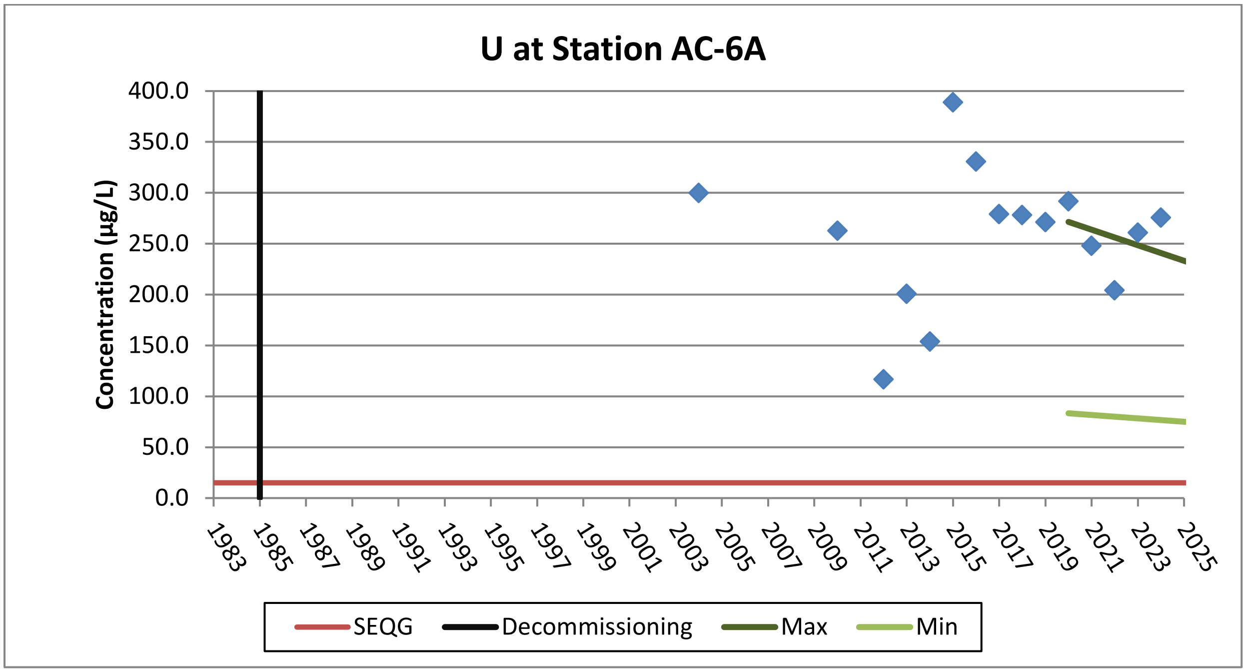


Figure 4.2.1-10 AC-6A Verna Lake Outlet to Ace Lake

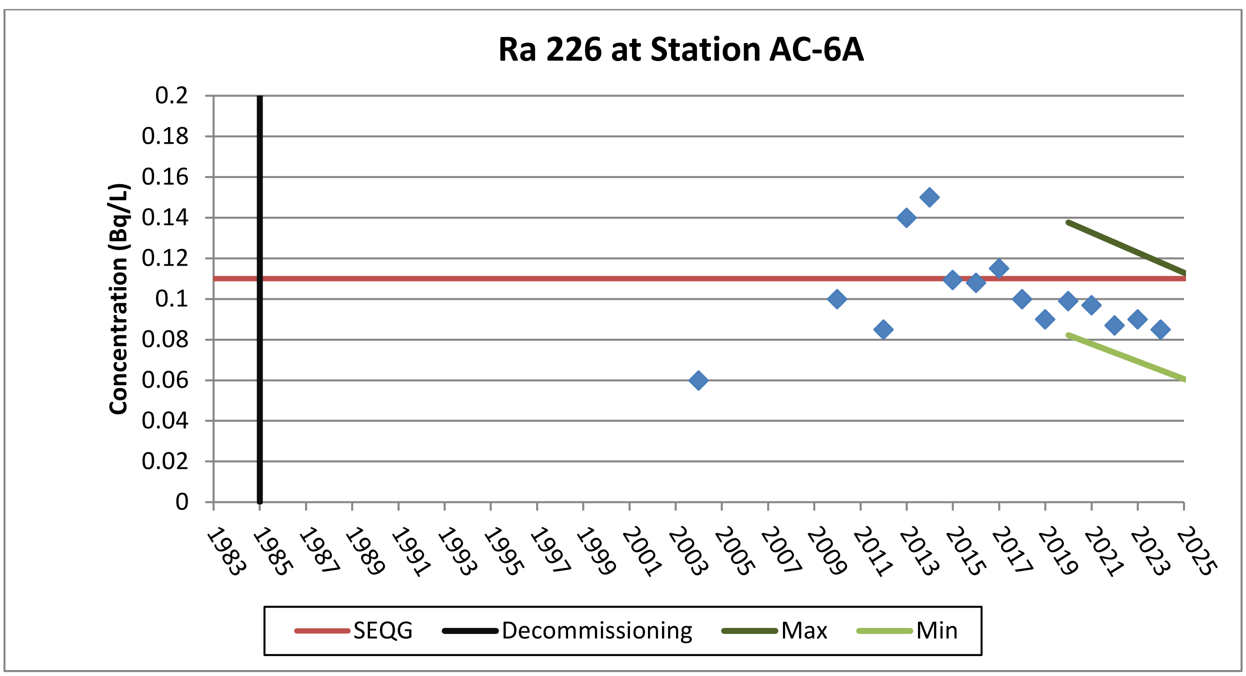
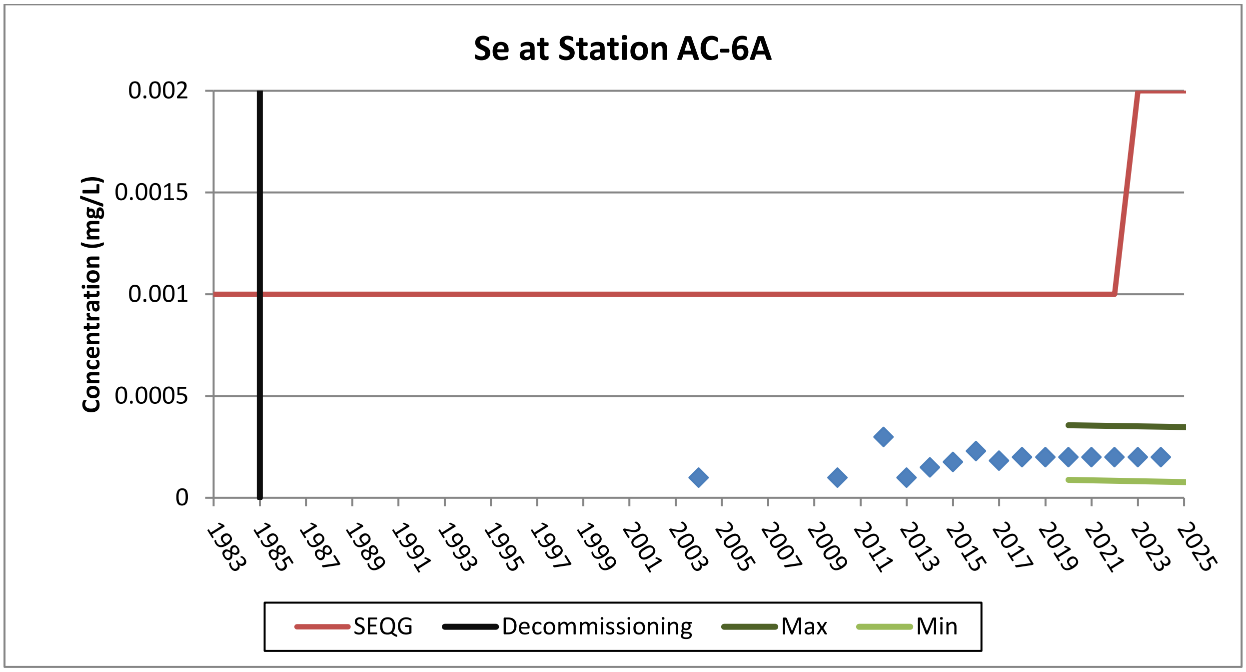


Figure 4.2.1-11 AC-6A Verna Lake Outlet to Ace Lake



Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.1-12 AC-6A Verna Lake Outlet to Ace Lake

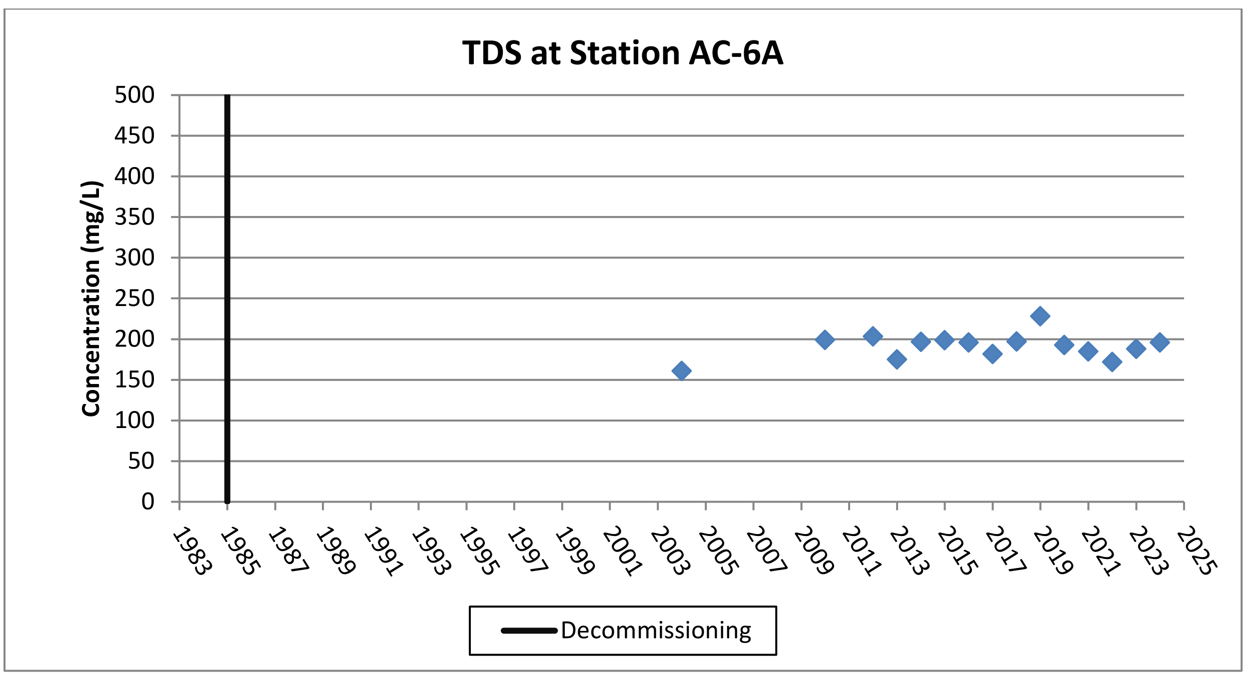


Figure 4.2.1-13 AC-8 Ace Lake Outlet to Ace Creek

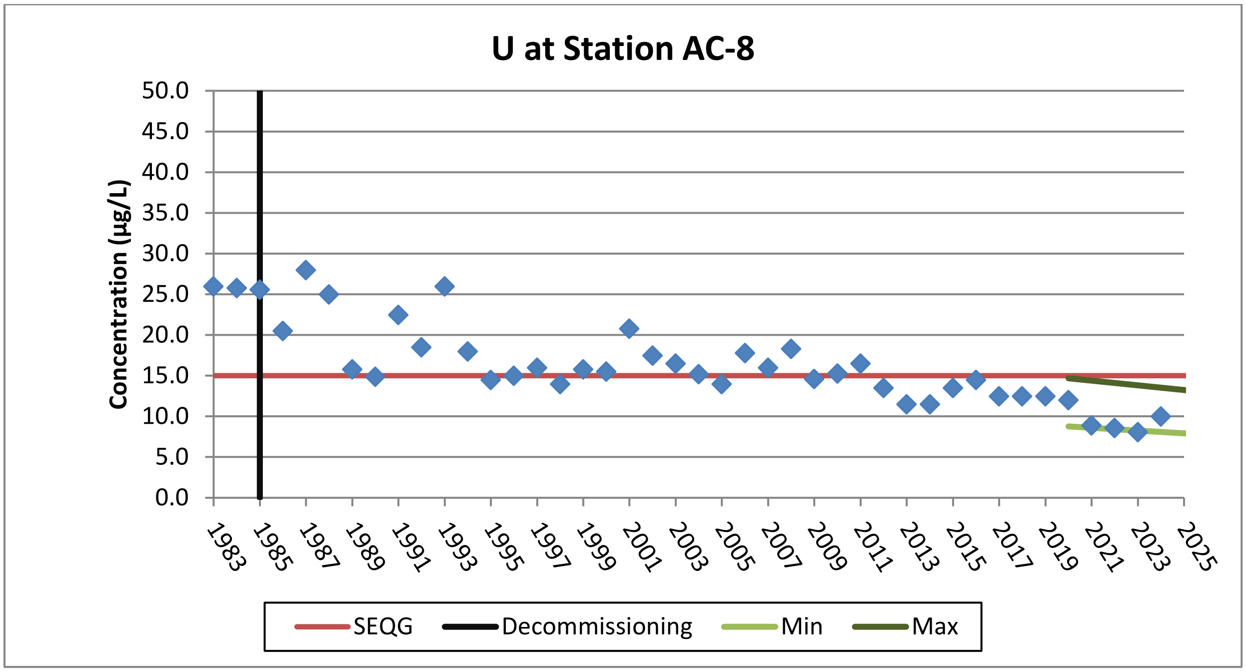


Figure 4.2.1-14 AC-8 Ace Lake Outlet to Ace Creek

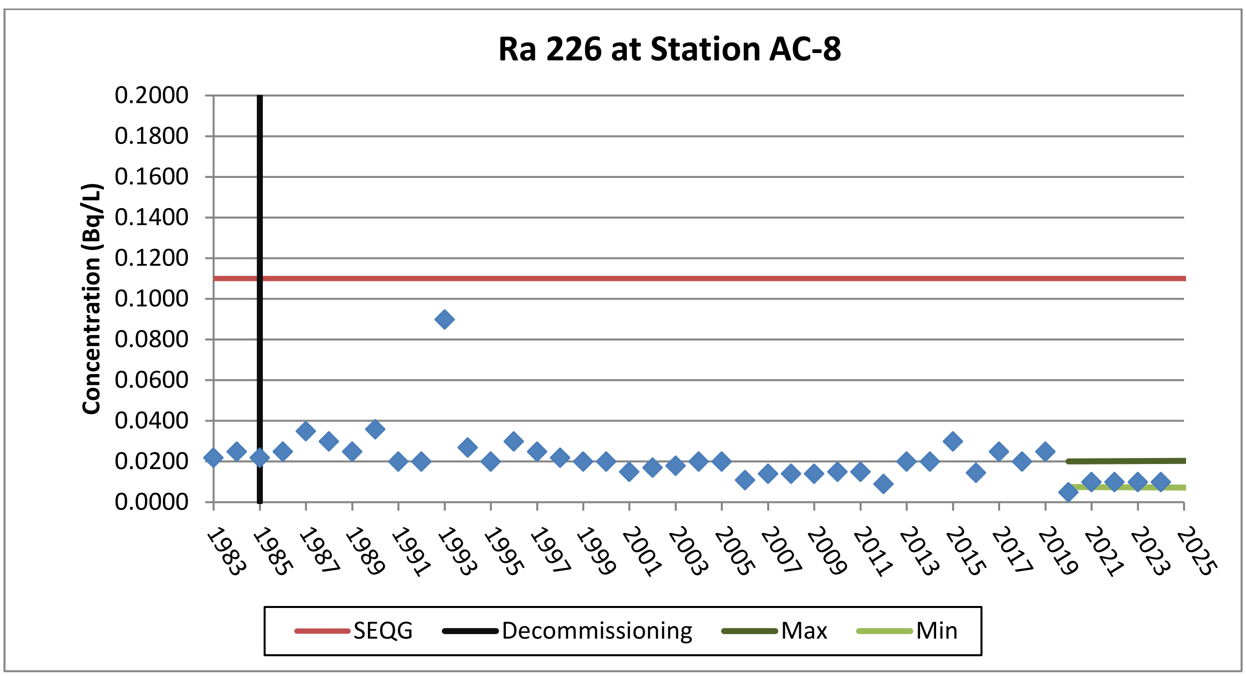
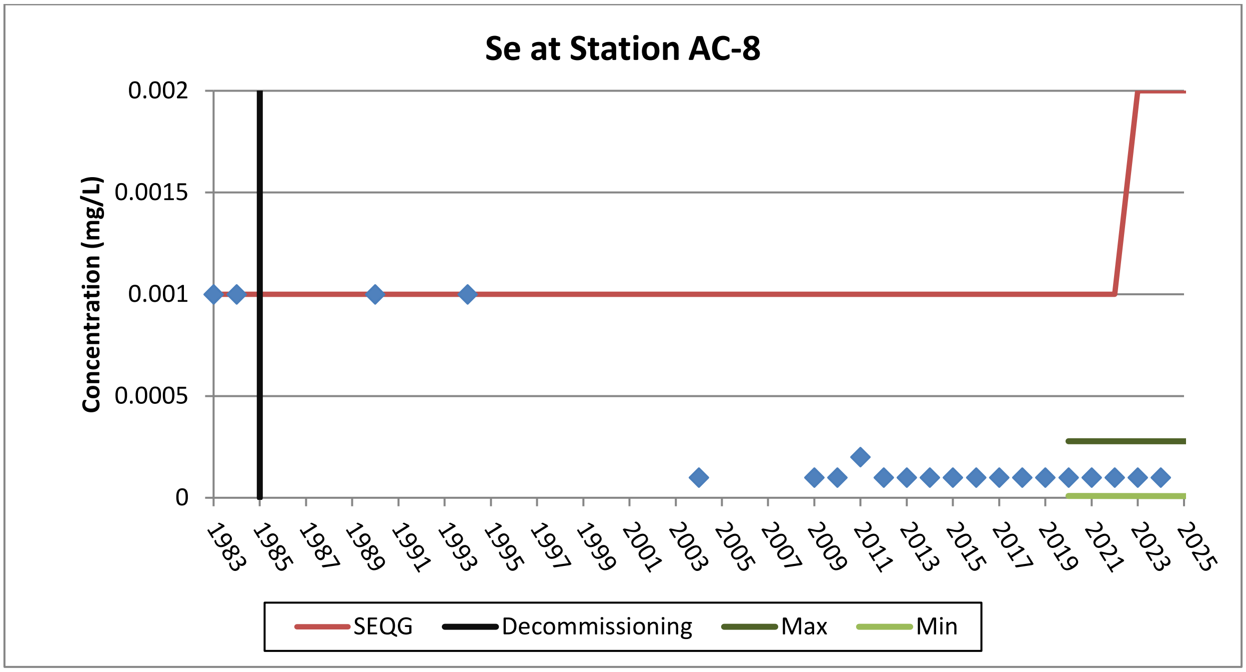


Figure 4.2.1-15 AC-8 Ace Lake Outlet to Ace Creek



Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.1-16 AC-8 Ace Lake Outlet to Ace Creek

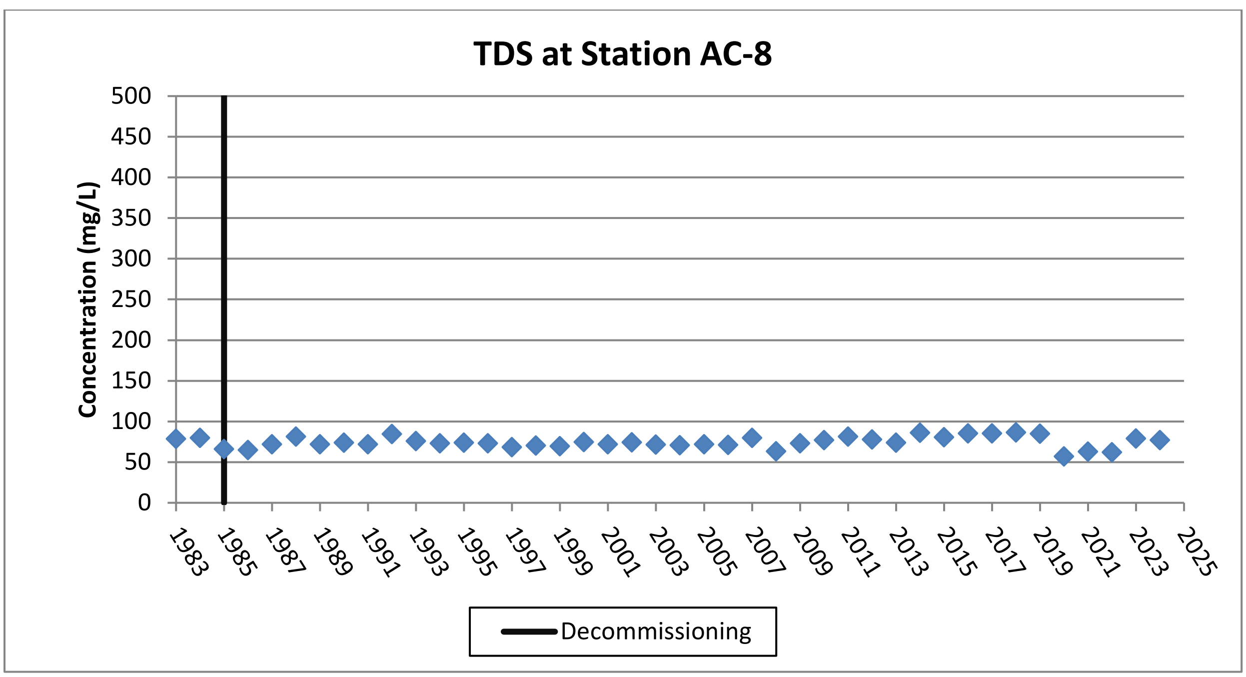
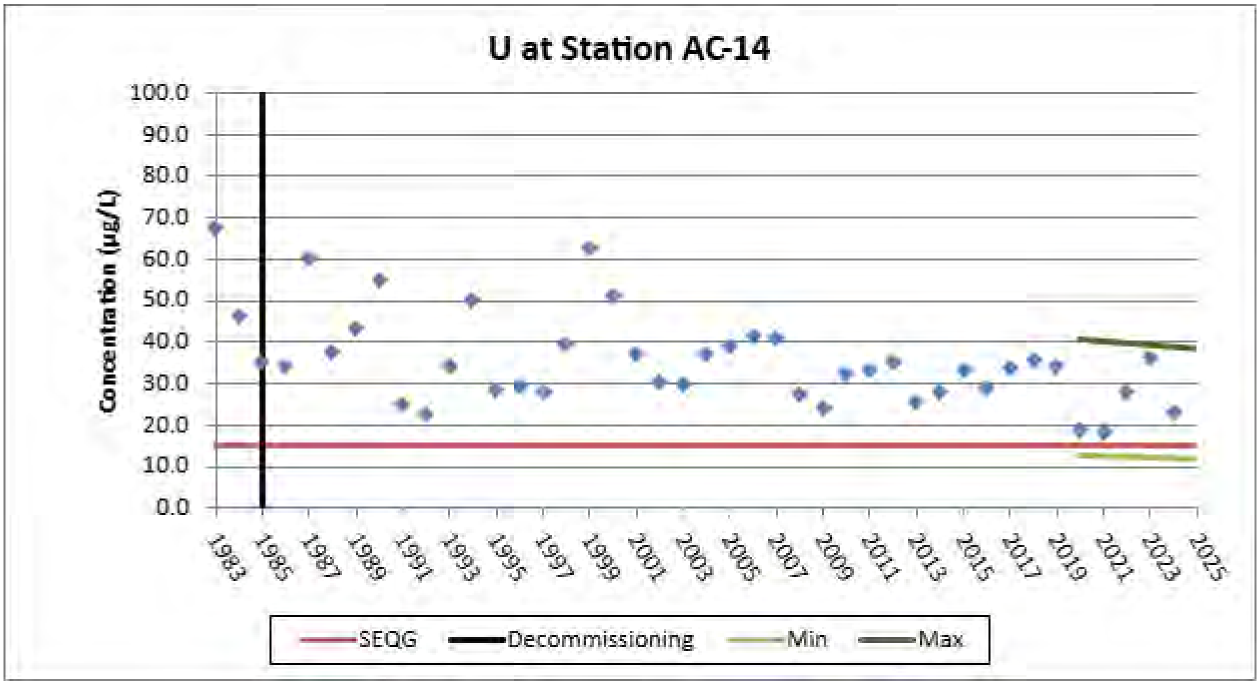
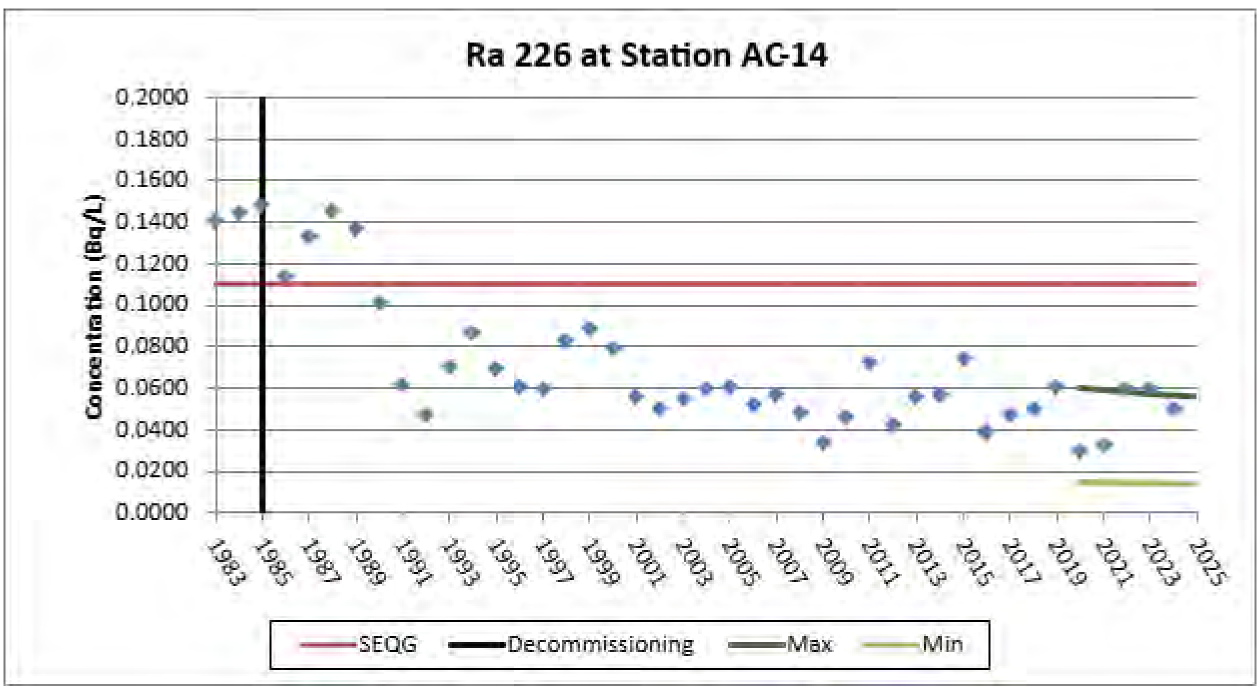


Figure 4.2.1-17 AC-14 - Ace Creek



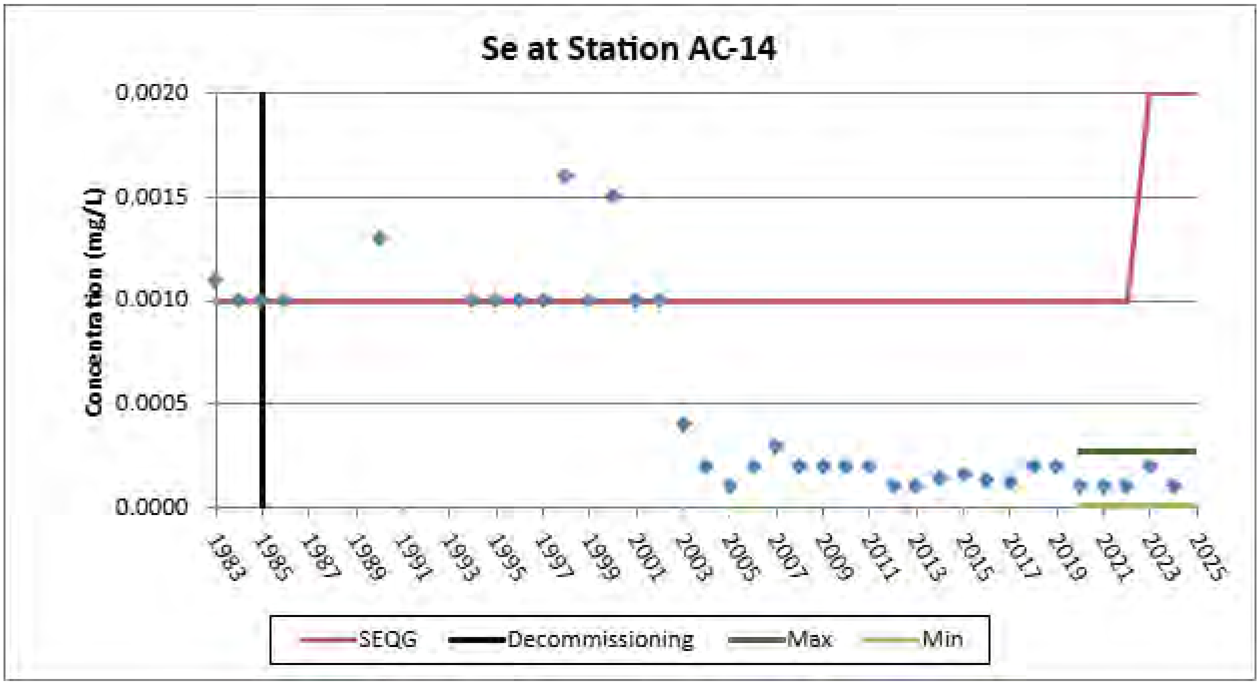
Note: The result of the March 25, 2025 sample was 15 µg/l.

Figure 4.2.1-18 AC-14 - Ace Creek



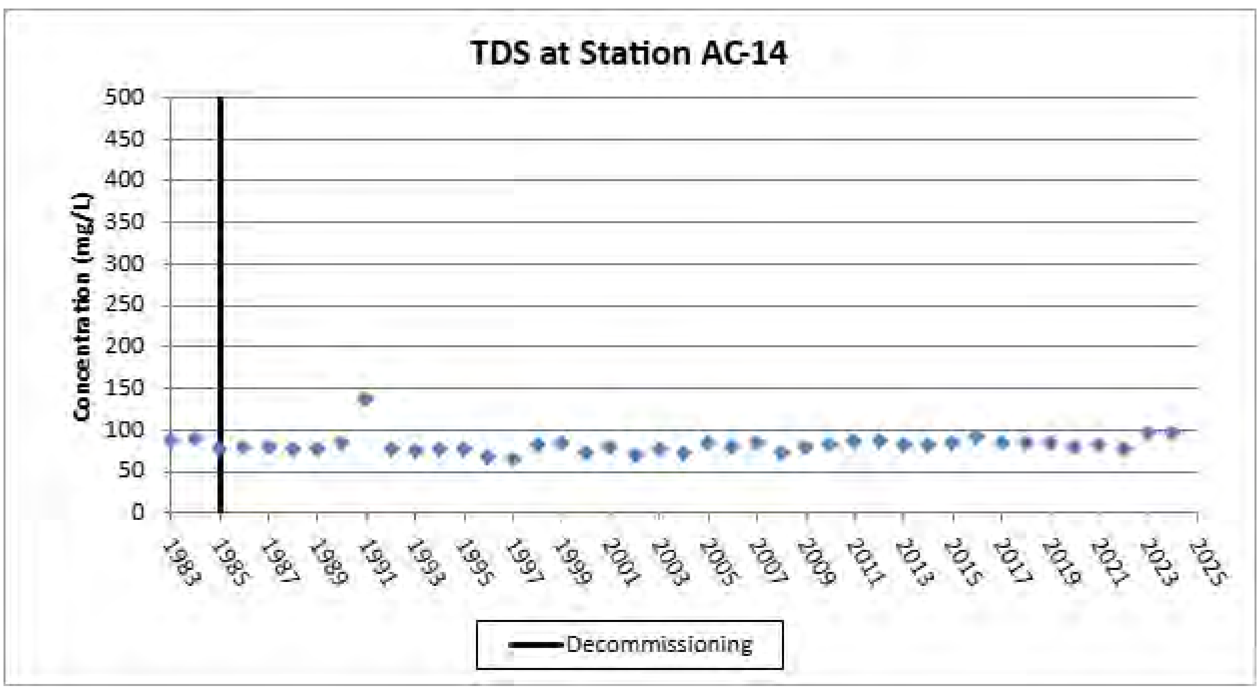
Note: The result of the March 25, 2025 sample was 0.02 Bq/l.

Figure 4.2.1-19 AC-14 - Ace Creek



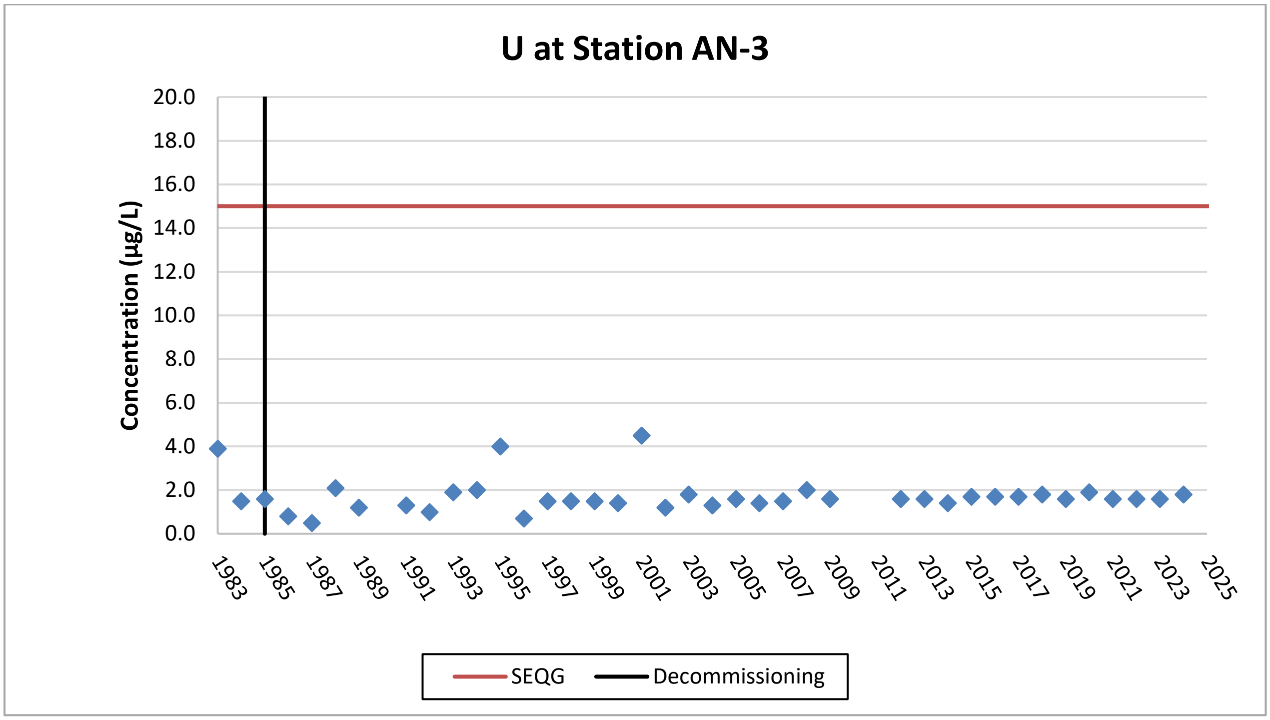
Note 1: Method detection limit changed from 0.001 mg/l to 0.0001 mg/l in 2003. SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.
Note 2: The result of the March 25, 2025 sample was 0.0001 mg/l.

Figure 4.2.1-20 AC-14 - Ace Creek



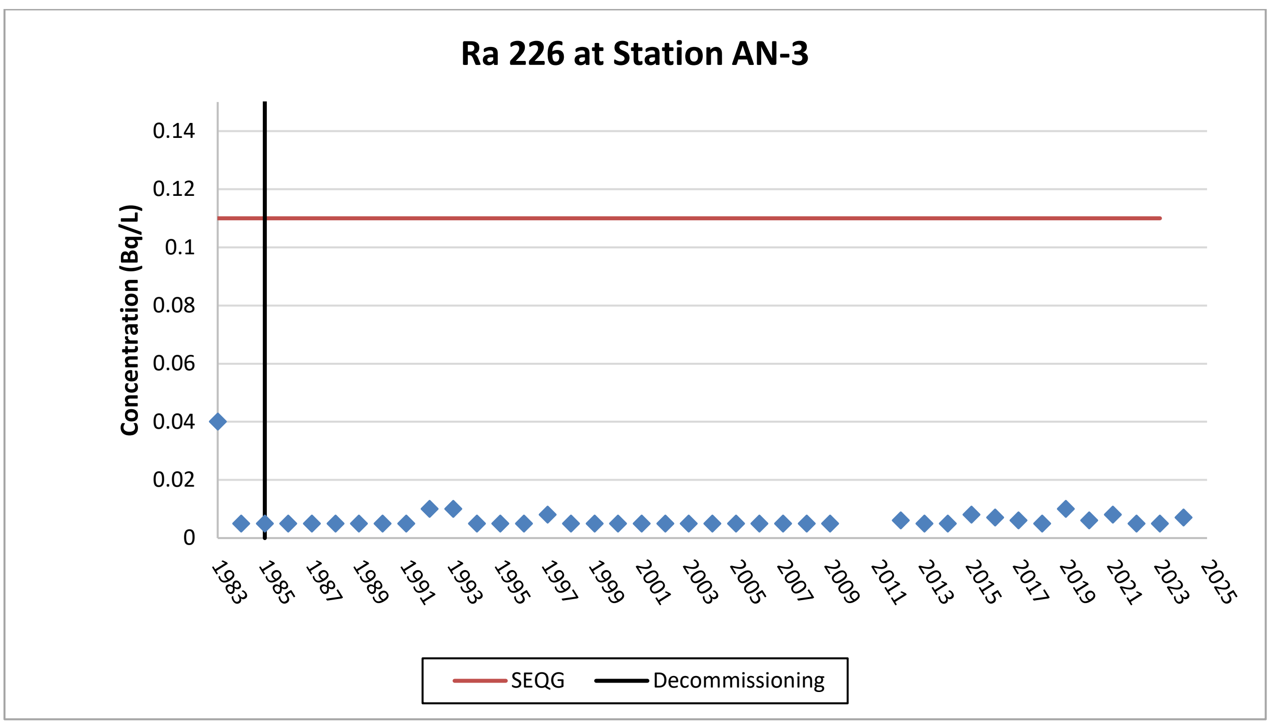
Note: The result of the March 25, 2025 sample was 90 mg/l.

Figure 4.2.2-1 AN-3 Fulton Lake (Upstream of TL Stations)



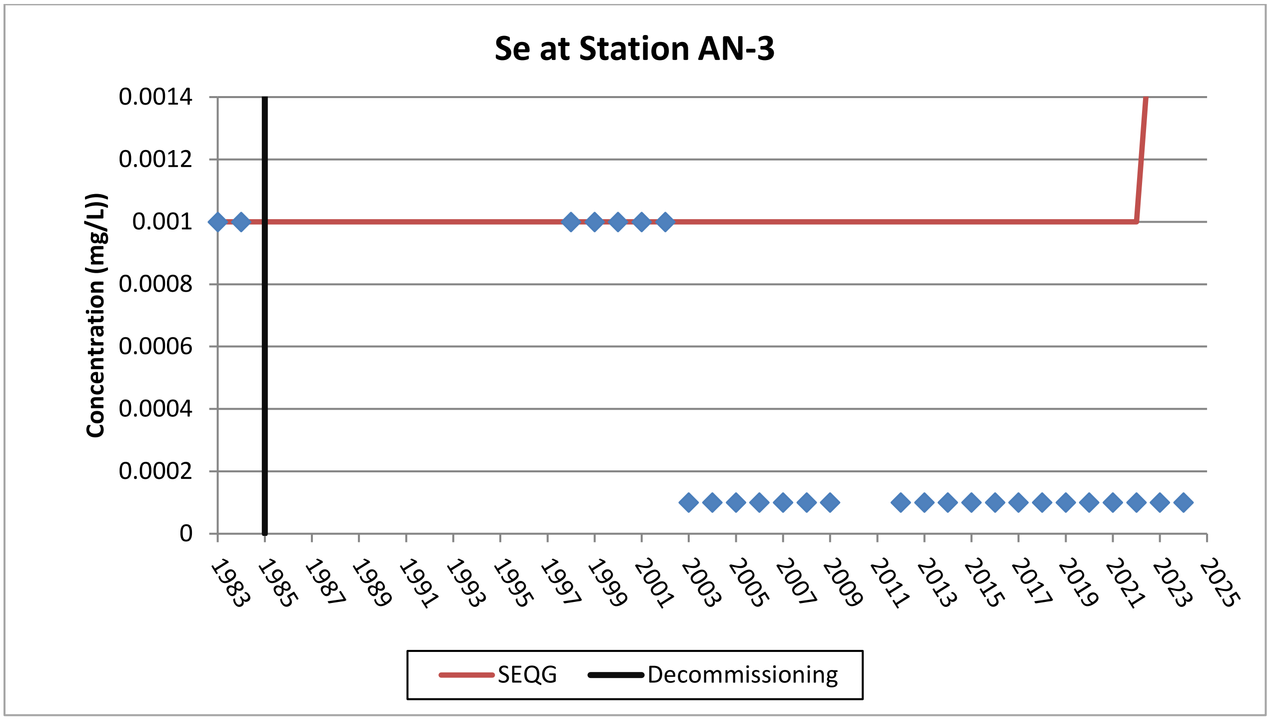
**The 2010 and 2011 scheduled sampling was not completed due to a lack of water flow.*

Figure 4.2.2-2 AN-3 Fulton Lake (Upstream of TL Stations)



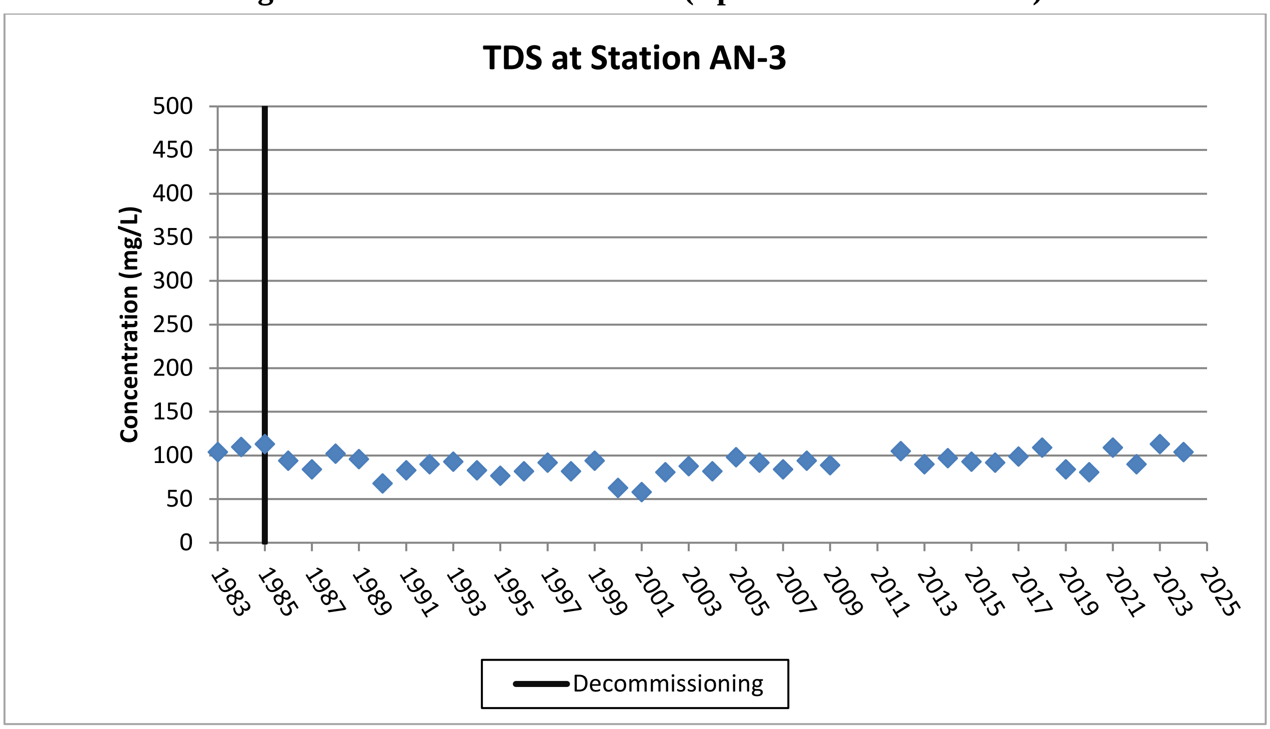
**The 2010 and 2011 scheduled sampling was not completed due to a lack of water flow.*

Figure 4.2.2-3 AN-3 Fulton Lake (Upstream of TL Stations)



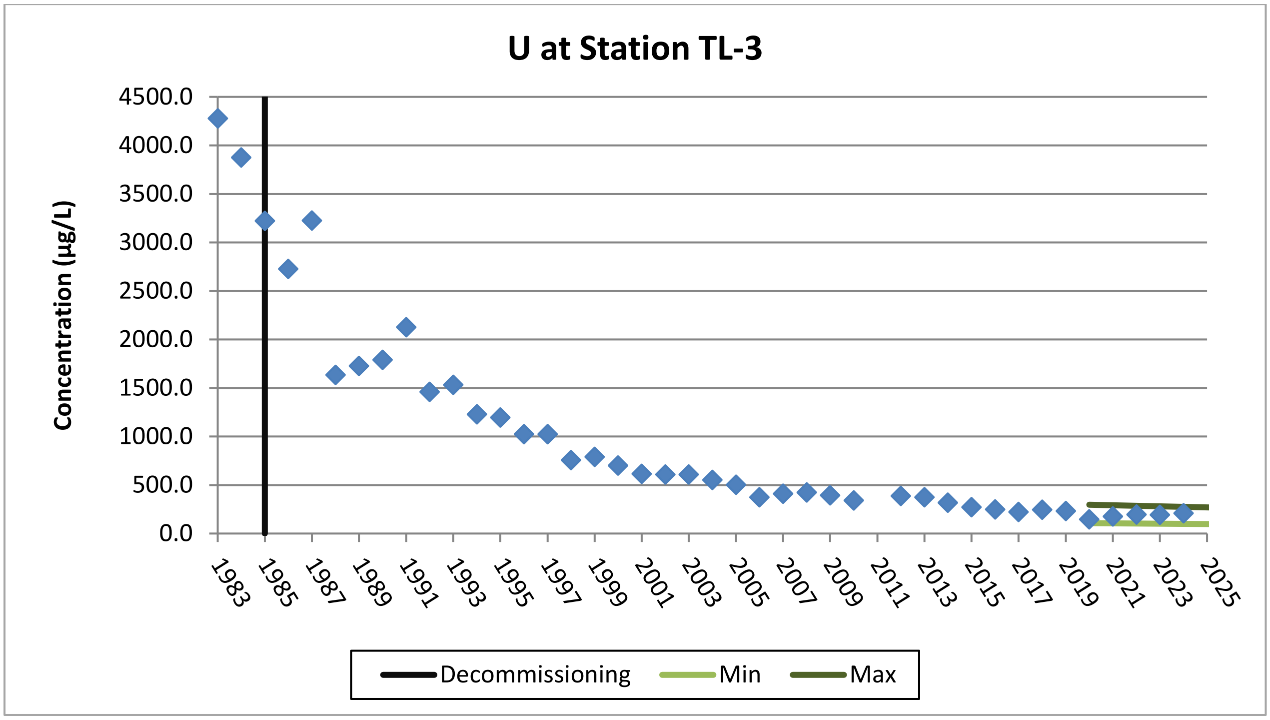
**The 2010 and 2011 scheduled sampling was not completed due to a lack of water flow.*
Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.2-4 AN-3 Fulton Lake (Upstream of TL Stations)



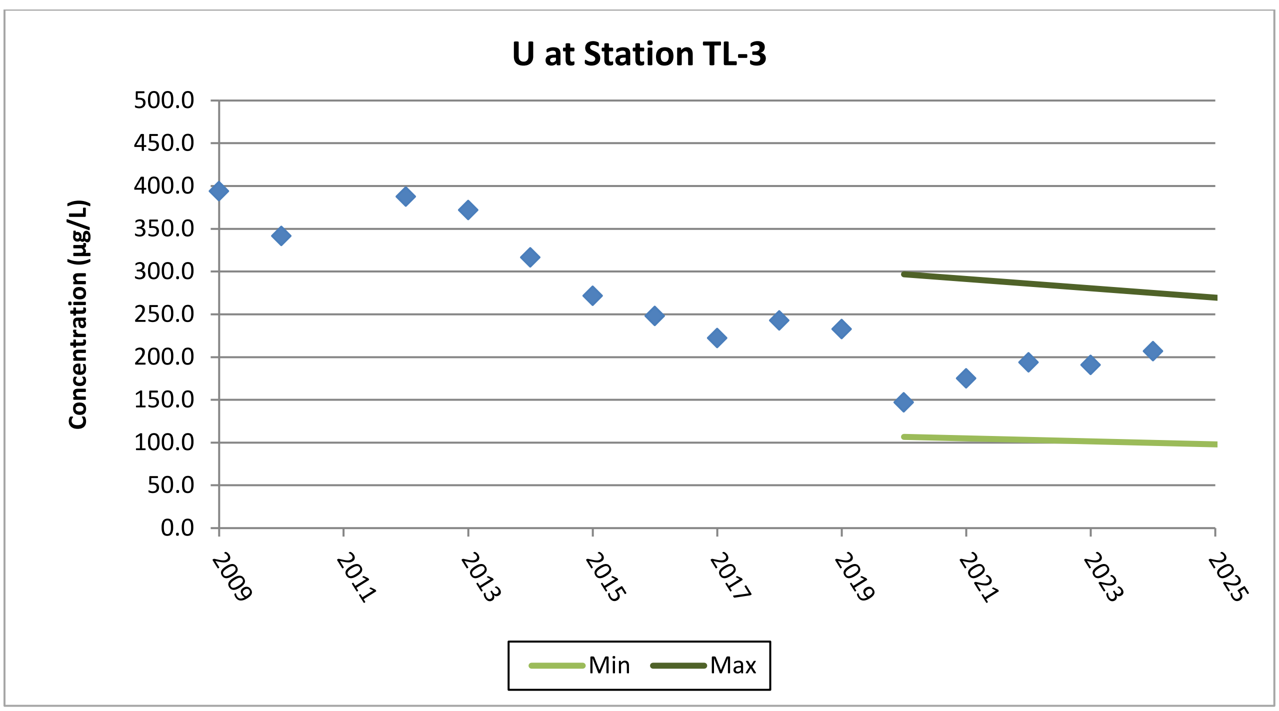
**The 2010 and 2011 scheduled sampling was not completed due to a lack of water flow.*

Figure 4.2.2-5 TL-3 Fookes Reservoir Outlet



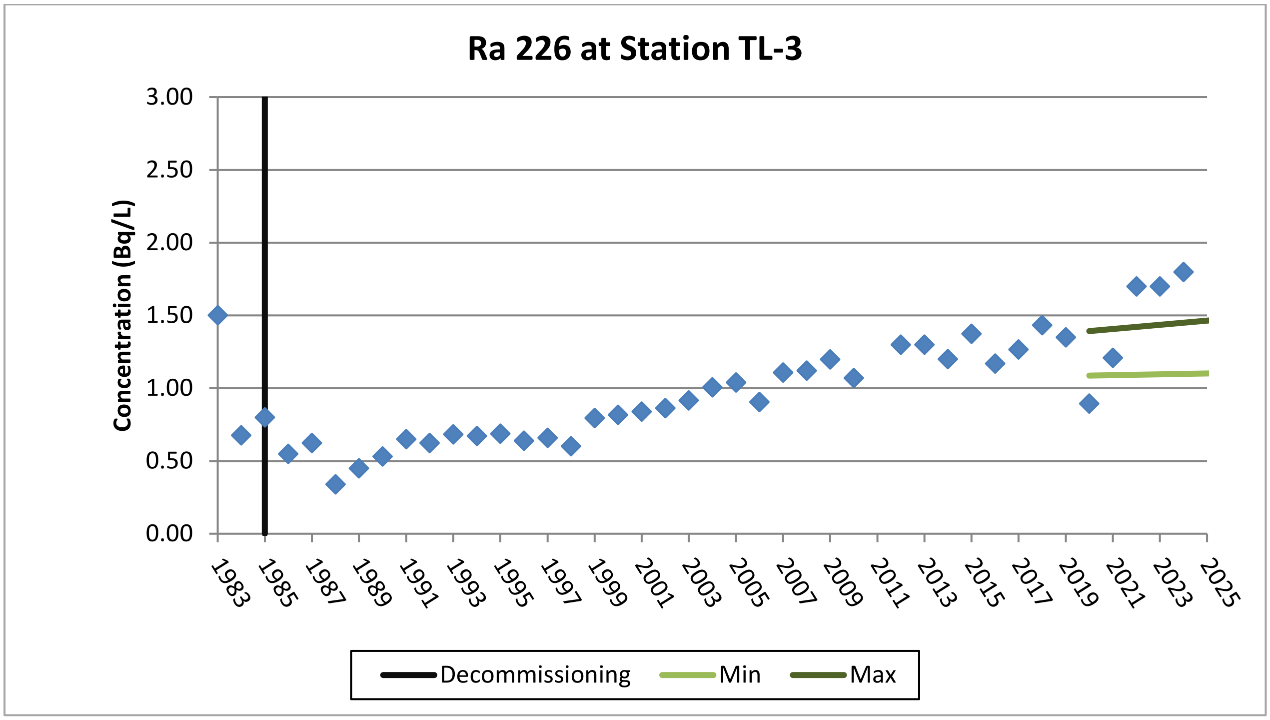
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-6 TL-3 Fookes Reservoir Outlet – Detailed Trend



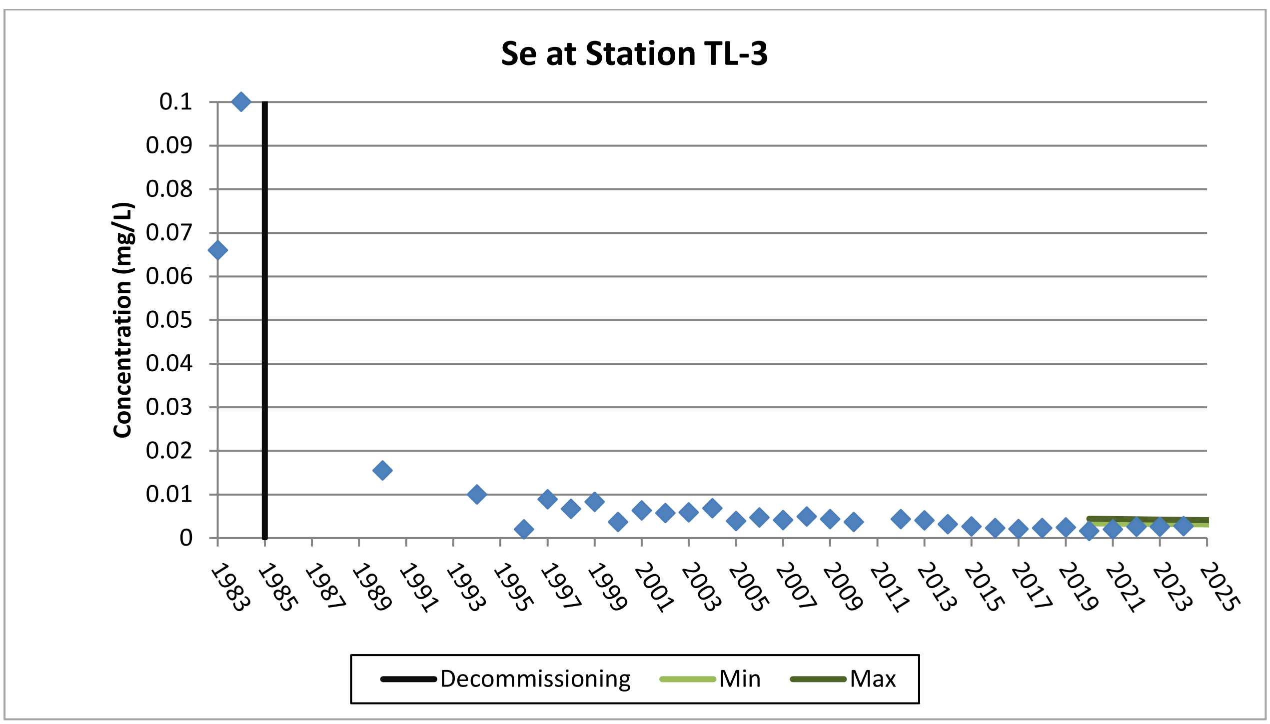
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-7 TL-3 Fookes Reservoir Outlet



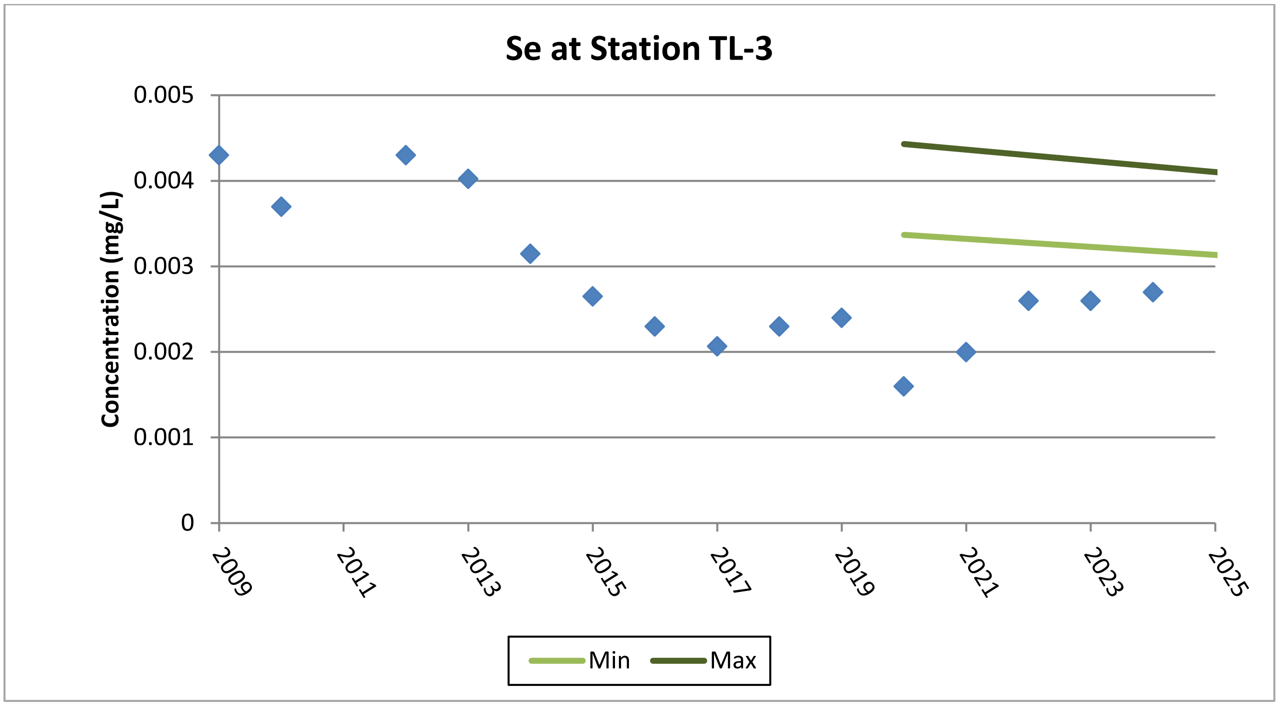
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-8 TL-3 Fookes Reservoir Outlet



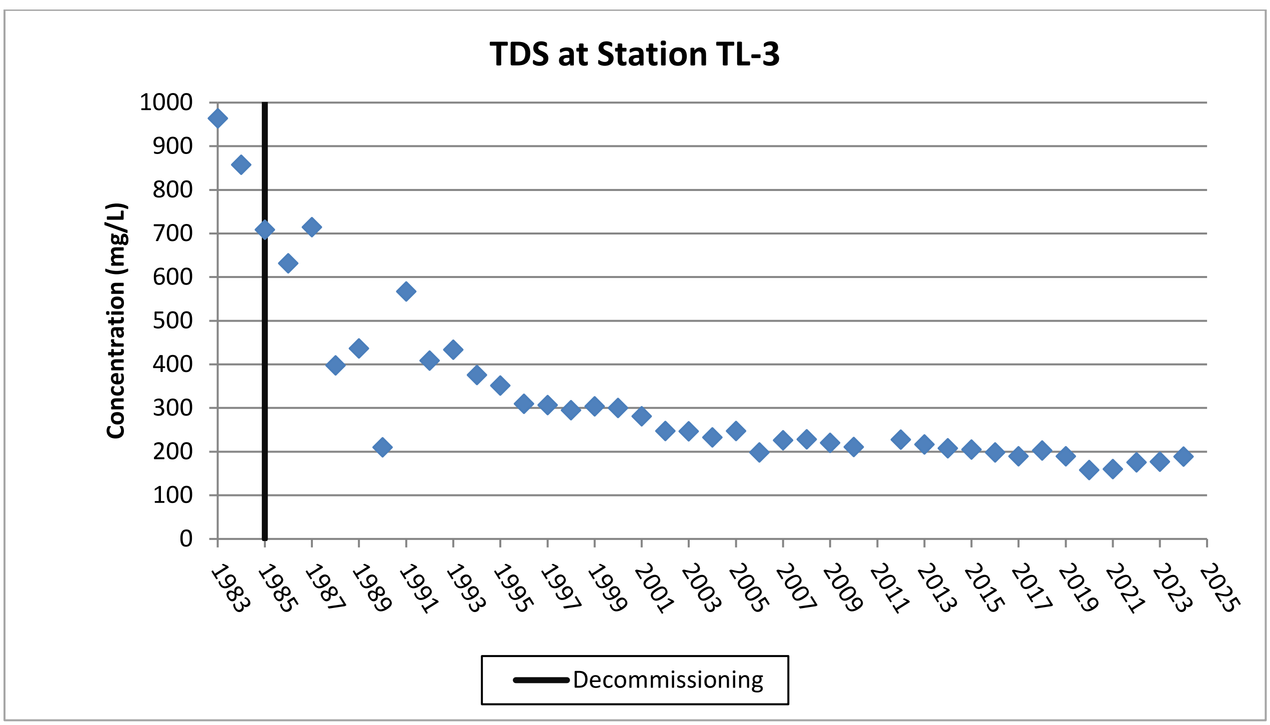
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-9 TL-3 Fookes Reservoir Outlet – Detailed Trend



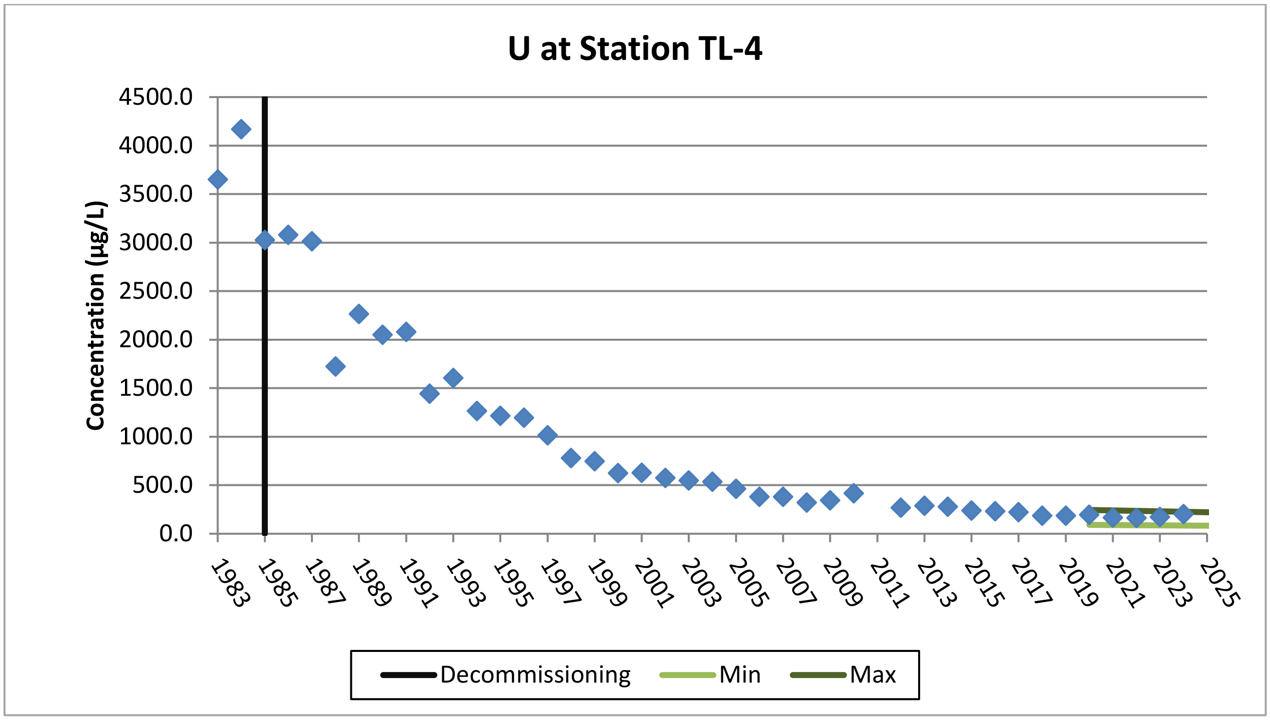
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-10 TL-3 Fookes Reservoir Outlet



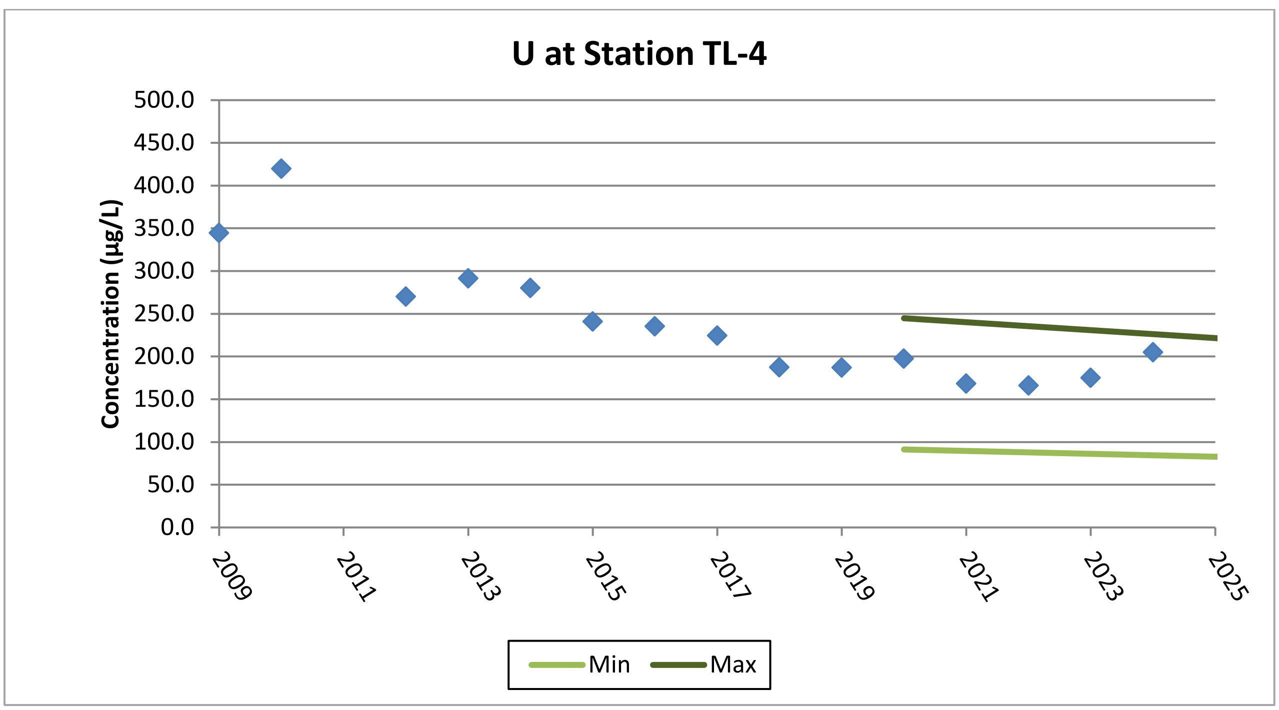
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-11 TL-4 Marie Reservoir Outlet



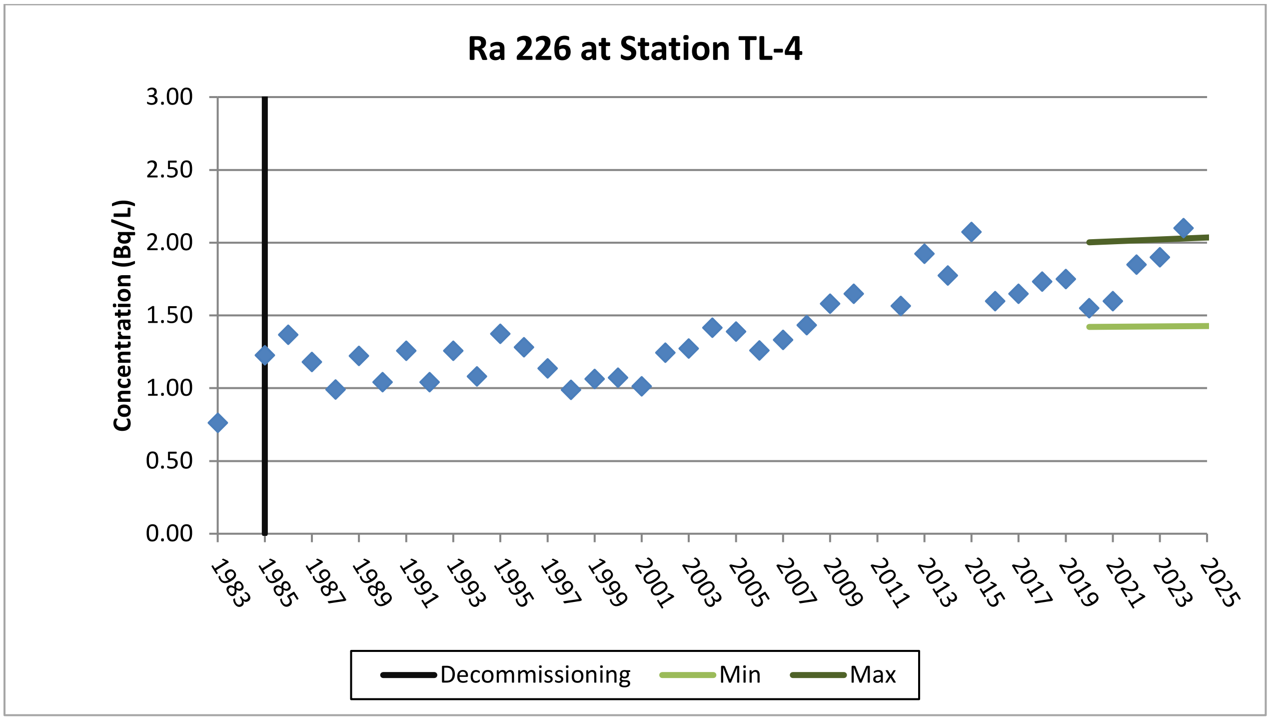
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-12 TL-4 Marie Reservoir Outlet – Detailed Trend



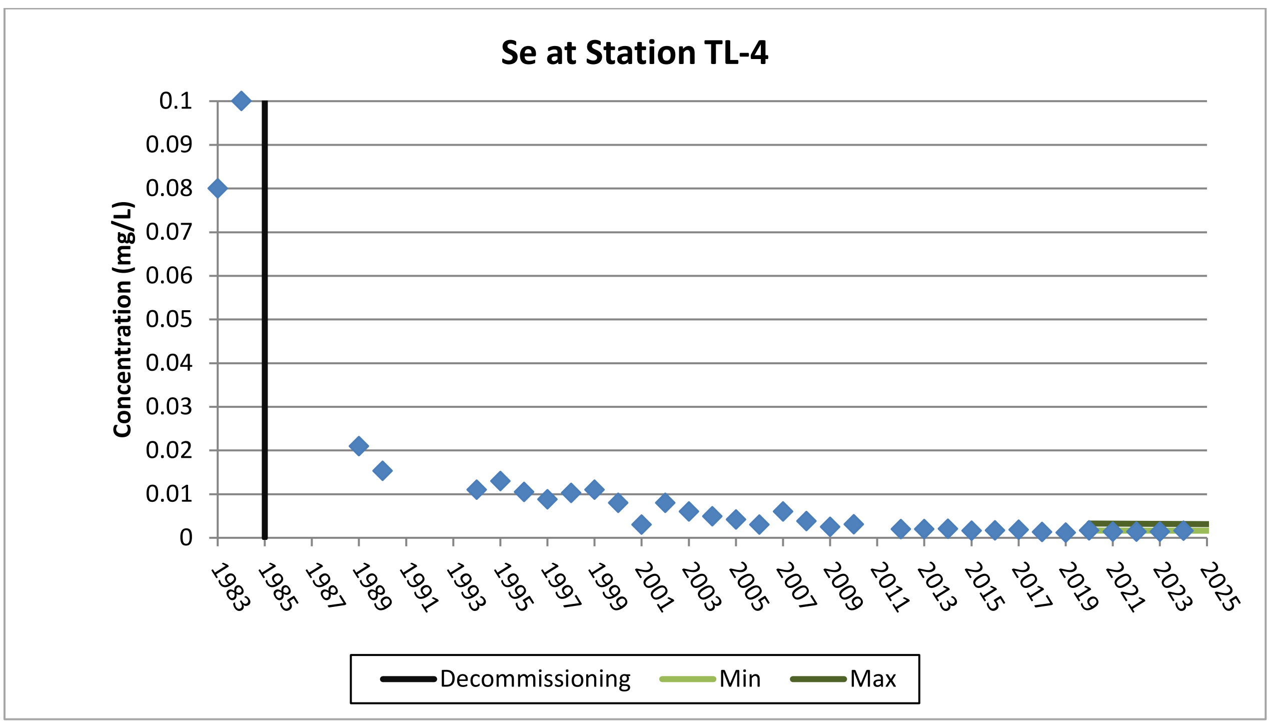
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-13 TL-4 Marie Reservoir Outlet



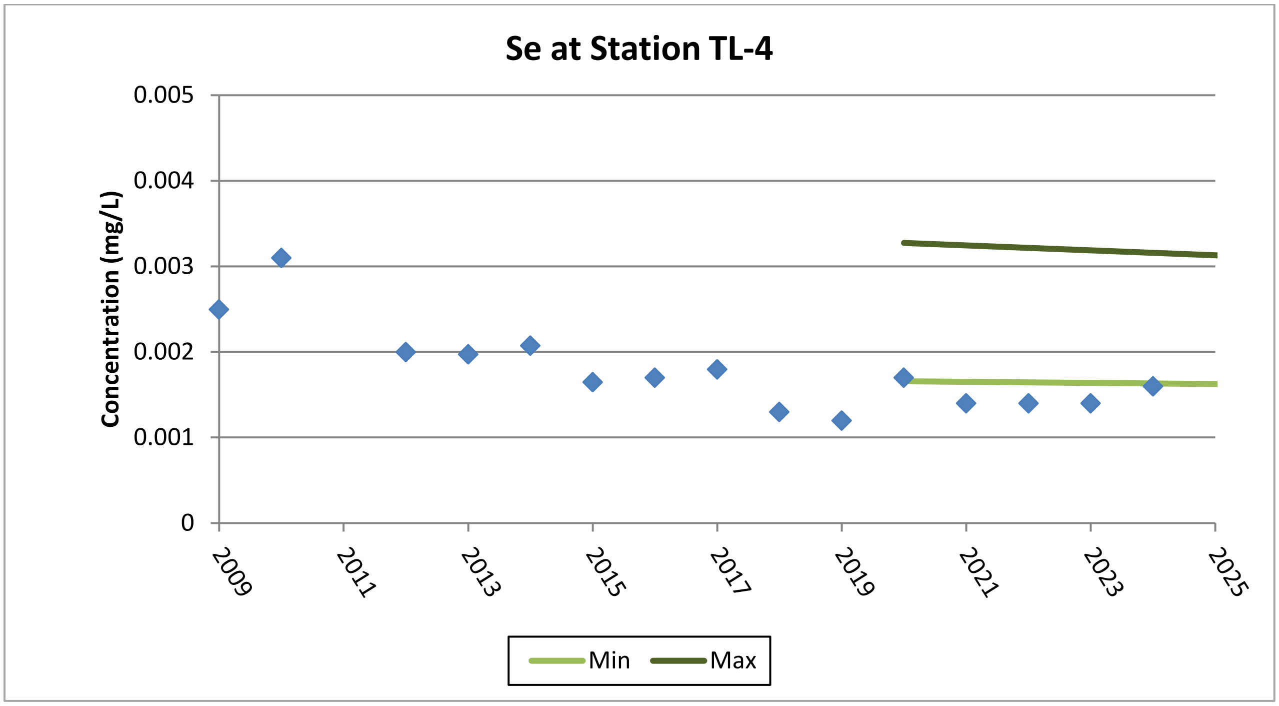
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-14 TL-4 Marie Reservoir Outlet



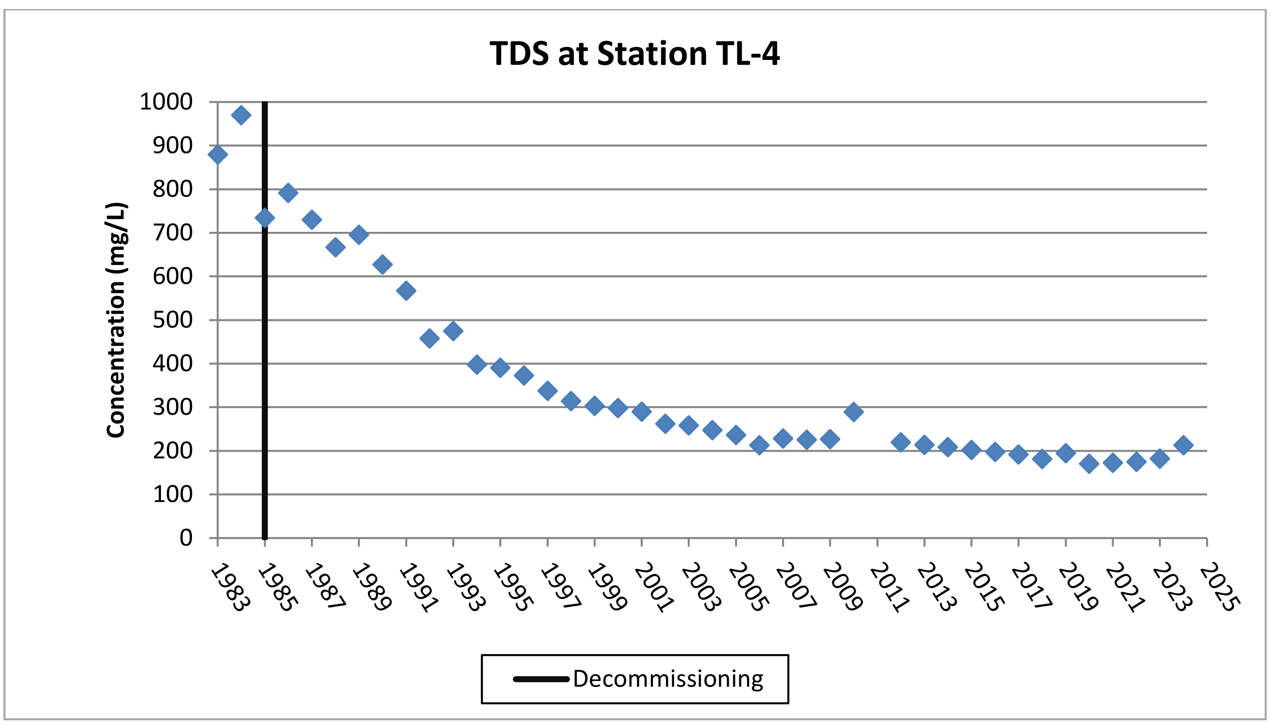
**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-15 TL-4 Marie Reservoir Outlet – Detailed Trend



**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-16 TL-4 Marie Reservoir Outlet



**No data available for 2011 due to a lack of water flow.*

Figure 4.2.2-17 TL-6 Minewater Reservoir Outlet

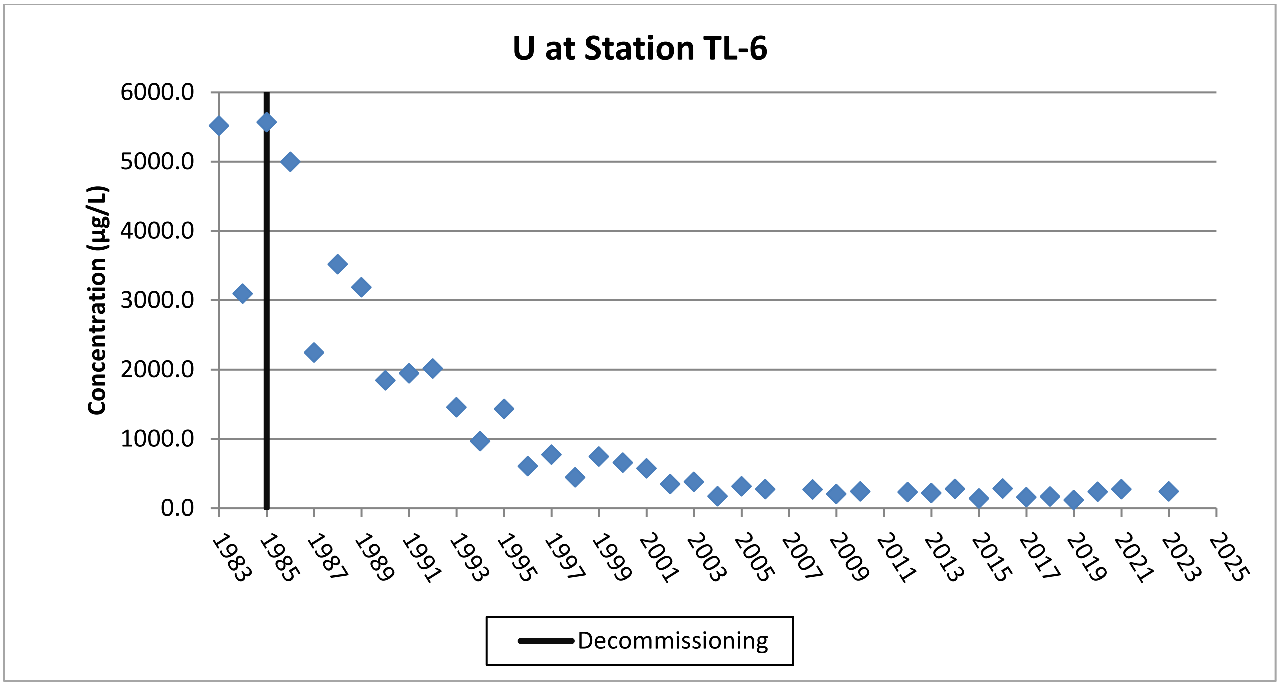
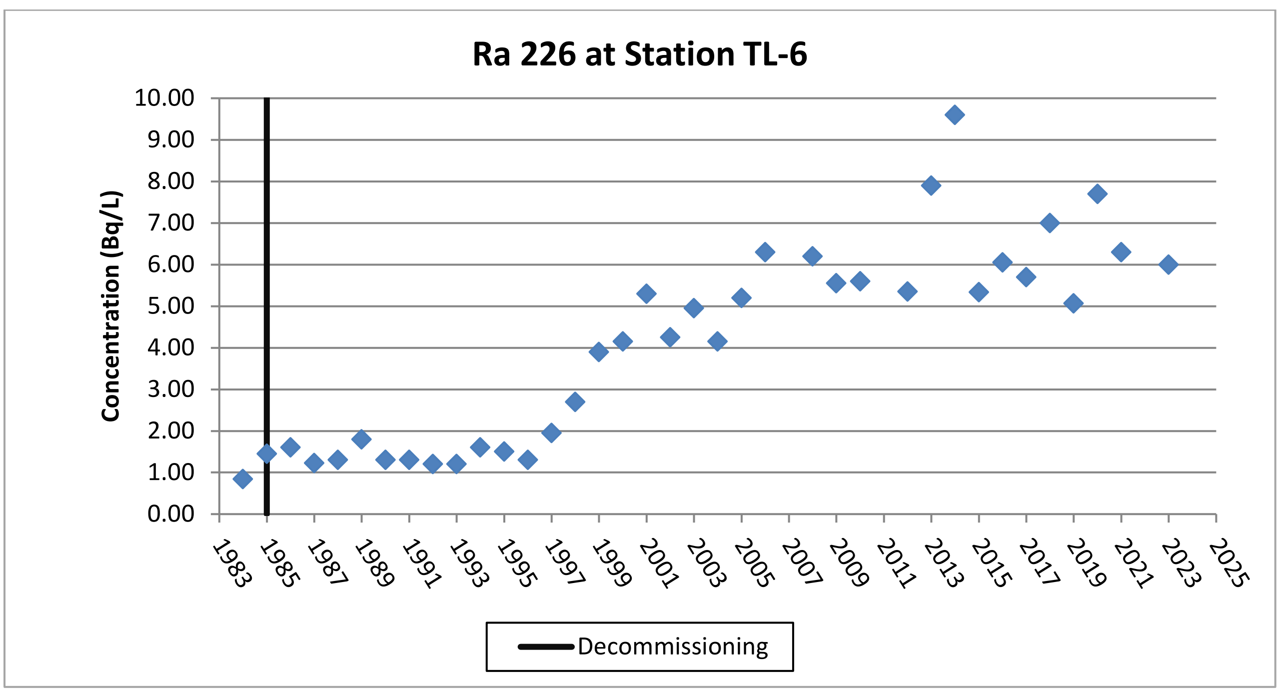


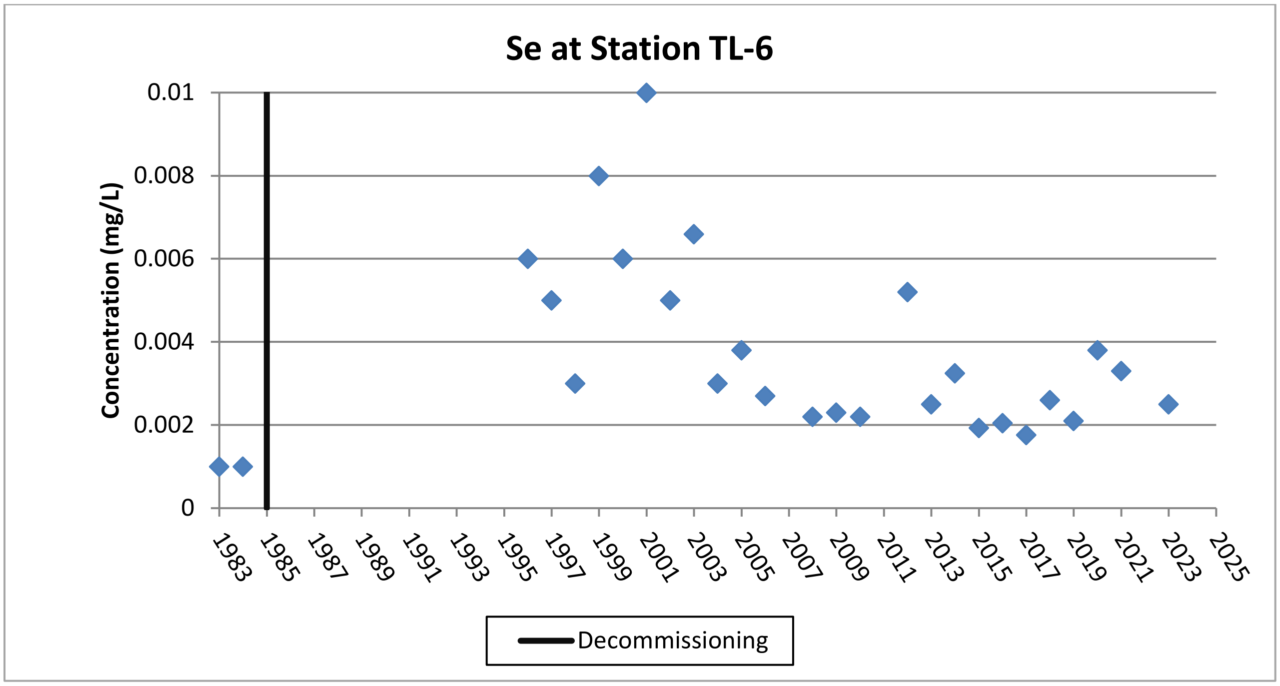
Figure 4.2.2-18 TL-6 Minewater Reservoir Outlet

**No data available for 2007, 2011, 2022 and 2024 due to a lack of water flow.*



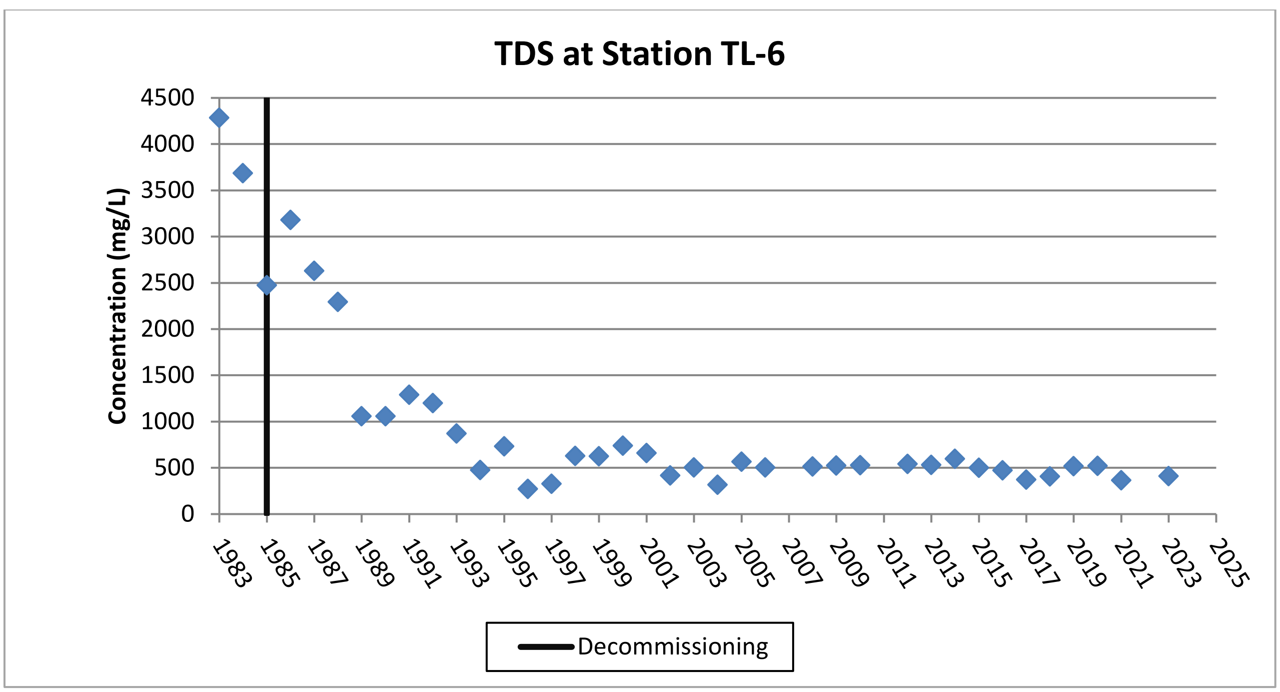
**No data available for 2007, 2011, 2022 and 2024 due to a lack of water flow.*

Figure 4.2.2-19 TL-6 Minewater Reservoir Outlet



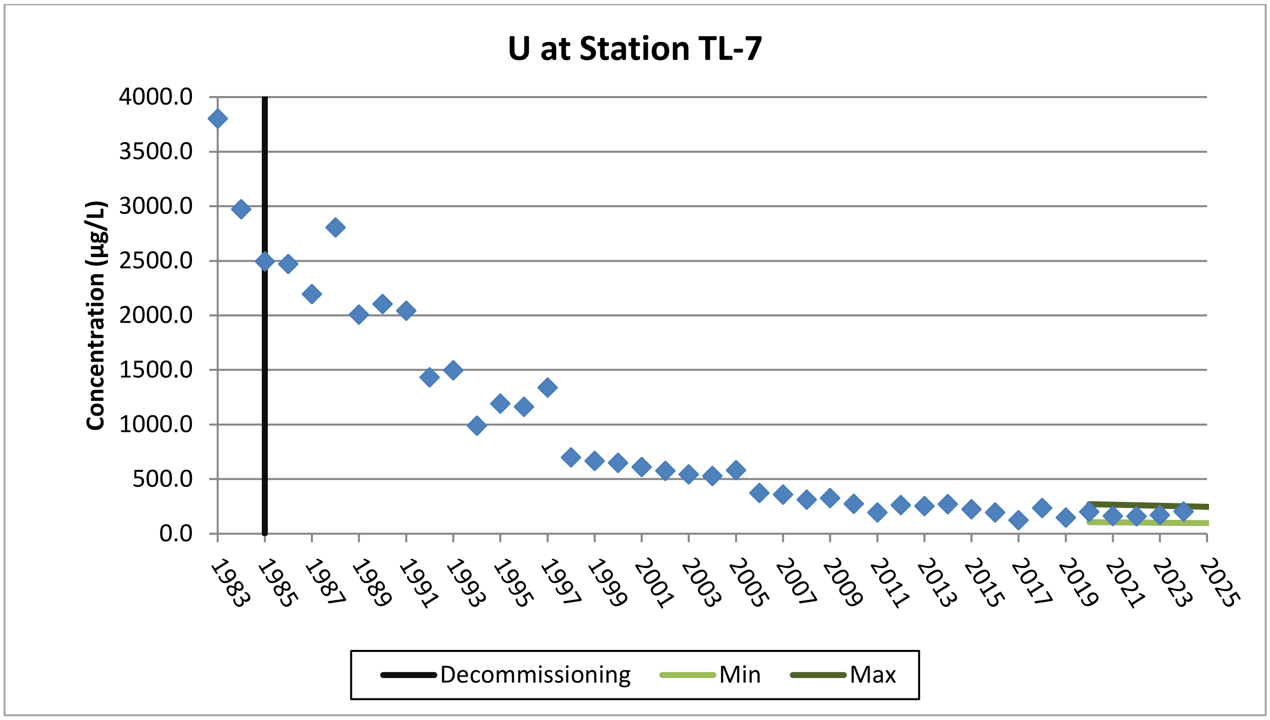
**No data available for 2007, 2011, 2022 and 2024 due to a lack of water flow.*

Figure 4.2.2-20 TL-6 Minewater Reservoir Outlet



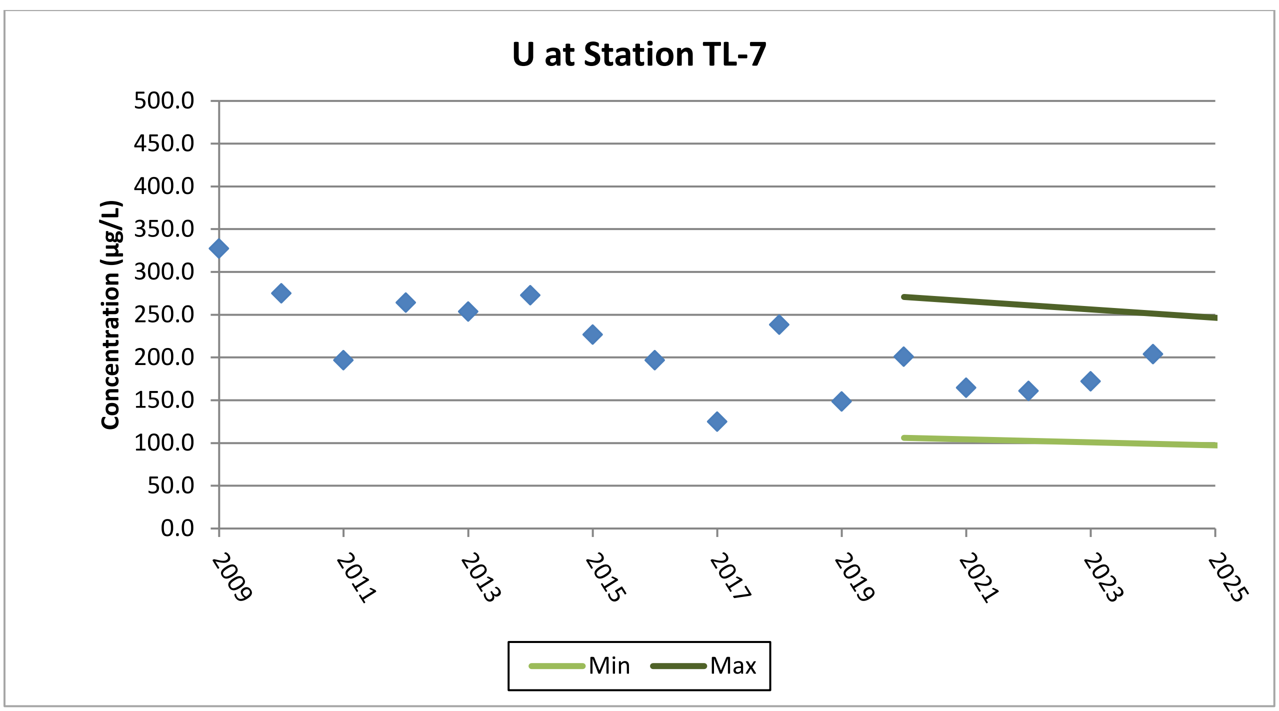
**No data available for 2007, 2011, 2022 and 2024 due to a lack of water flow.*

Figure 4.2.2-21 TL-7 Meadow Fen Outlet



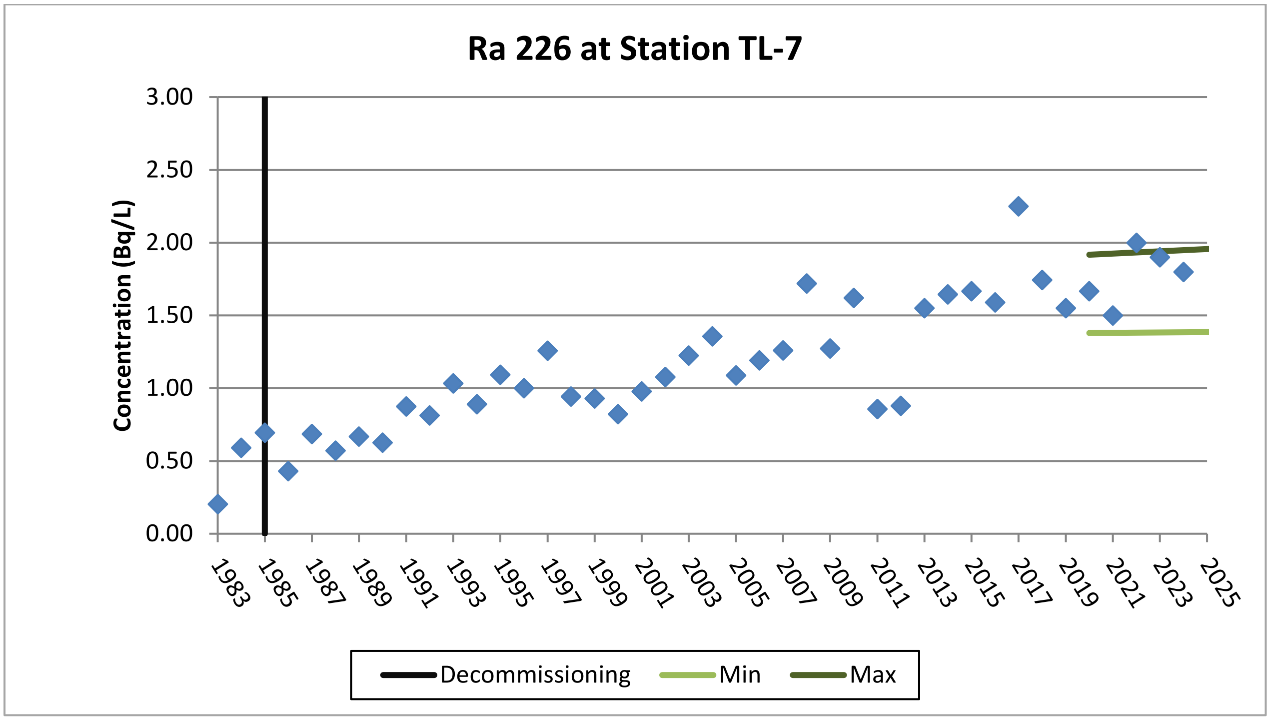
Note: The result of the March 25, 2025 sample was 244 µg/l.

Figure 4.2.2-22 TL-7 Meadow Fen Outlet - Detailed Trend



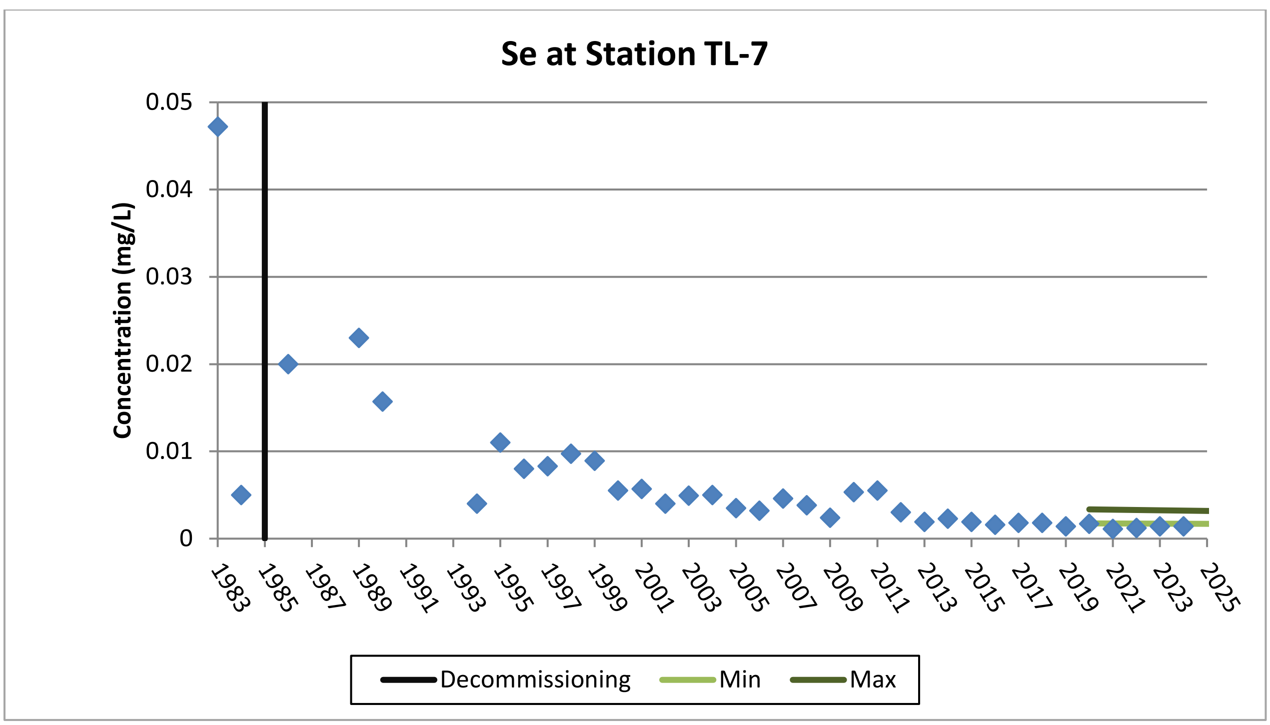
Note: The result of the March 25, 2025 sample was 244 µg/l.

Figure 4.2.2-23 TL-7 Meadow Fen Outlet



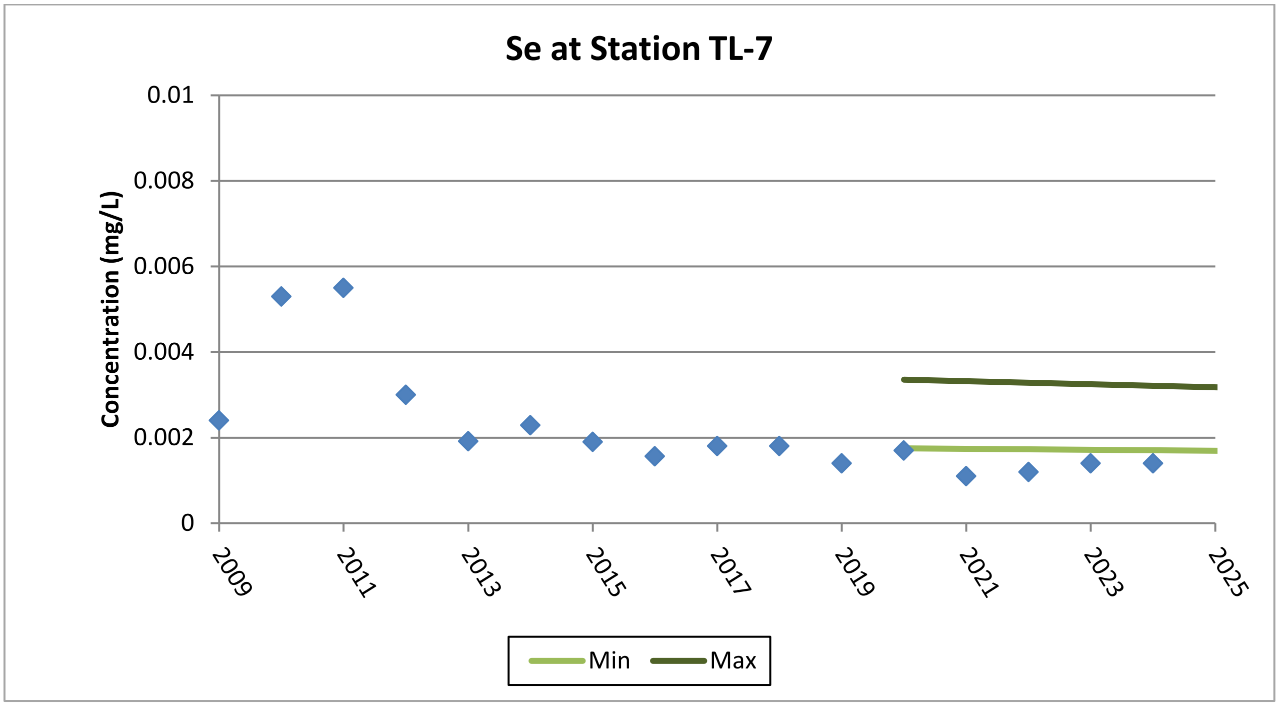
Note: The result of the March 25, 2025 sample was 3.0 Bq/l.

Figure 4.2.2-24 TL-7 Meadow Fen Outlet



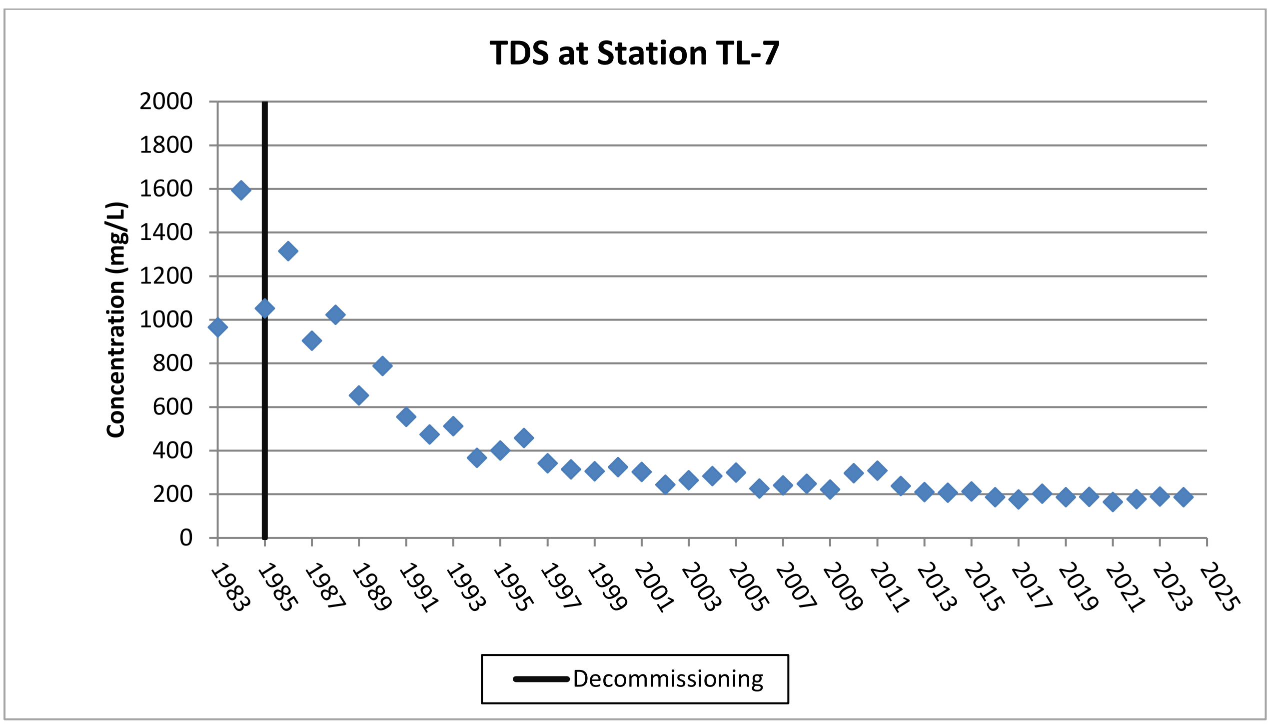
Note: The result of the March 25, 2025 sample was 0.0018 mg/l.

Figure 4.2.2-25 TL-7 Meadow Fen Outlet – Detailed Trend



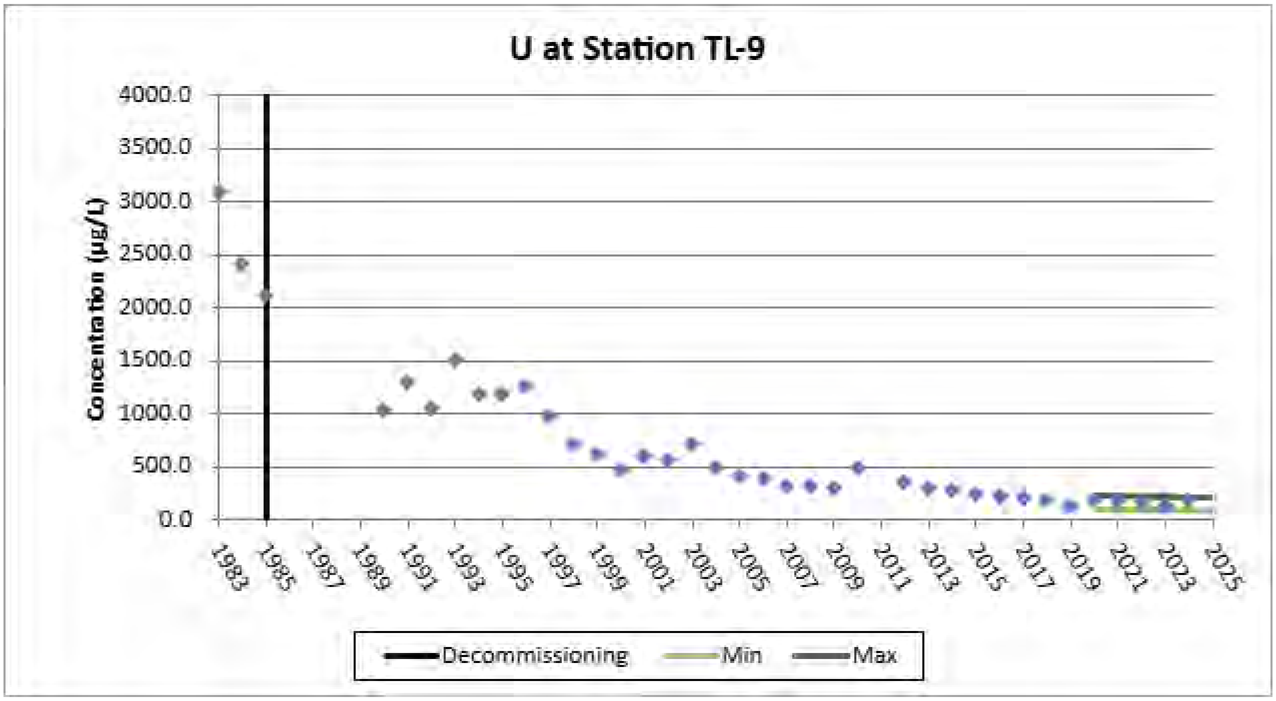
Note: The result of the March 25, 2025 sample was 0.0018 mg/l.

Figure 4.2.2-26 TL-7 Meadow Fen Outlet



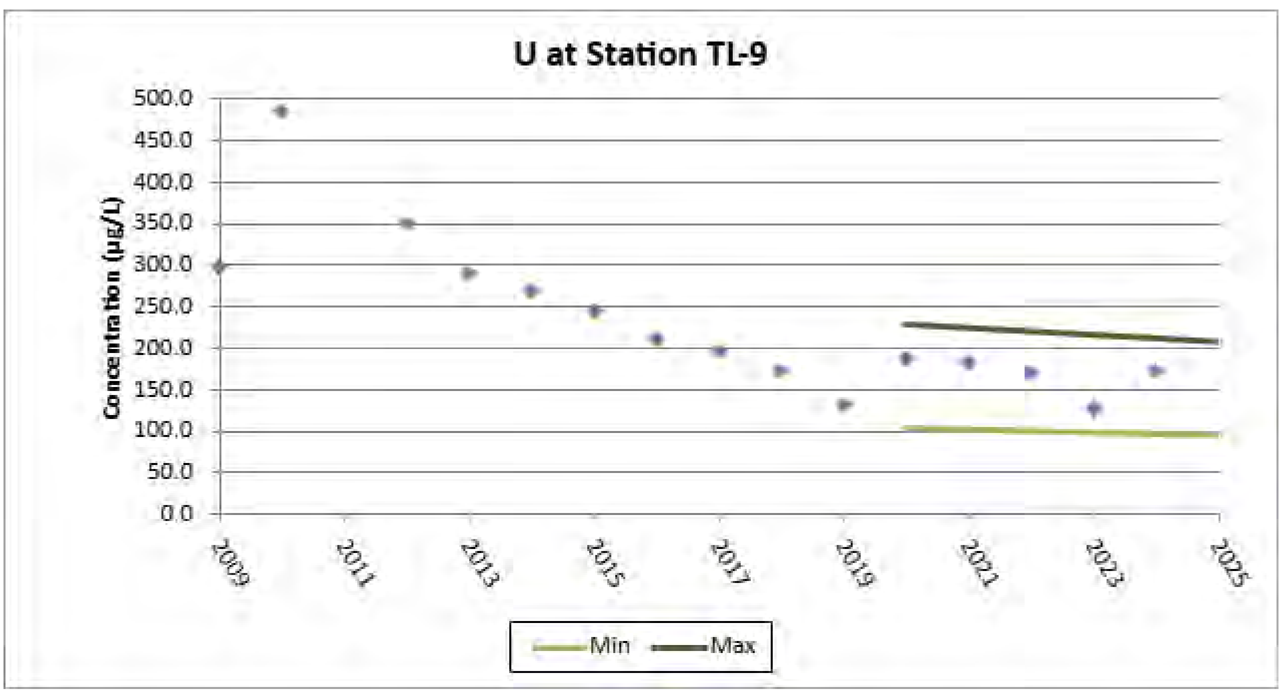
Note: The result of the March 25, 2025 sample was 215 mg/l.

Figure 4.2.2-27 TL-9 Fulton Creek Downstream of Greer Lake



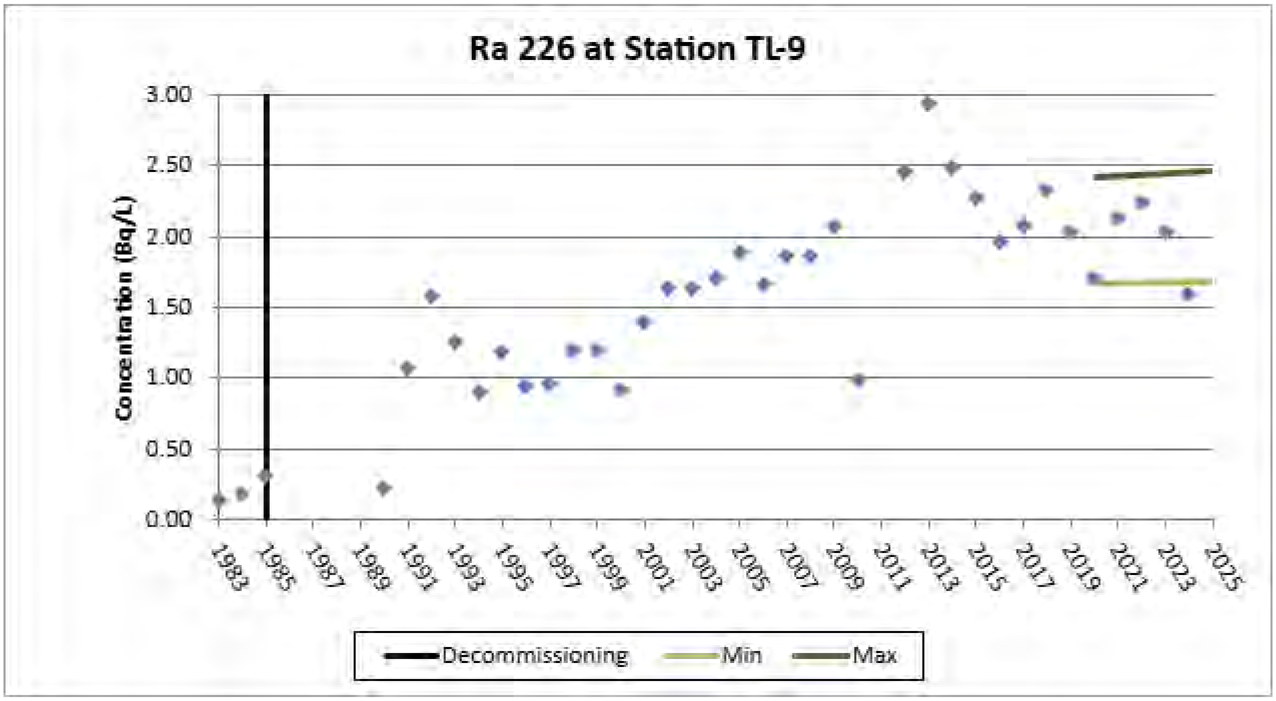
**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 242 µg/l.

Figure 4.2.2-28 TL-9 Fulton Creek Downstream of Greer Lake – Detailed Trend



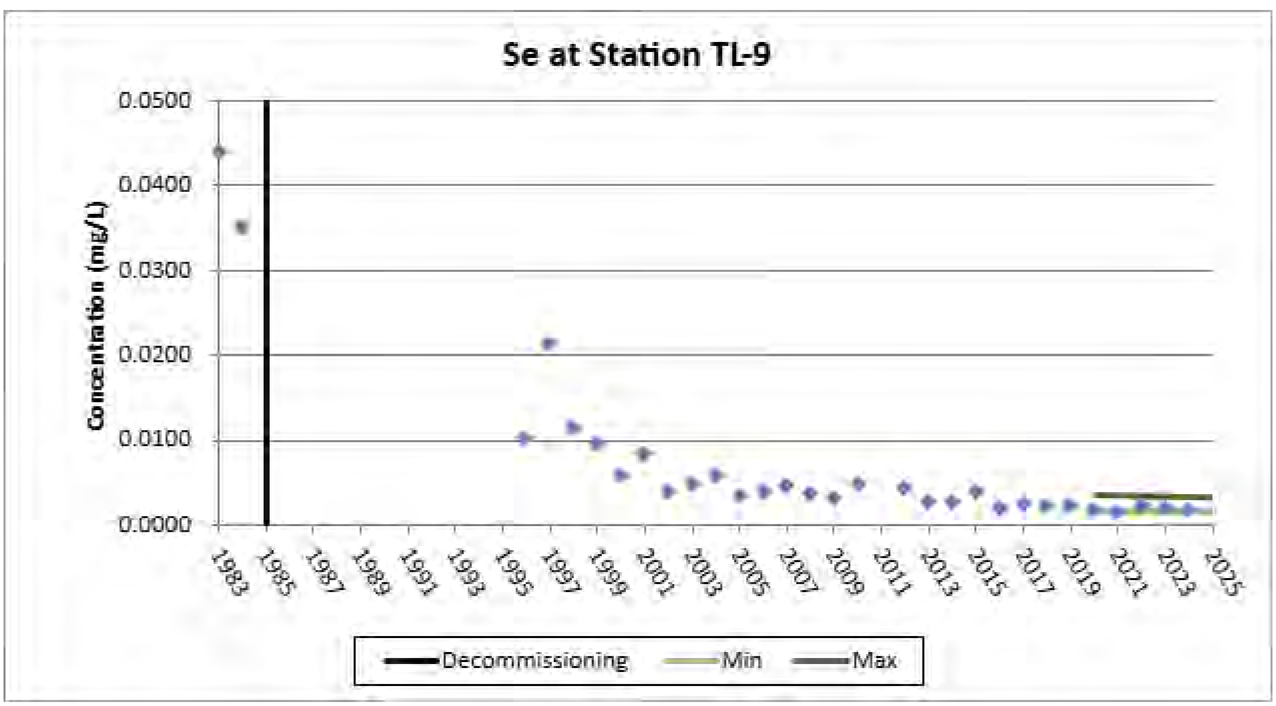
**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 242 µg/l.

Figure 4.2.2-29 TL-9 Fulton Creek Downstream of Greer Lake



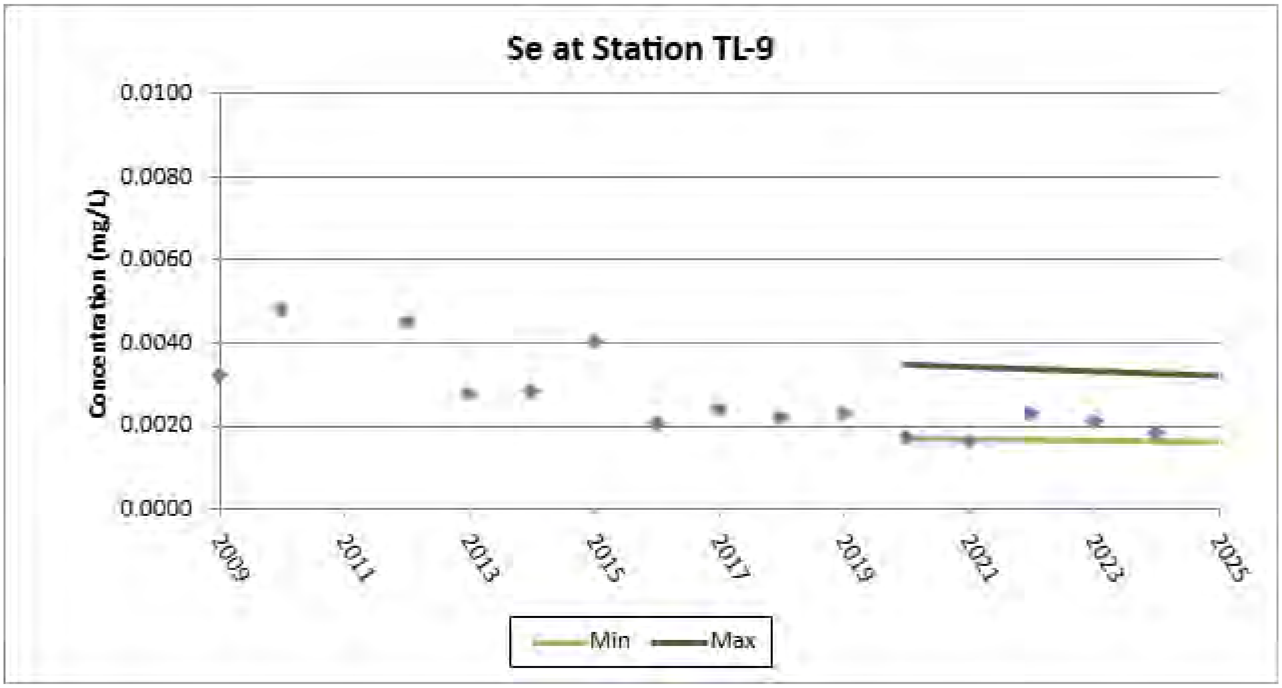
**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 1.8 Bq/l.

Figure 4.2.2-30 TL-9 - Fulton Creek Downstream of Greer Lake



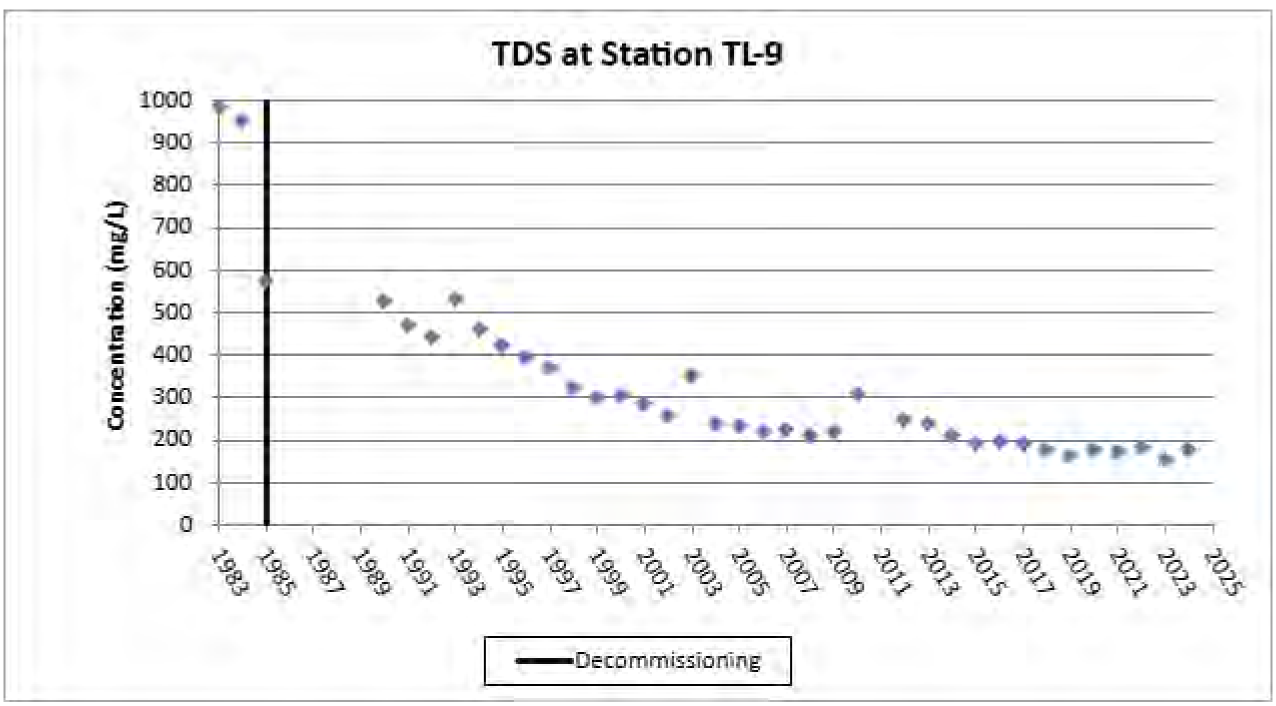
**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 0.0021 mg/l.

Figure 4.2.2-31 TL-9 - Fulton Creek Downstream of Greer Lake – Detailed Trend



**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 0.0021 mg/l.

Figure 4.2.2-32 TL-9 - Fulton Creek Downstream of Greer Lake



**No data available due to a lack of water flow in 2011.*
Note: The result of the March 25, 2025 sample was 217 mg/l.

Figure 4.2.3-1 BL-3 - Beaverlodge Lake Opposite Fulton Creek Outlet

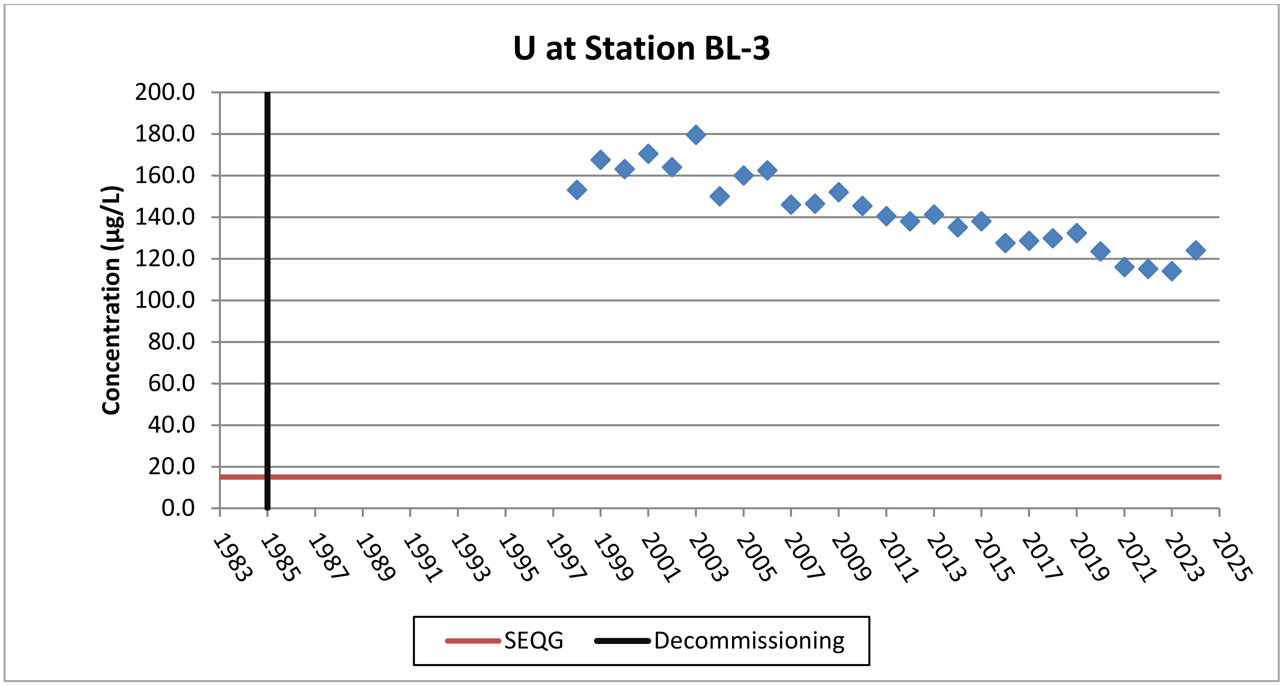


Figure 4.2.3-2 BL-3 - Beaverlodge Lake Opposite Fulton Creek Outlet

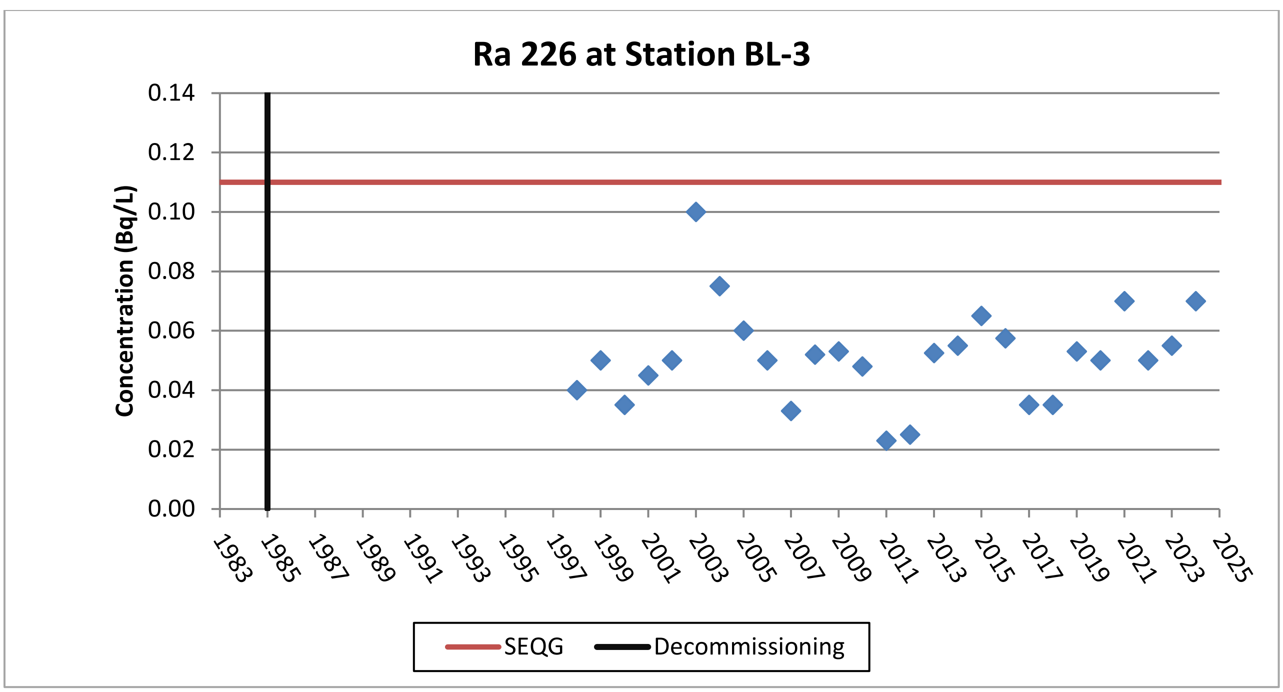
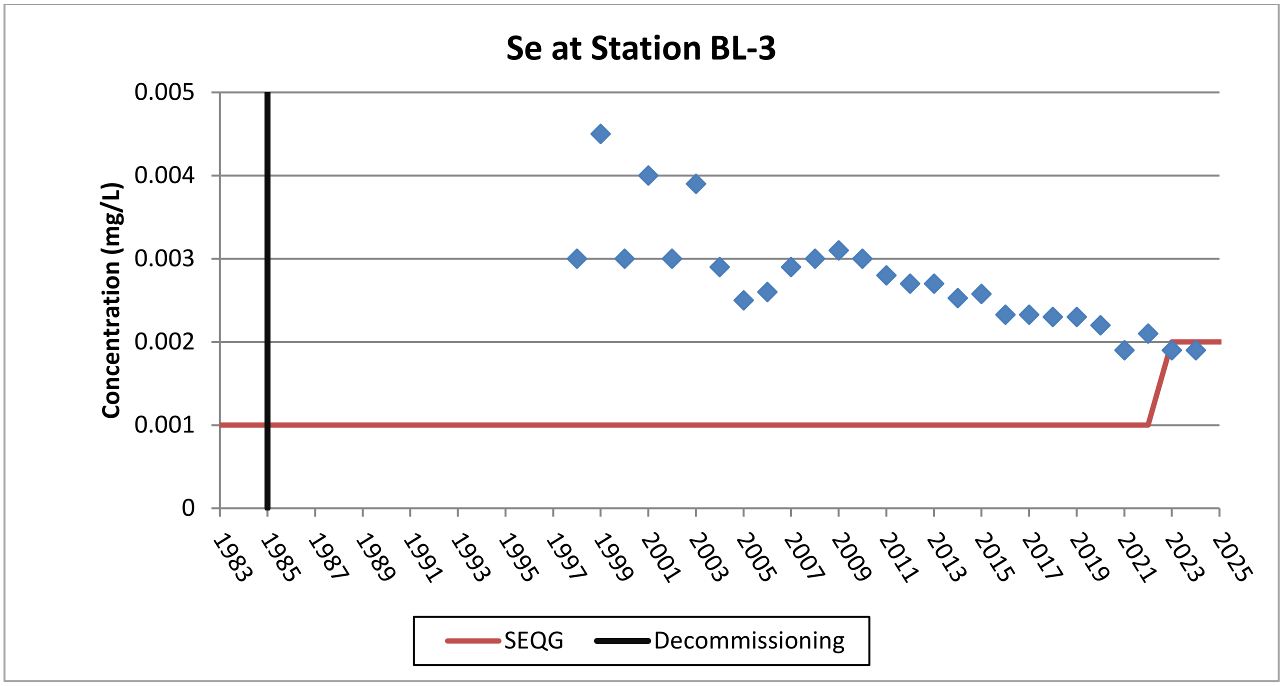


Figure 4.2.3-3 BL-3 - Beaverlodge Lake Opposite Fulton Creek Outlet



Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.3-4 BL-3 - Beaverlodge Lake Opposite Fulton Creek Outlet

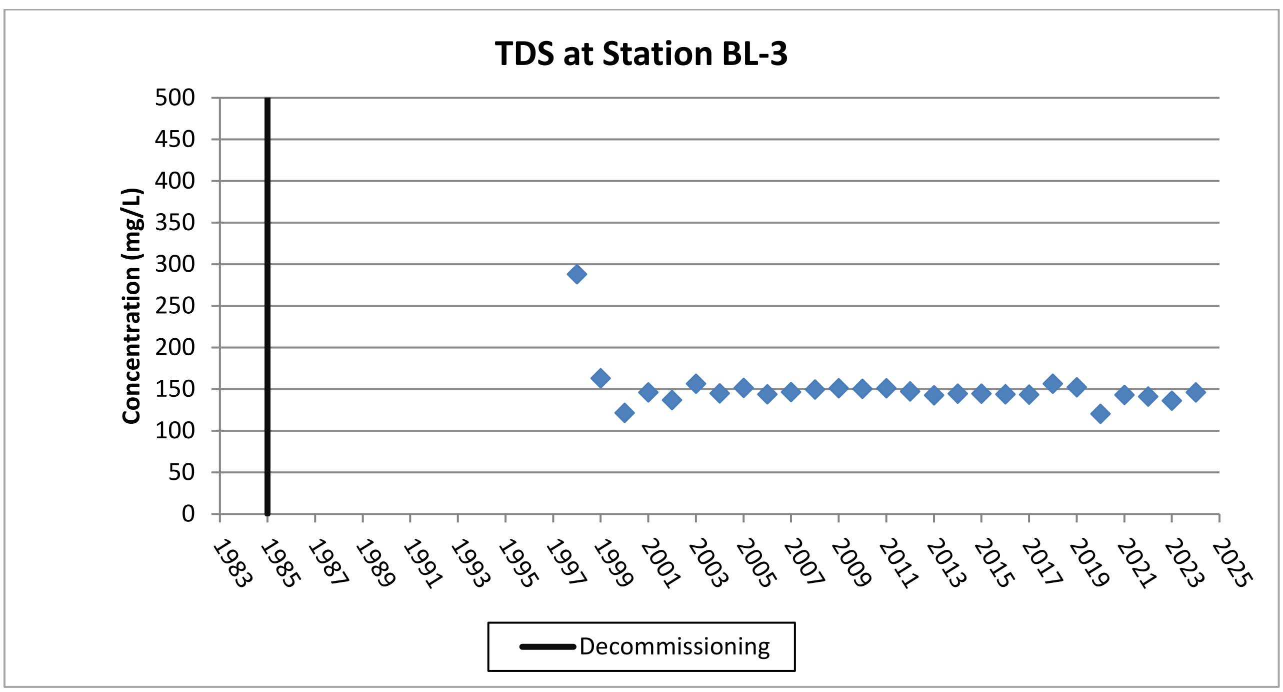


Figure 4.2.3-5 BL-4 Beaverlodge Lake Centre

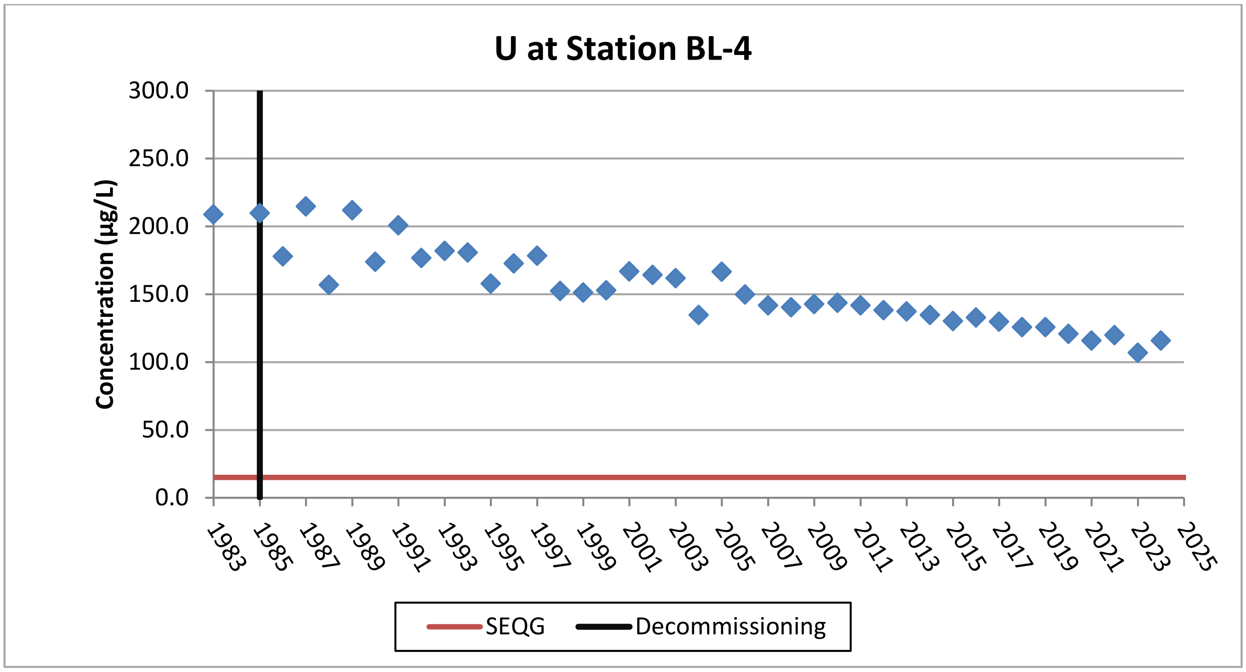


Figure 4.2.3-6 BL-4 Beaverlodge Lake Centre

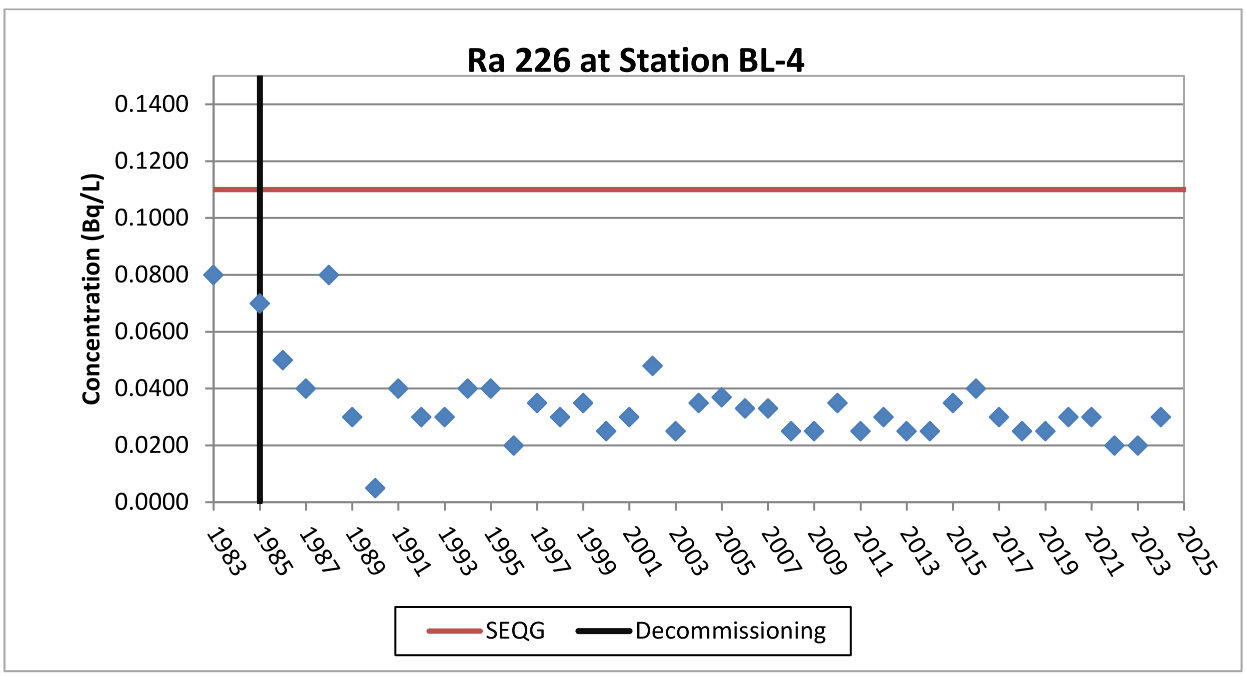
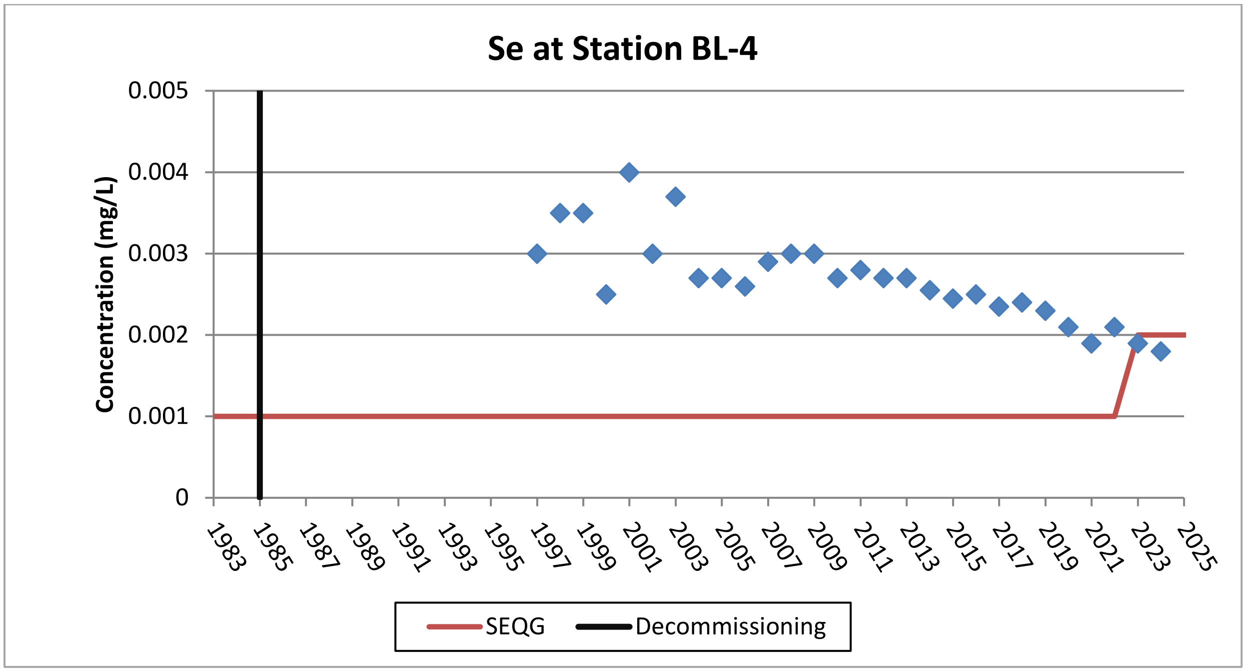


Figure 4.2.3-7 BL-4 Beaverlodge Lake Centre



Note: Method detection limit changed from 0.001 mg/L to 0.0001 mg/L in 2003.
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.3-8 BL-4 Beaverlodge Lake Centre

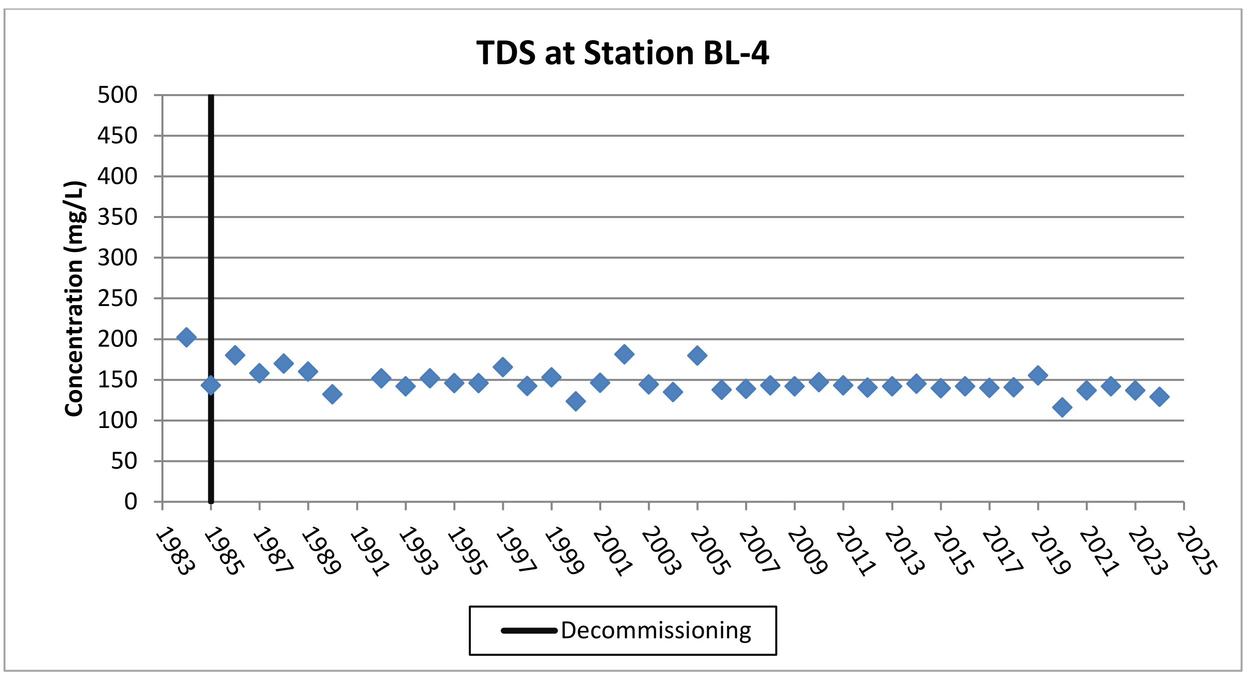
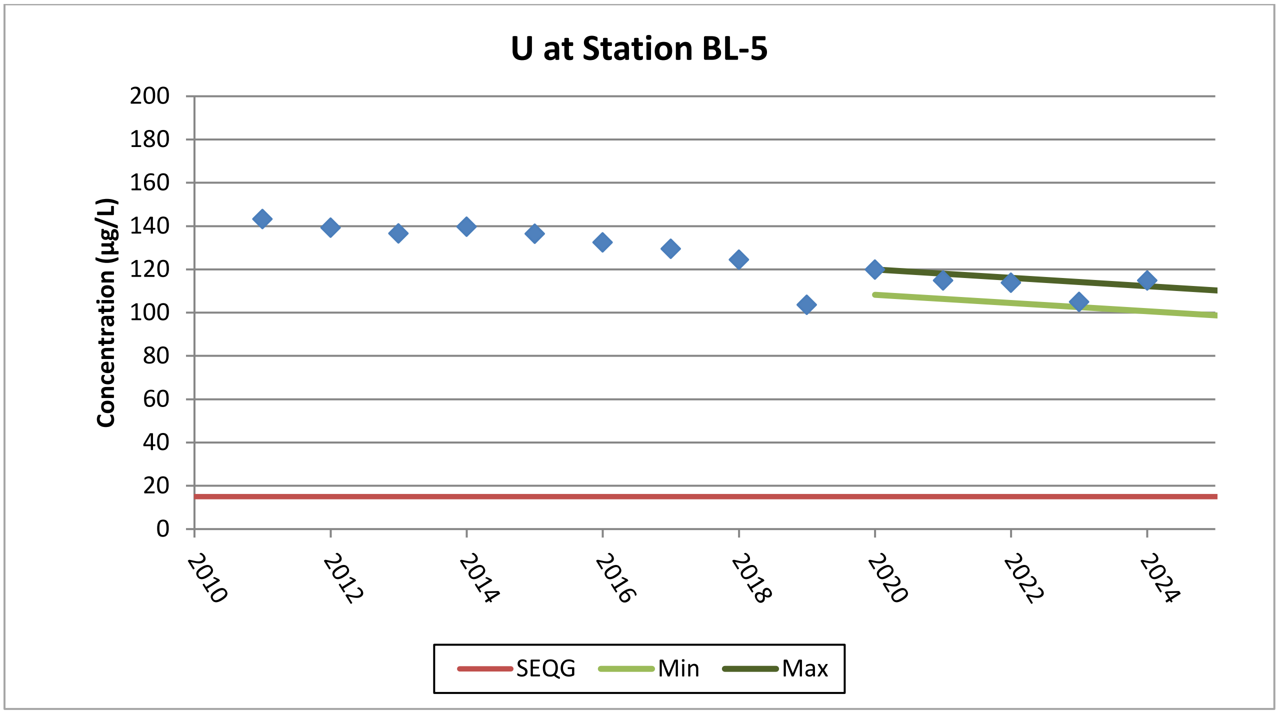
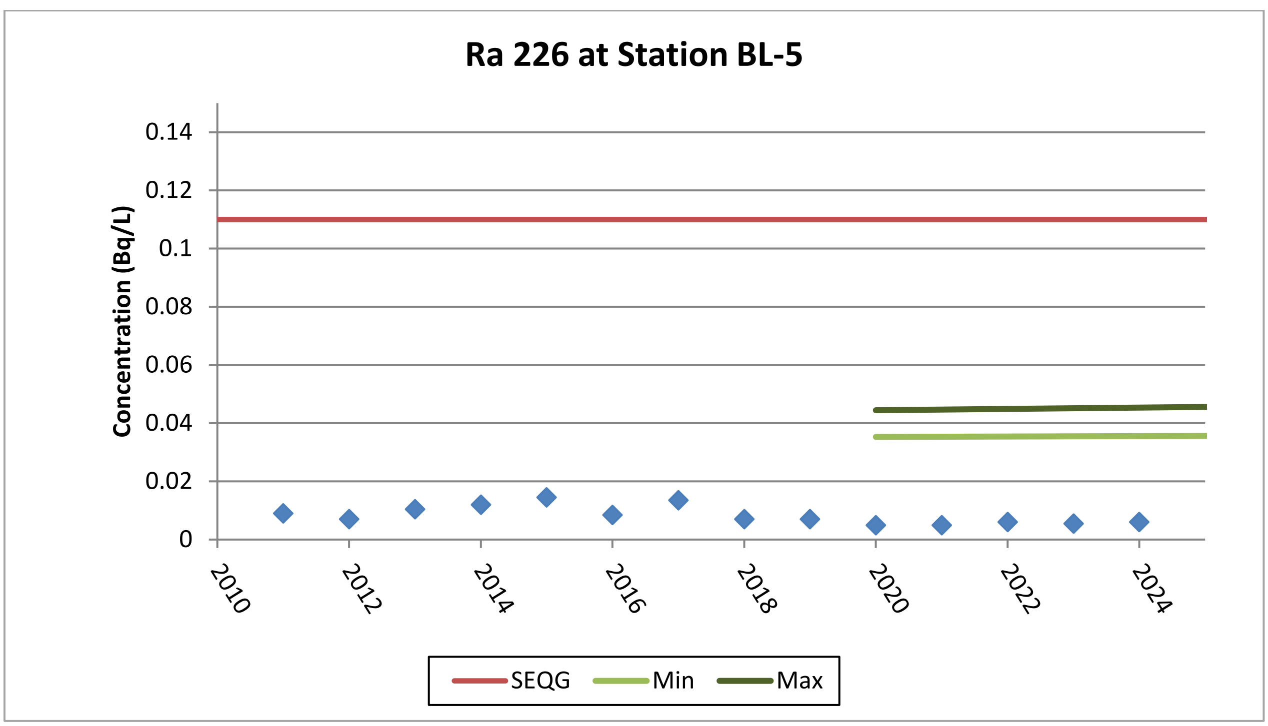


Figure 4.2.3-9 BL-5 Beaverlodge Lake Outlet



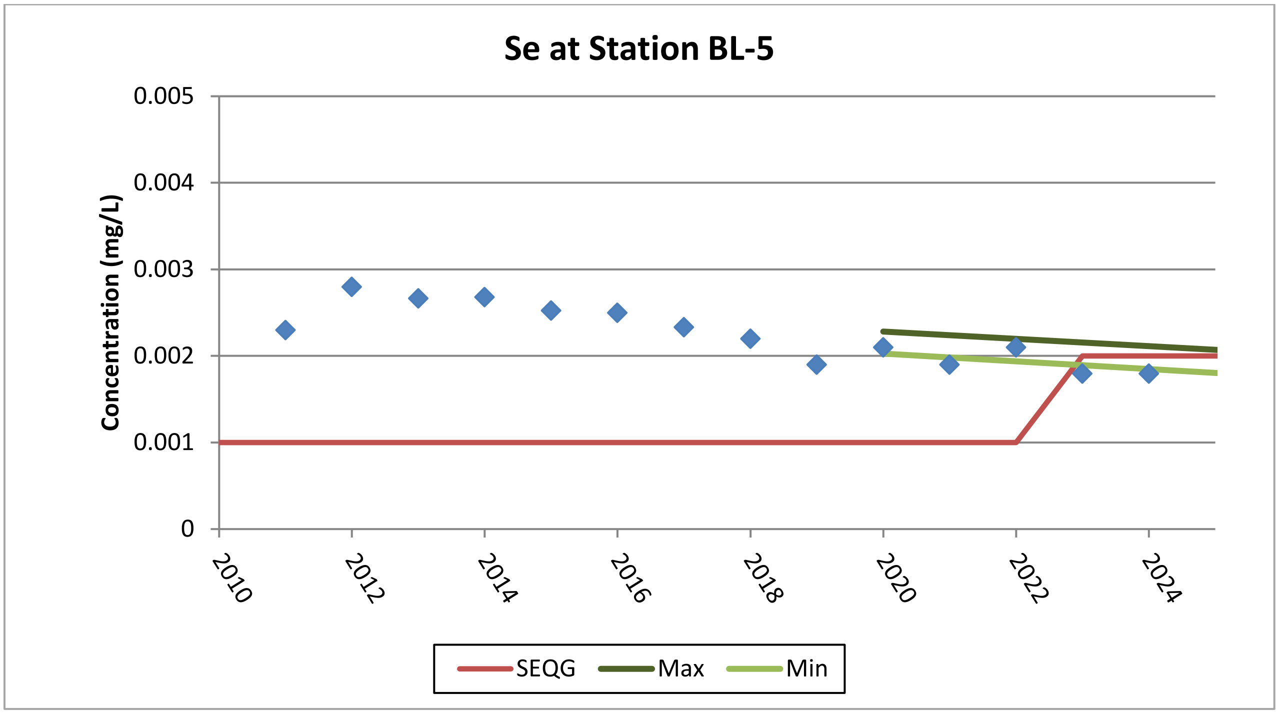
** Station implemented in water sampling program in 2011.*

Figure 4.2.3-10 BL-5 Beaverlodge Lake Outlet



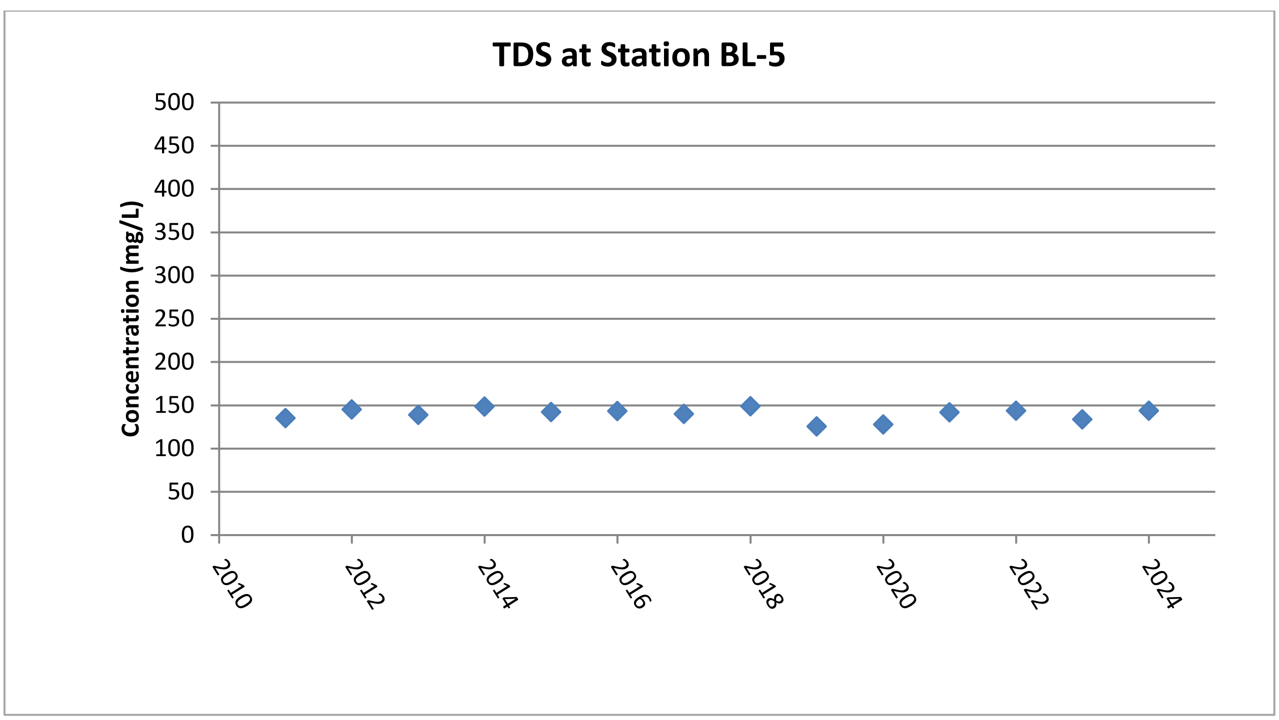
** Station implemented in water sampling program in 2011.*

Figure 4.2.3-11 BL-5 Beaverlodge Lake Outlet



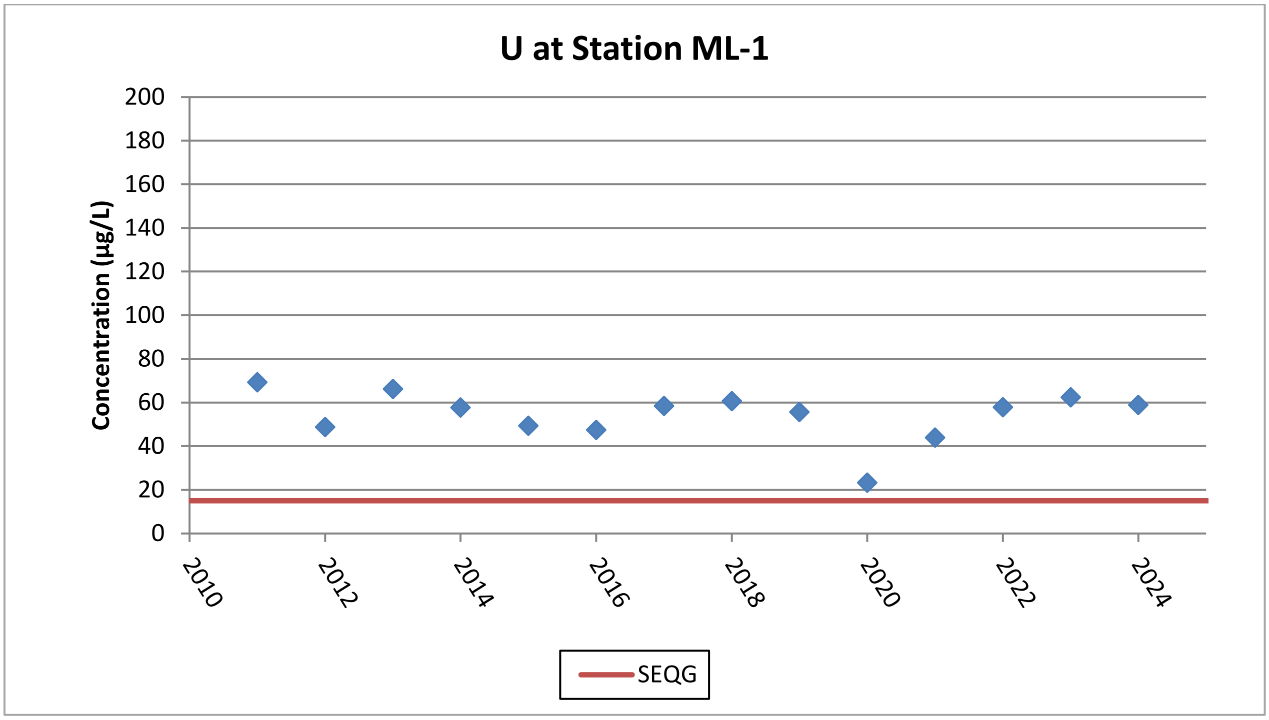
** Station implemented in water sampling program in 2011.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.3-12 BL-5 Beaverlodge Lake Outlet



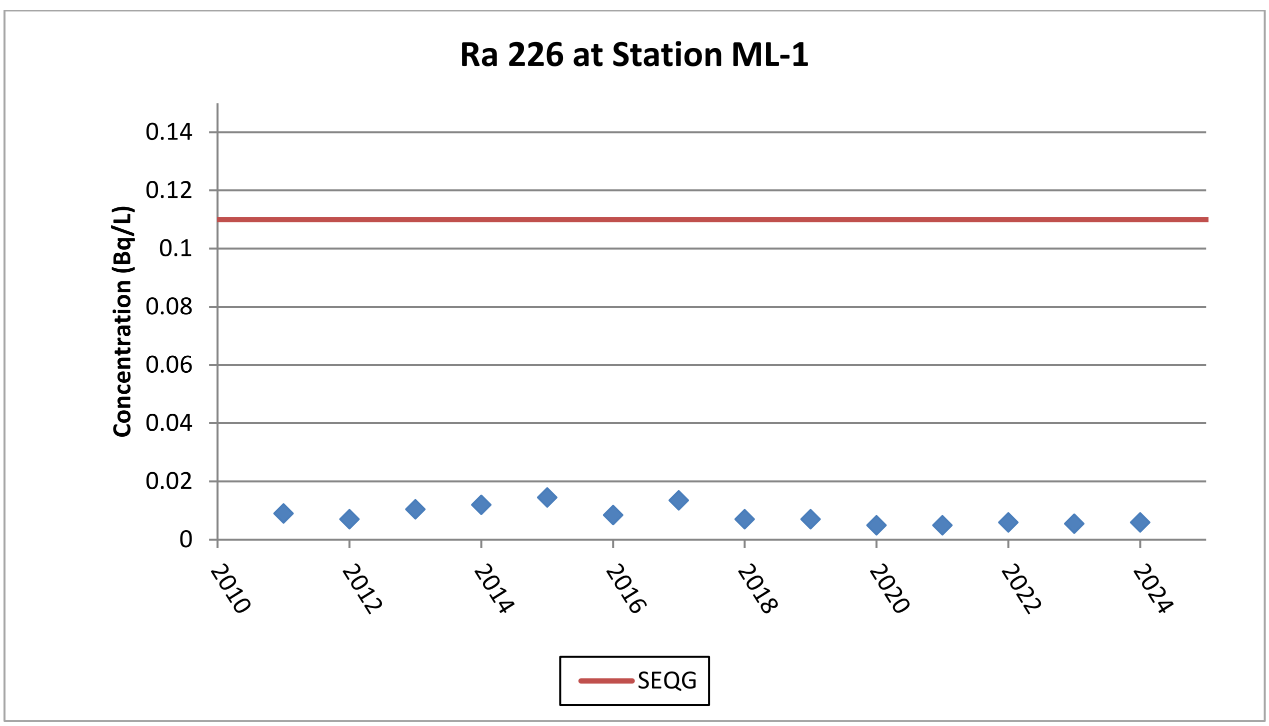
** Station implemented in water sampling program in 2011.*

Figure 4.2.3-13 ML-1 Outlet of Martin Lake



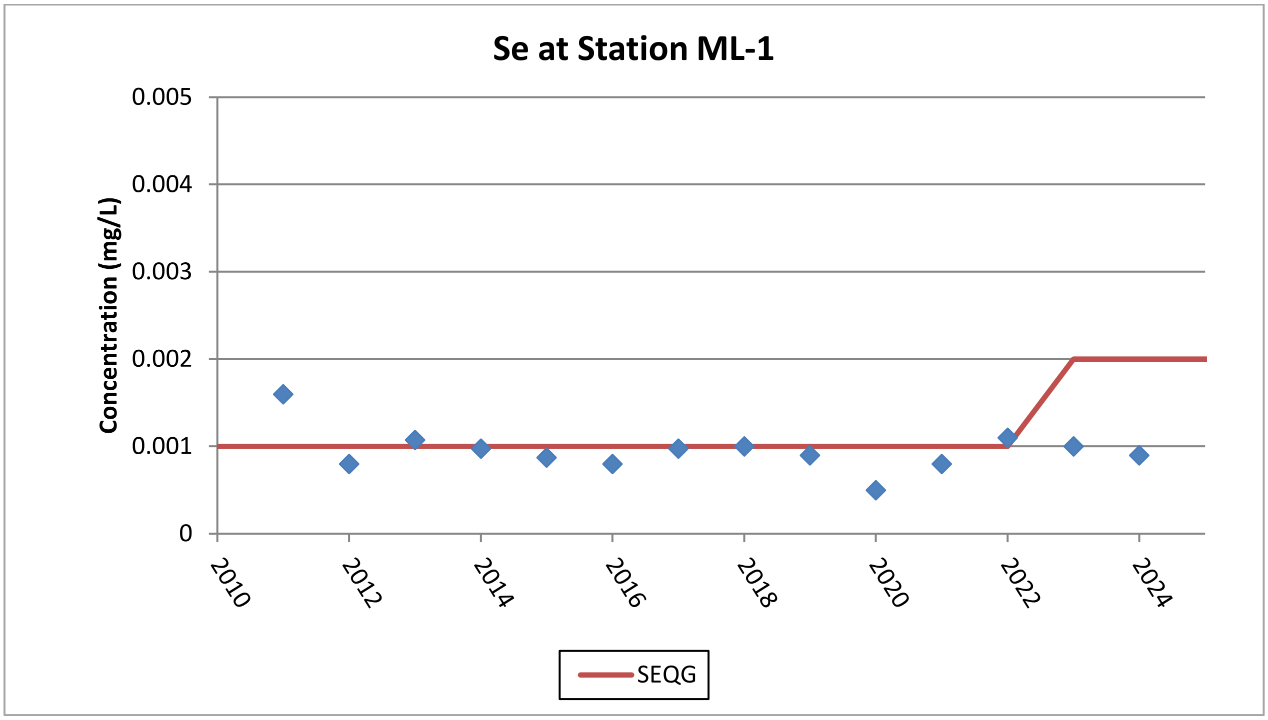
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-14 ML-1 Outlet of Martin Lake



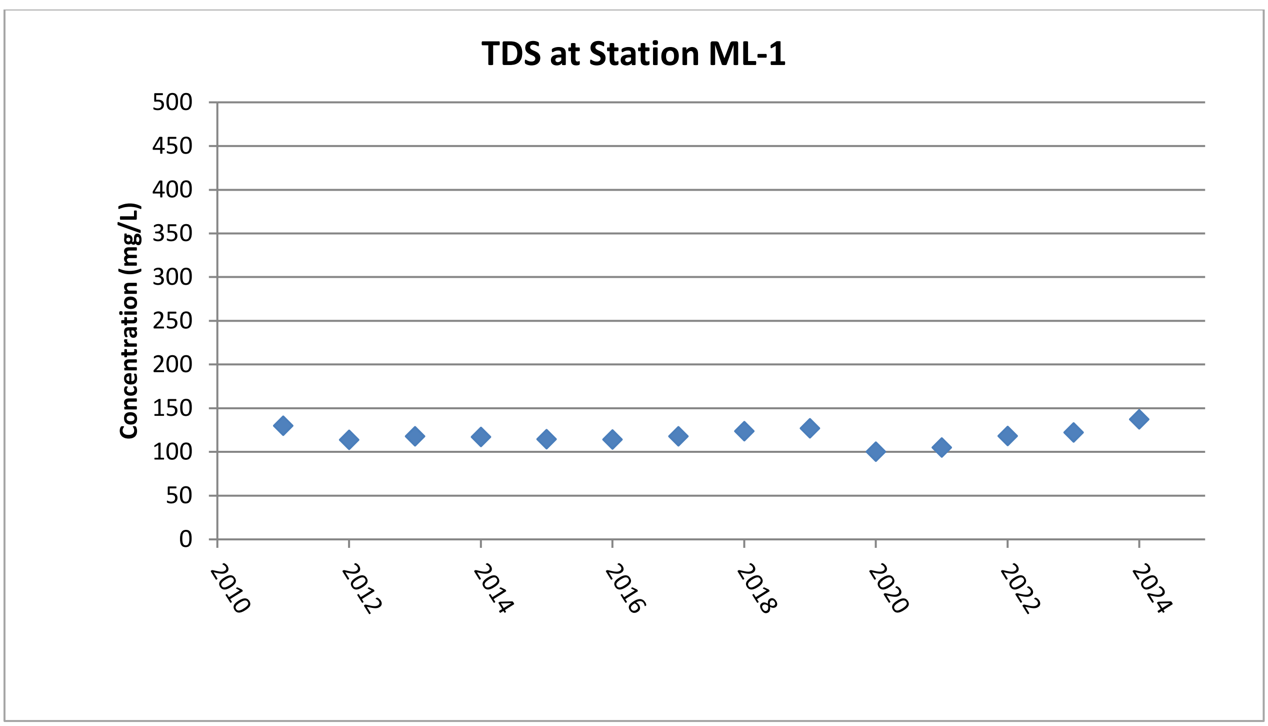
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-15 ML-1 Outlet of Martin Lake



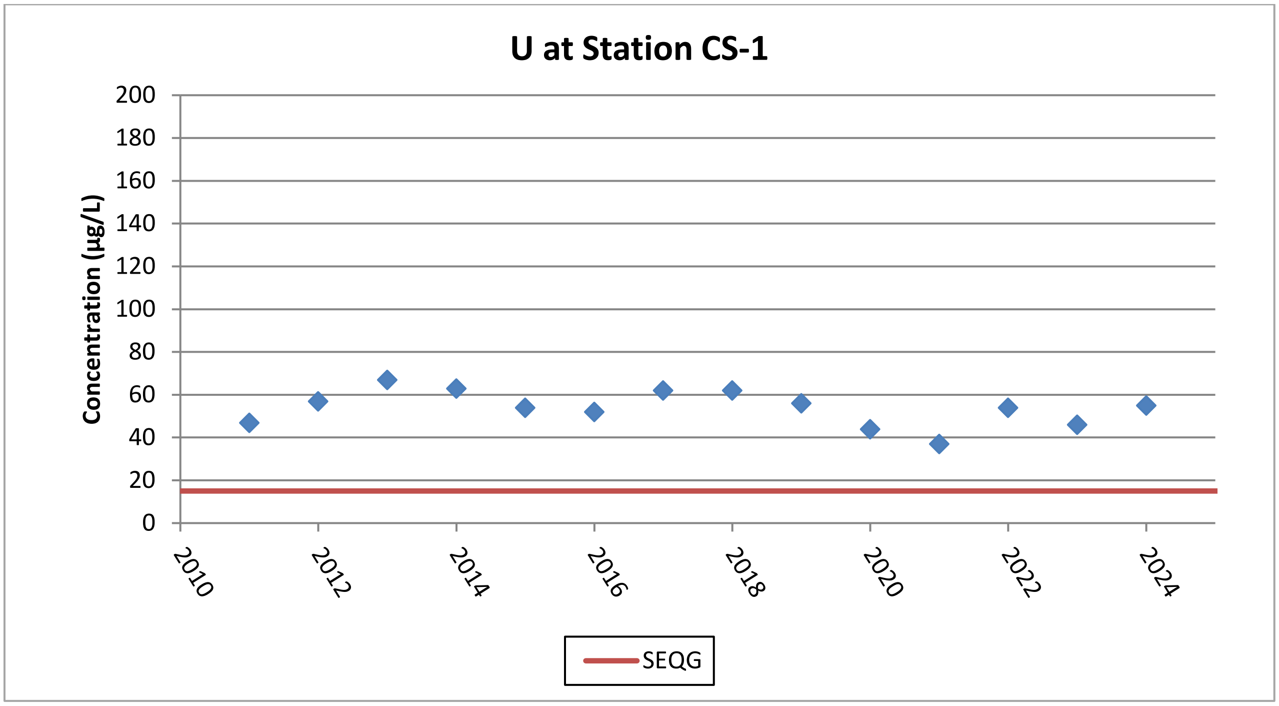
**Station implemented in water sampling program in 2011.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.3-16 ML-1 Outlet of Martin Lake



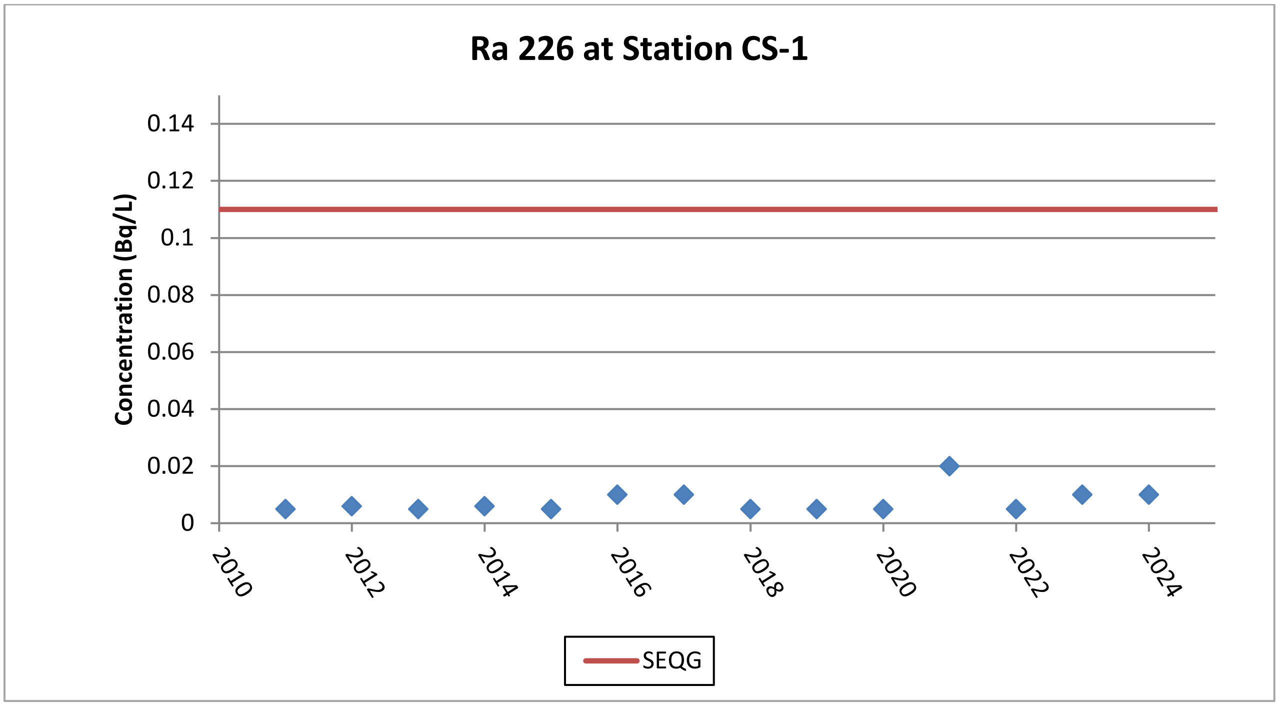
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-17 CS-1 Crackingstone River at Bridge



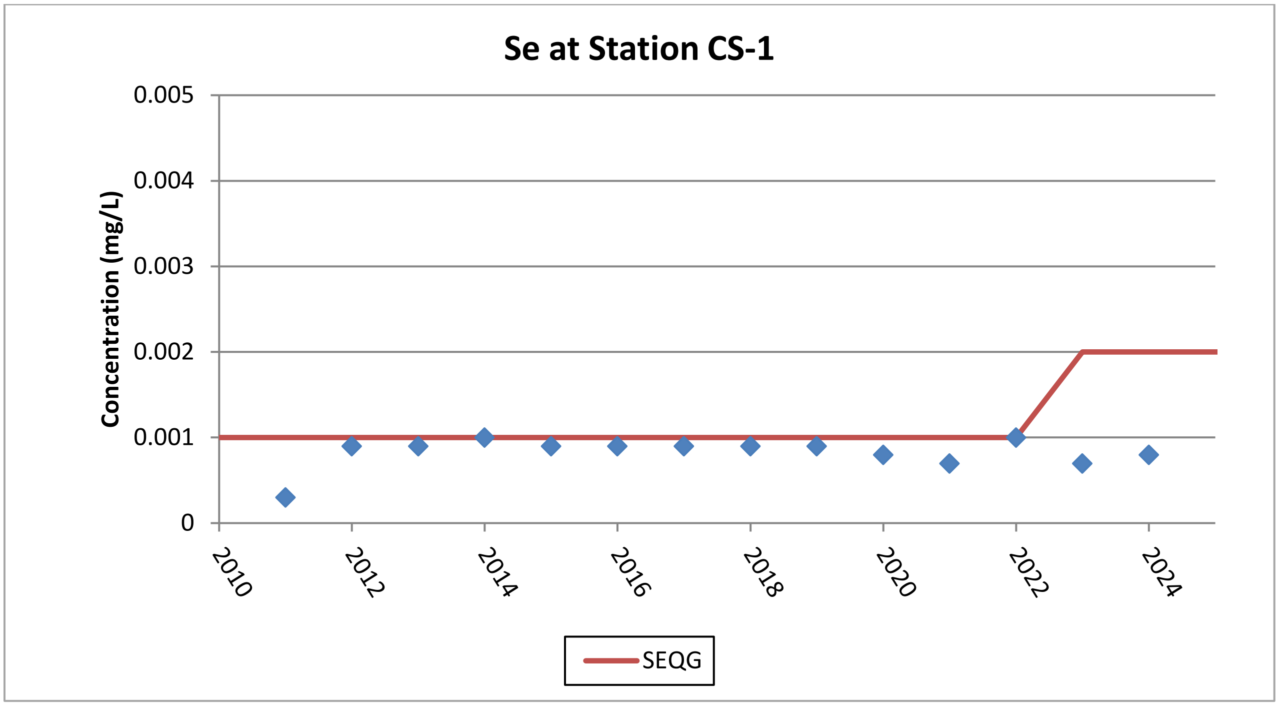
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-18 CS-1 Crackingstone River at Bridge



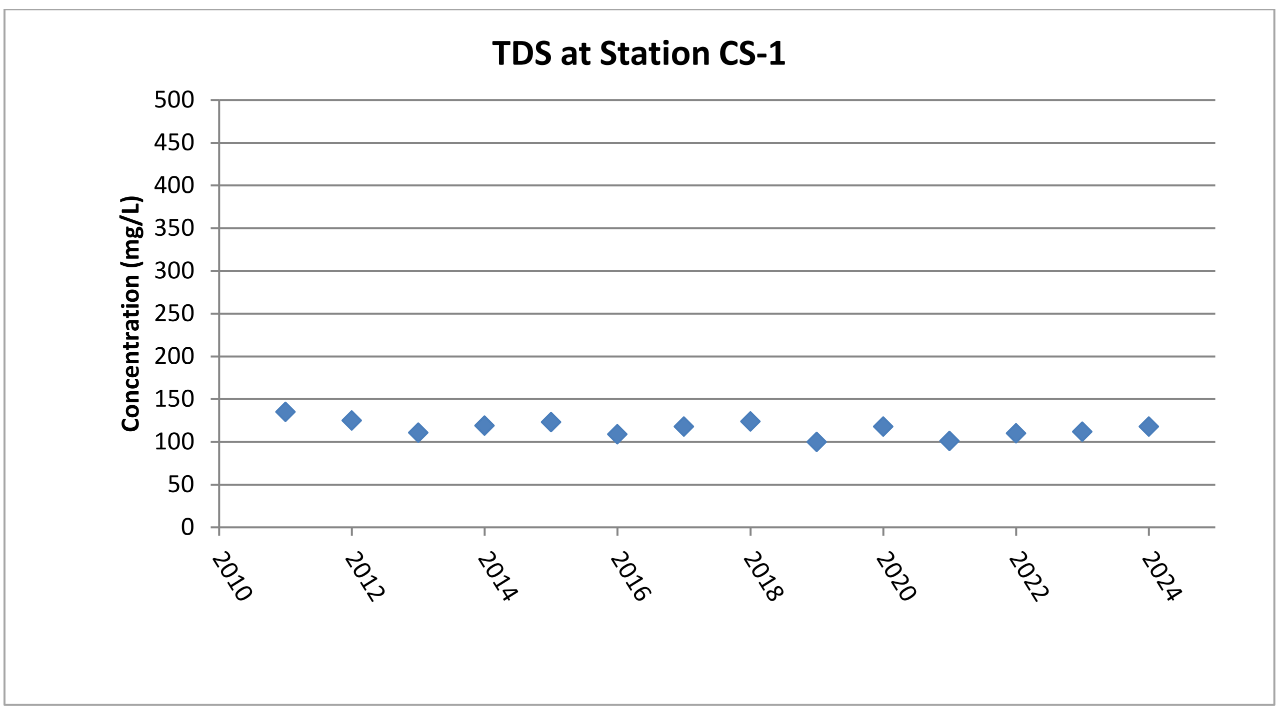
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-19 CS-1 Crackingstone River at Bridge



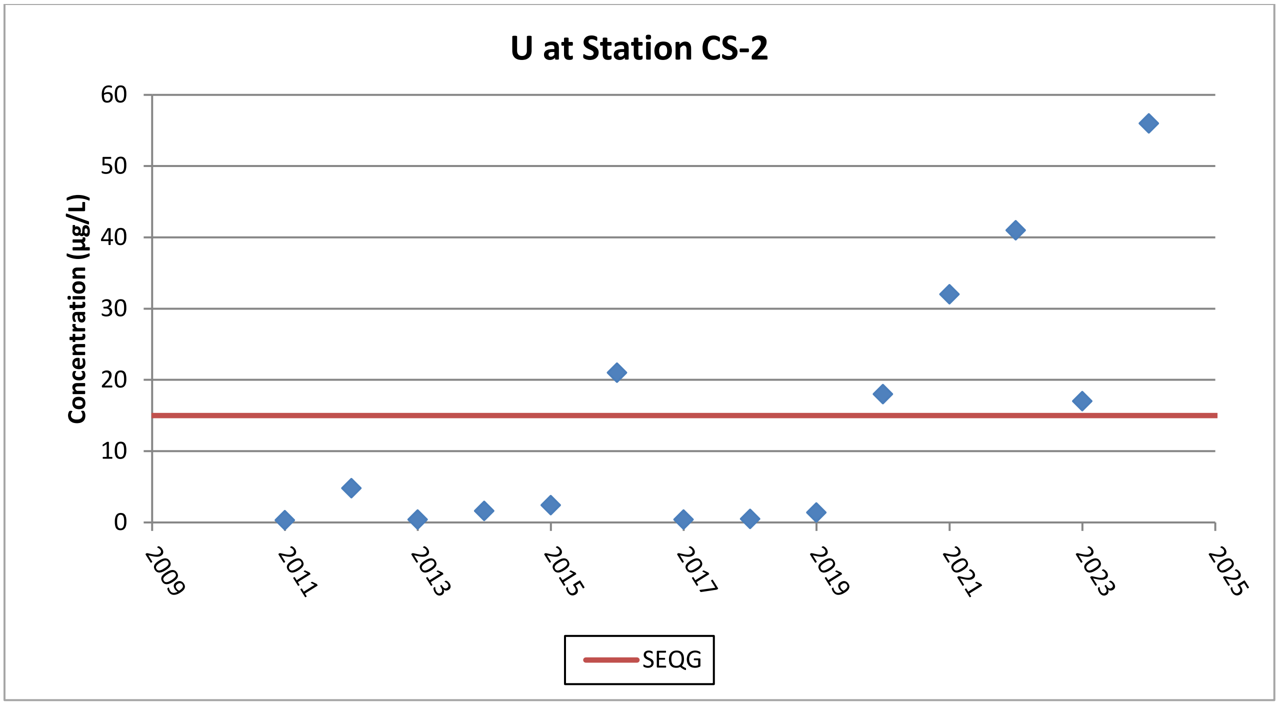
**Station implemented in water sampling program in 2011.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.2.3-20 CS-1 Crackingstone River at Bridge



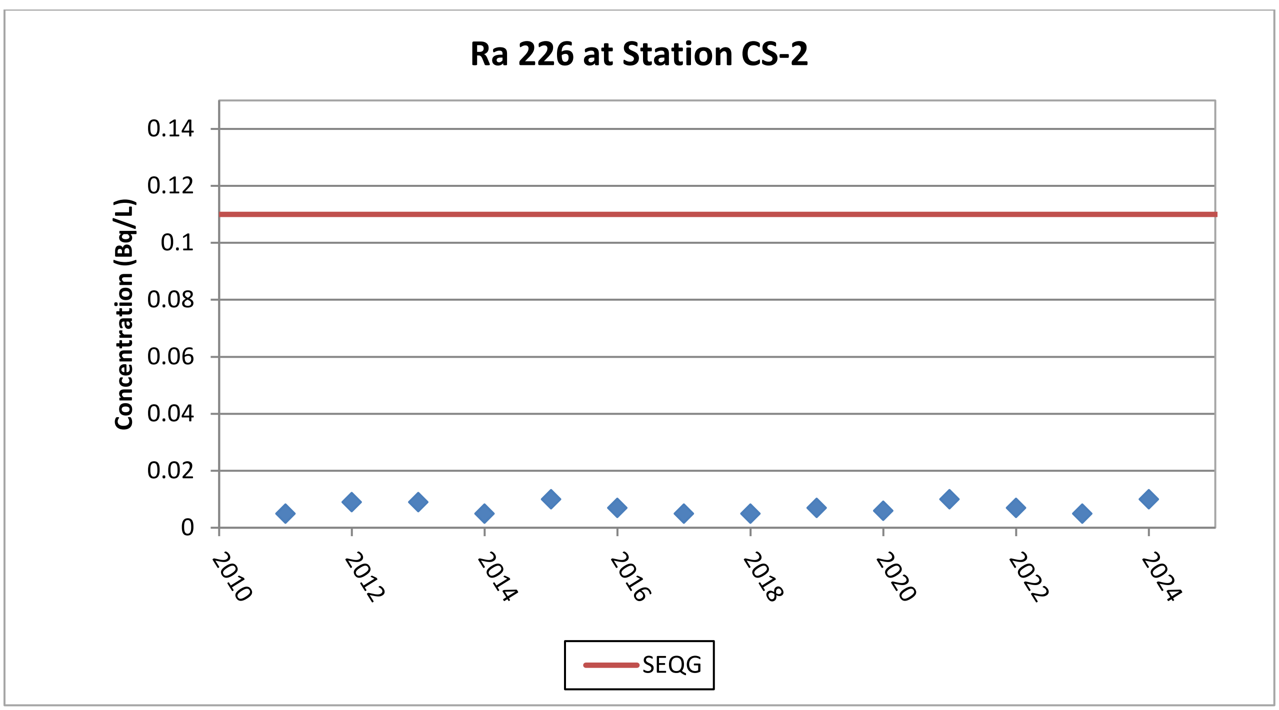
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-21 CS-2 Crackingstone Bay



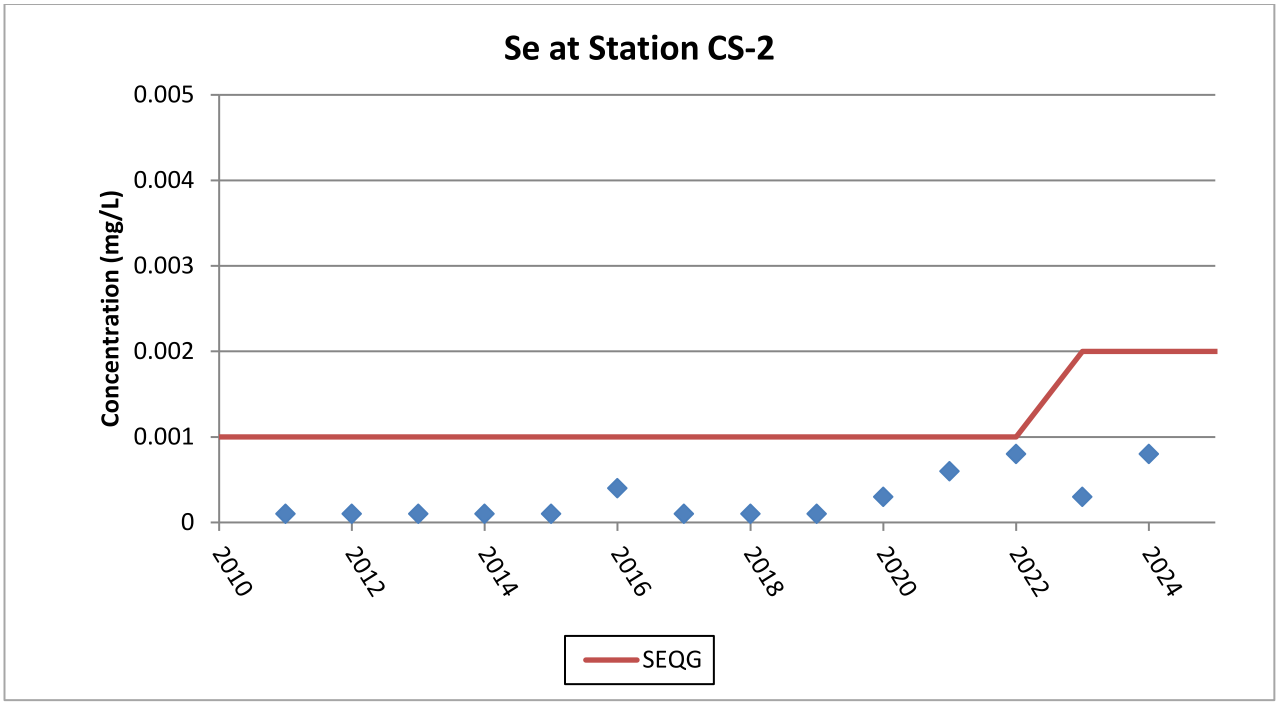
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-22 CS-2 Crackingstone Bay



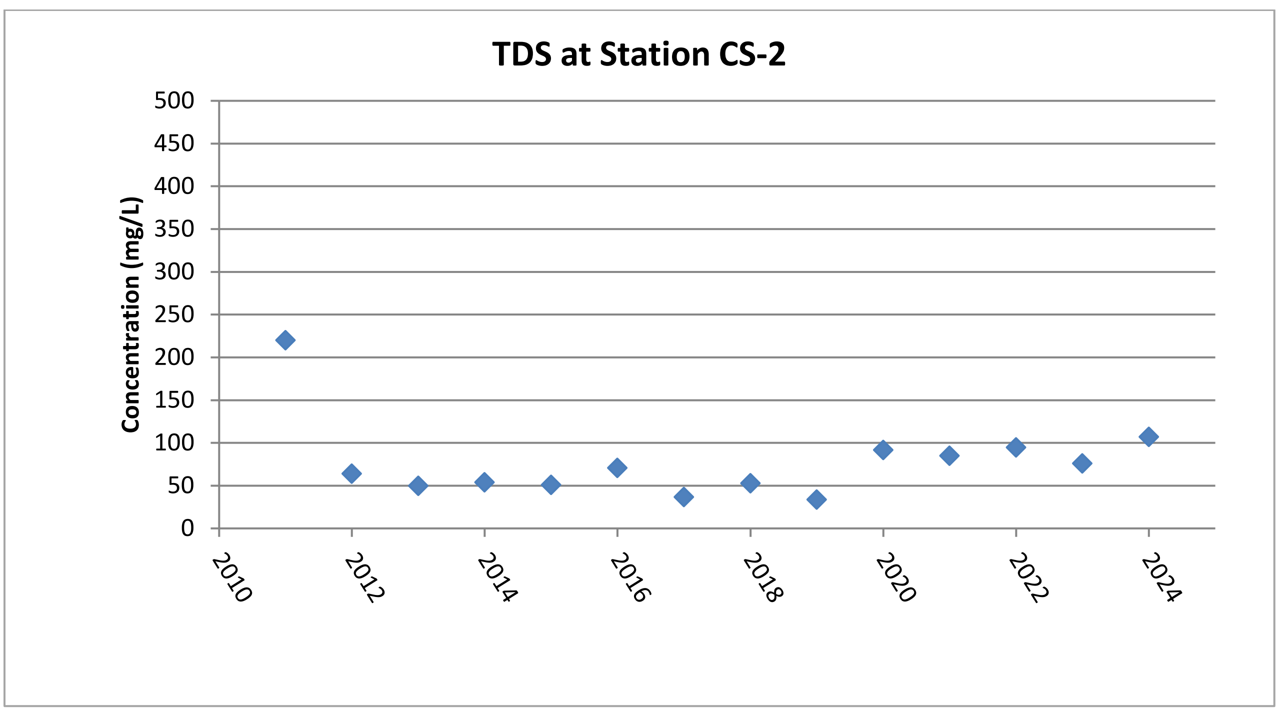
**Station implemented in water sampling program in 2011.*

Figure 4.2.3-23 CS-2 Crackingstone Bay



**Station implemented in water sampling program in 2011.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

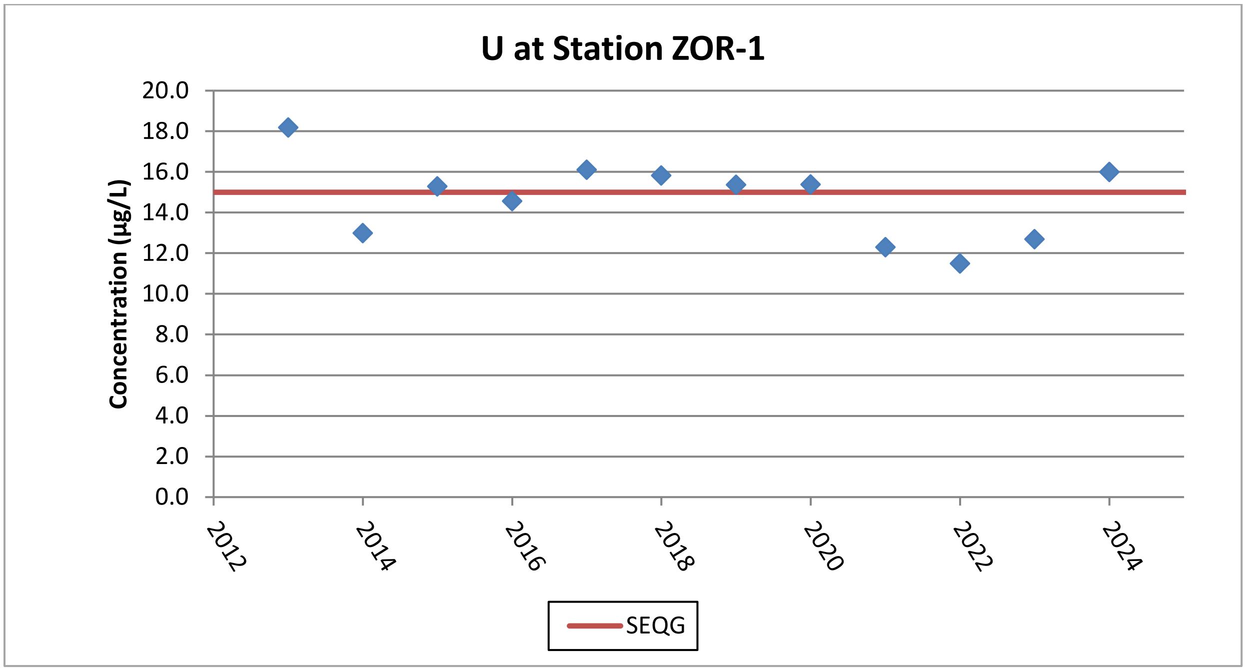
Figure 4.2.3-24 CS-2 Crackingstone Bay



**Station implemented in water sampling program in 2011.*

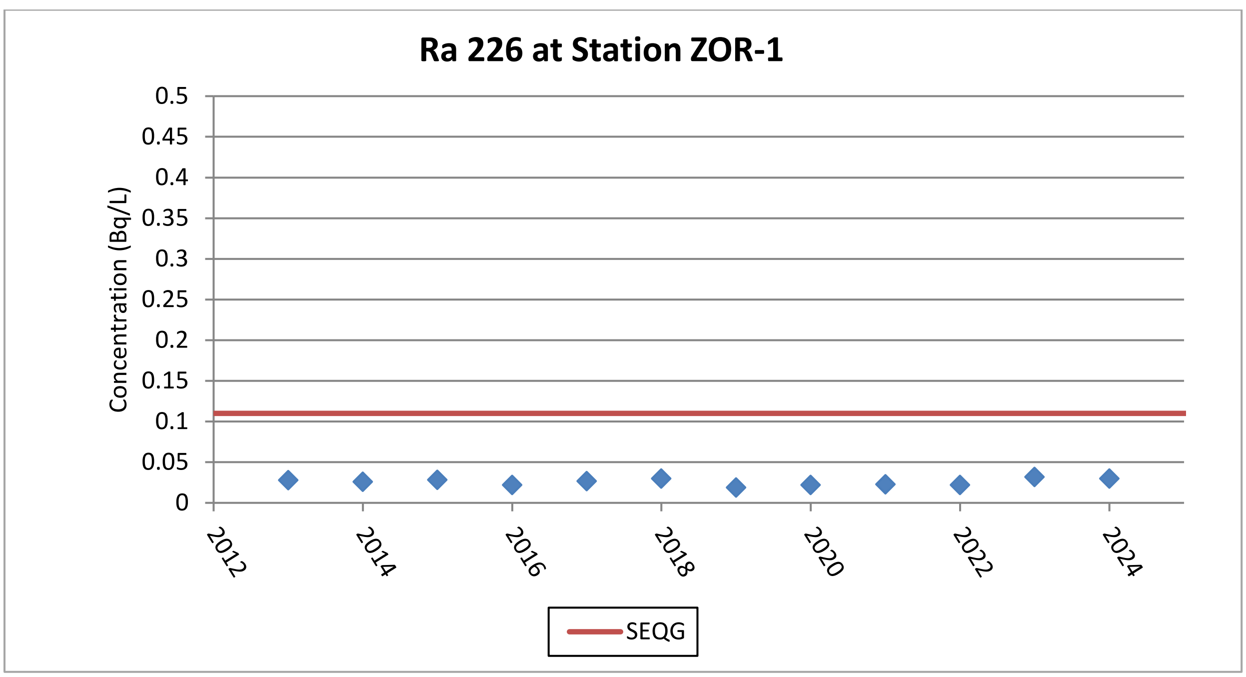
Figure 4.3 ZOR-01 and ZOR-02 sampling locations

Figure 4.3-1 ZOR-01 Outlet of Zora Lake



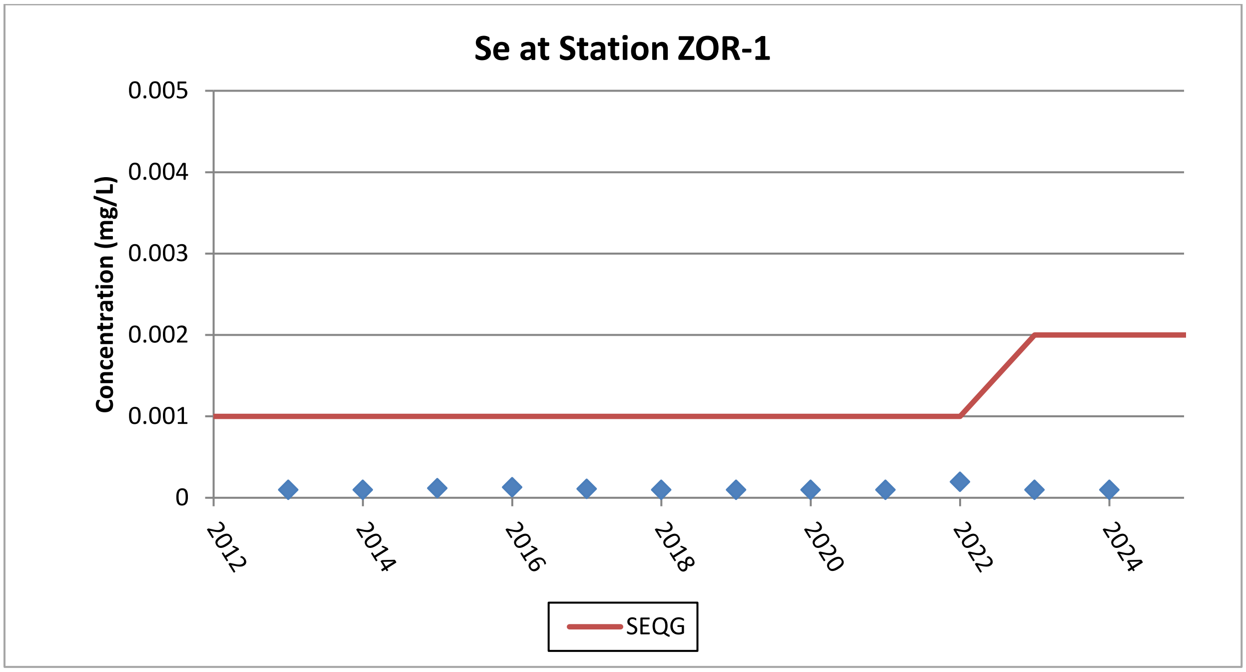
**Sampling initiated in 2013.*

Figure 4.3-2 ZOR-01 Outlet of Zora Lake



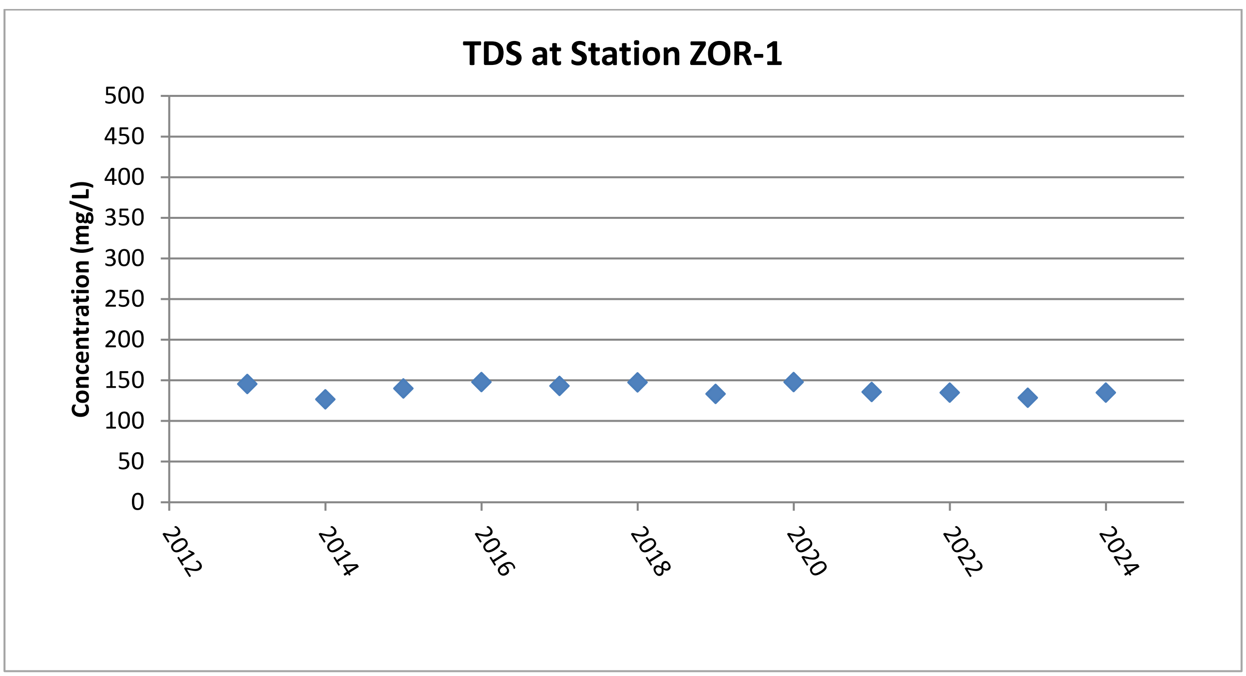
**Sampling initiated in 2013.*

Figure 4.3-3 ZOR-01 Outlet of Zora Lake



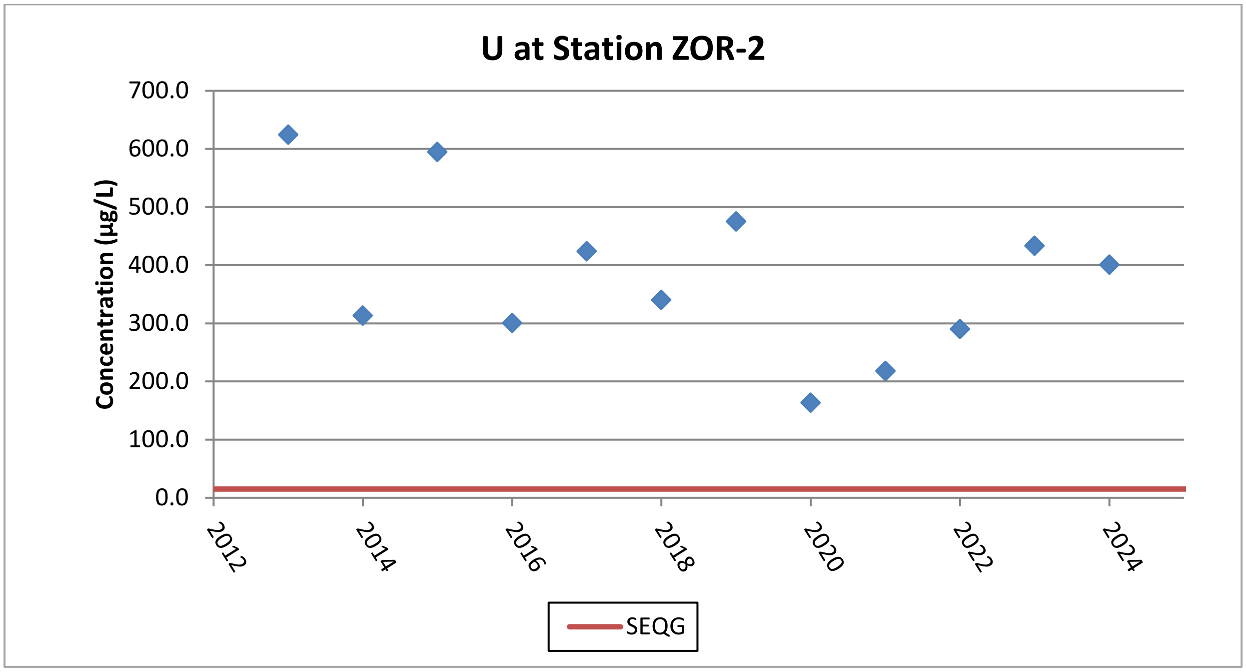
**Sampling initiated in 2013.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.3-4 ZOR-01 Outlet of Zora Lake



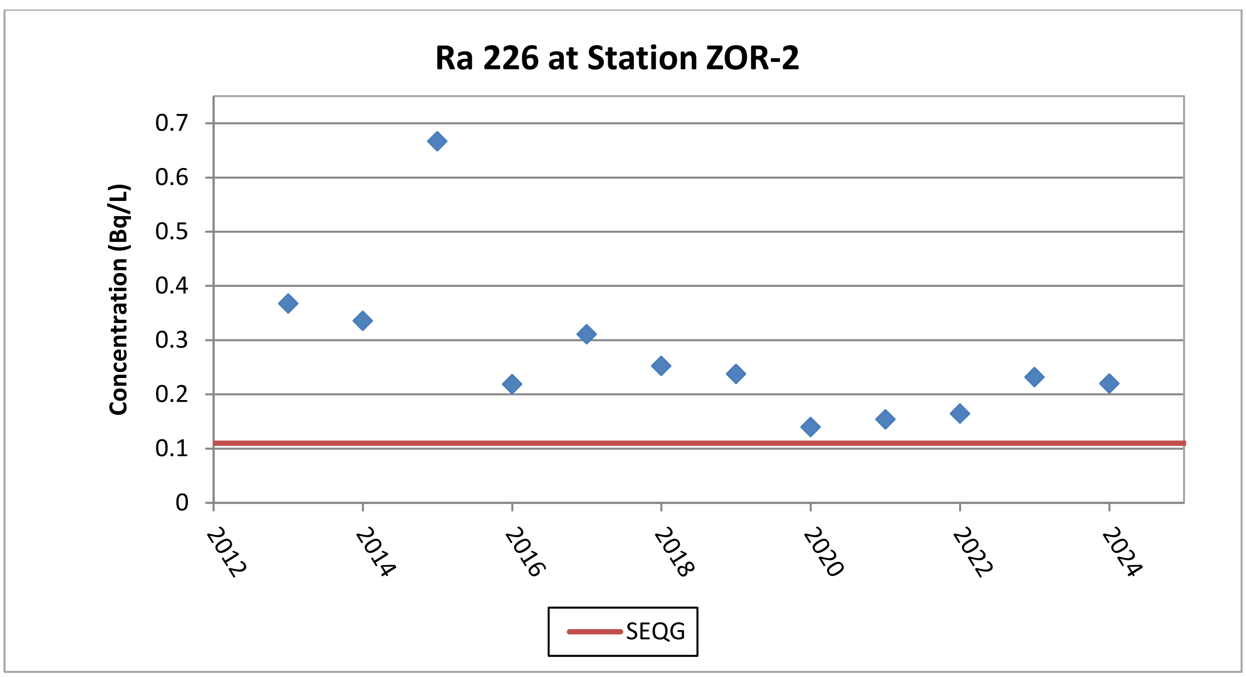
**Sampling initiated in 2013.*

Figure 4.3-5 ZOR-02 Outlet of the Zora Creek Flow Path



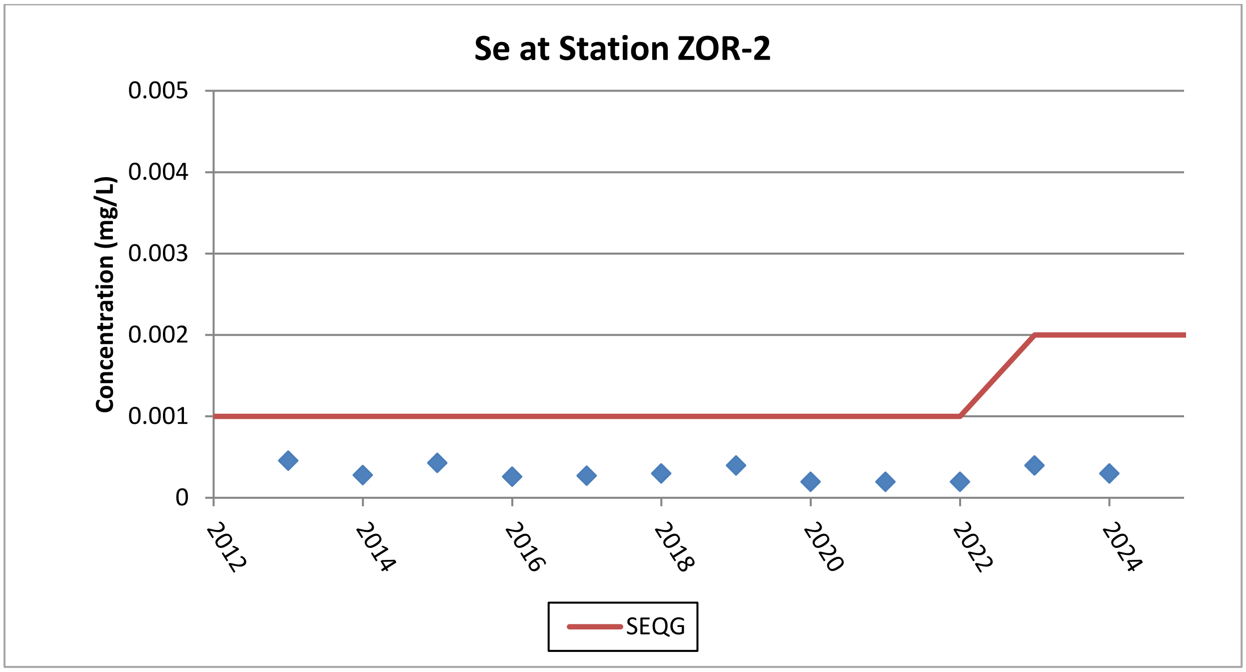
**Sampling initiated in 2013.*

Figure 4.3-6 ZOR-02 Outlet of the Zora Creek Flow Path



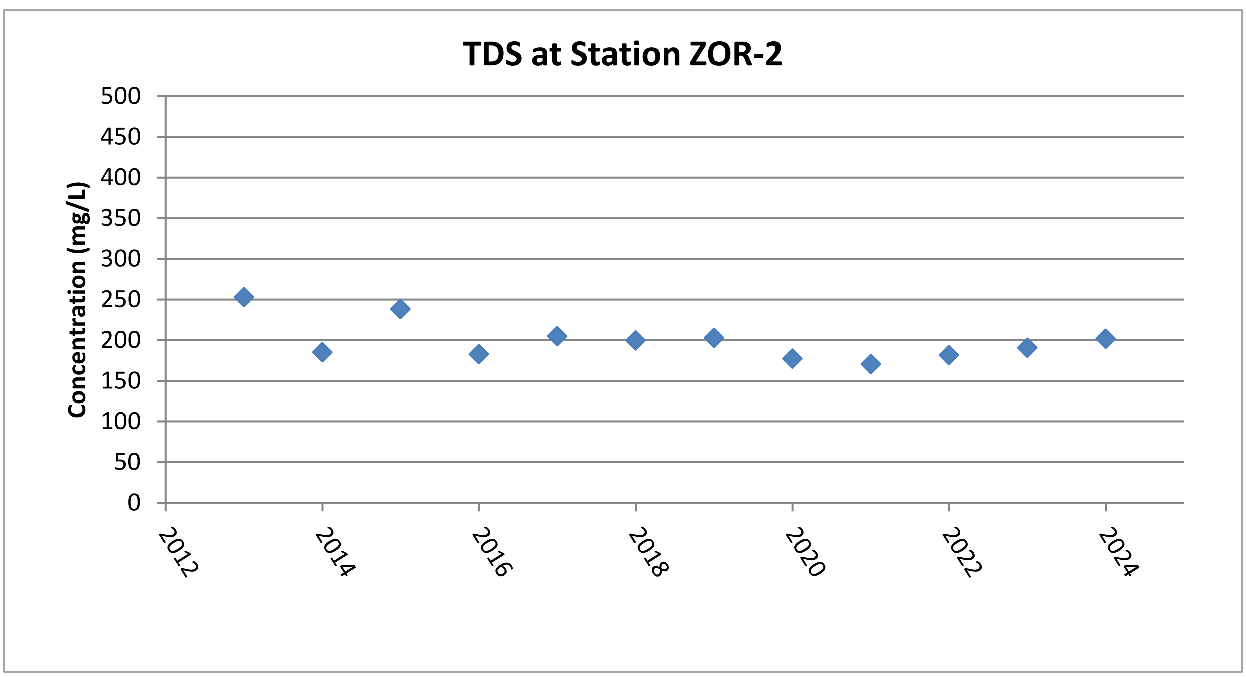
**Sampling initiated in 2013.*

Figure 4.3-7 ZOR-02 Outlet of the Zora Creek Flow Path



**Sampling initiated in 2013.*
SEQG increased from 0.001 mg/l to 0.002 mg/l in 2023.

Figure 4.3-8 ZOR-02 Outlet of the Zora Creek Flow Path



**Sampling initiated in 2013.*

Figure 4.5.1-1 - Air Sampling Locations

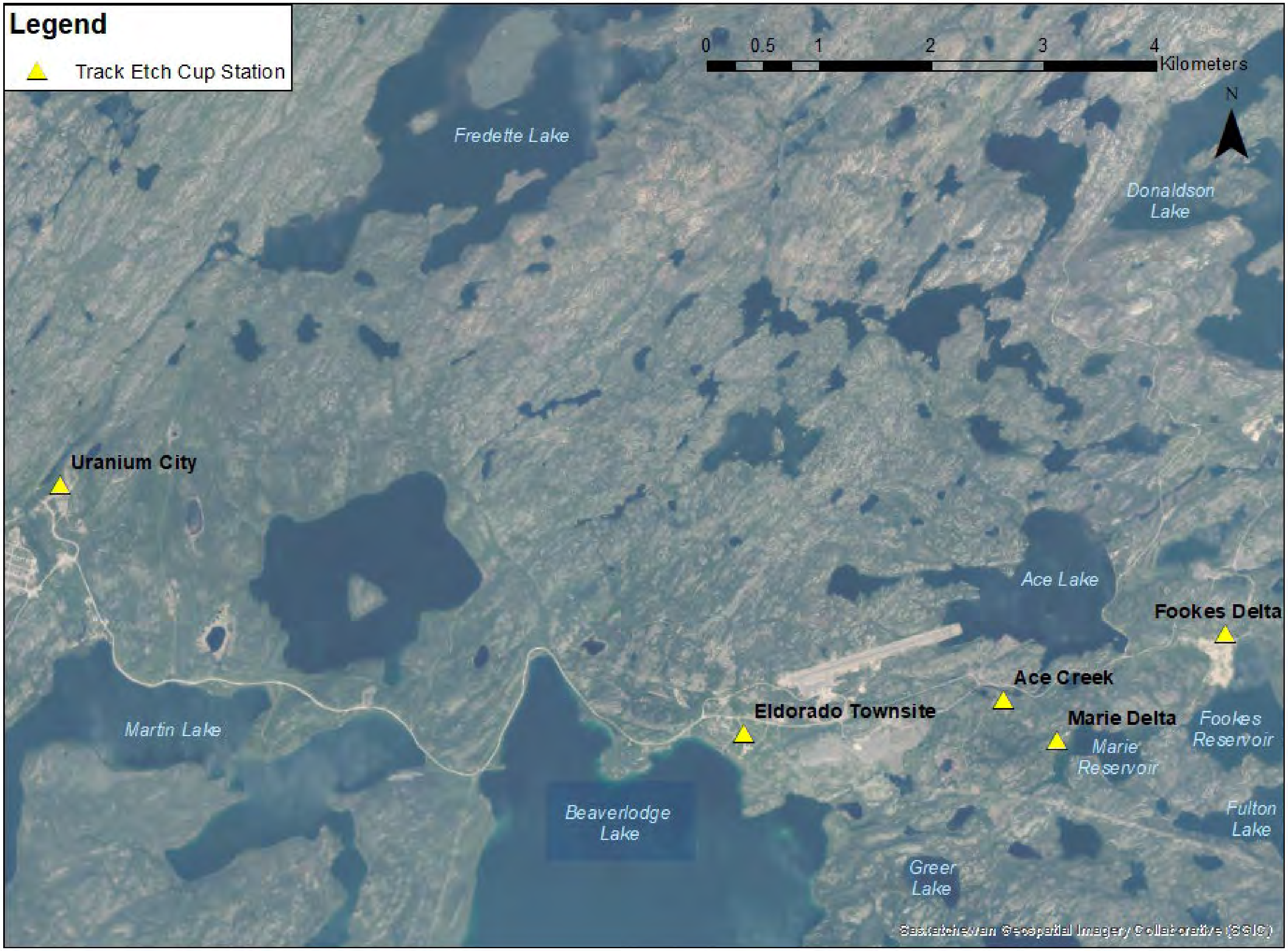
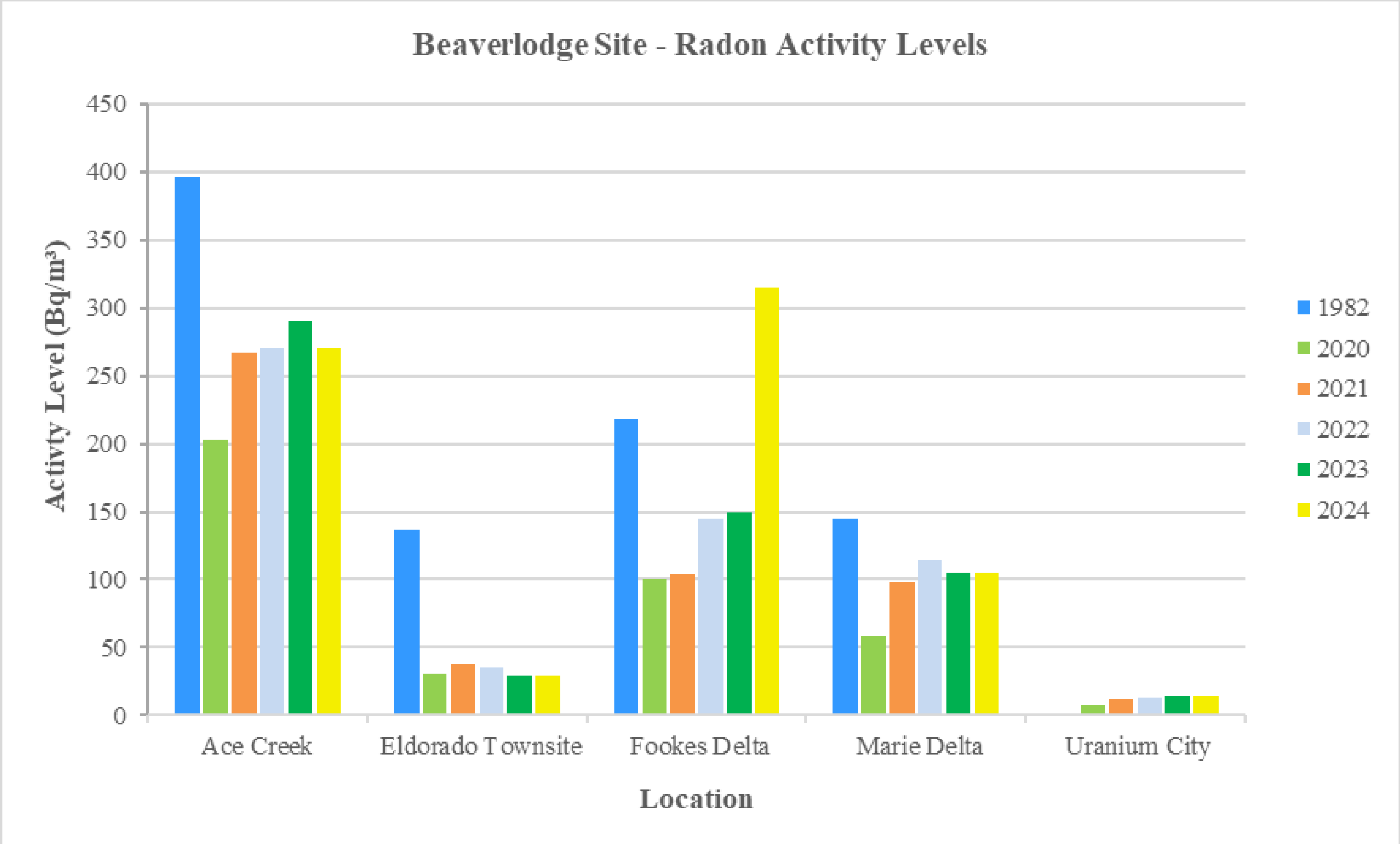


Figure 4.5.1-2 Radon Summary (2020 - 2024 versus 1982)



** In 2020, the second set of the semi-annual radon samples (five stations) were lost in transit to the lab and therefore were not analyzed as per the Beaverlodge EMP. The CNSC and SkMOE were notified of this occurrence on August 20, 2021, once it was discovered results were not reported by the lab.*

APPENDIX A

APPENDIX A

Property Name	Acceptable Gamma Levels	Boreholes Plugged	Stable Mine Openings	Stable Crown Pillar	Water Quality Within Modelled Predictions	Waste Rock	Tailings	IC Monitoring	IC Maintenance	Land Status
EAGLE 4/7	Y (Meets Guideline)	Y	Eagle shaft concrete collar and cap constructed in 2000.	Yes, no indication of instability or subsidence identified.	NA - Shaft Lake water sample	Y	No residual tailings	Inspection of evidence of recent human visitation, condition of concrete cap, evidence of artesian flow from boreole, evidence of significant pit wall failure, condition of vegetation.	Concrete cap maintenance or replacement.	Managed in IC
EAGLE (02 Zone)	Y (Meets Guideline)	Not Required in 2009	No mine openings to surface	NA	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of significant pit wall failure, condition of vegetation.	No maintenance required	Managed in IC
EMAR 16 (K260)	Y (Meets Guideline)	Not Required in 2009	No mine openings to surface	NA	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of significant pit wall failure, condition of vegetation.	No maintenance required	Managed in IC
EMAR 19 (11 Zone)	Y (Meets Guideline)	Not Required in 2009	No mine openings to surface	NA	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of significant pit wall failure, condition of vegetation.	No maintenance required	Managed in IC
EMAR 21 (46 Zone)	Y (Meets Guideline)	Not Required in 2009	Adit was backfilled during original decommissioning. Shows no signs of deterioration	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of significant pit wall failure, condition of adit, evidence of instability of crown pillar above adit, condition of vegetation.	No maintenance required	Managed in IC
EXC ATO 26	Y (Meets Guideline)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of significant waste rock slope failure and condition of vegetation.	No maintenance required	Managed in IC
EXC ACE 1	Y (Risk Assessment)	NA	No mine openings to surface	NA	NA	N	Accessible tailings were covered with 600mm of waste rock. Inaccessible residual tailings were left in place as vegetation cover had established.	Inspection of evidence of recent human visitation, evidence of disturbance of the waste rock covered tailings and condition of vegetation.	No maintenance required	Managed in IC and portion free released
ACE 2	Y (Meets Guideline)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	N	All accessible tailings were covered with 600 mm of waste rock.	Inspection of evidence of recent human visitation, condition of waste rock cover of tailings, and cover of vegetation	No maintenance required	Managed in IC
EXC ACE 3	Y (Meets Guideline)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC
HAB 6	Y (Meets Guideline)	Y	No mine openings to surface	NA	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, evidence of disturbance of the waste rock used to construct the trail, condition of waste rock used to construct the trail and the condition of vegetation on the trail.	No maintenance required	Managed in IC
EXC 2	Y (Meets Guideline)	Y	No mine openings to surface	NA	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC
ATO 26	Y (Meets Guideline)	NA	No mine openings to surface	NA	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC and portion free released
URA MC	Y (Meets Guideline)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, condition of the plugged artesian drill holes, evidence of significant sluffing of waste rock slope and condition of vegetation	No maintenance required	Managed in IC
HAB 3	Y (Lack of Disturbance- No Readings)	Y	No mine openings to surface	No indication of instability or subsidence identified.	Monitor AN-5	N	No residual tailings	Inspection of evidence of recent human visitation, condition of the crown pillar area, condition of vegetation	No maintenance required	Managed in IC
BOLGER 2	Y (Risk Assessment)	NA	No mine openings to surface	NA	NA	Y	No residual tailings	Inspection of recent human visitation, general pit wall stability, evidence of significant pit wall failure, evidence of significant sluffing of waste rock slope, and condition of vegetation	No maintenance required	Managed in IC
RA 6	Y (Meets Guideline)	NA	Adits RA6 was sealed with steel grating using #10 steel rail	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, RA 6 adit closure condition, condition of crown pillar, evidence of slumping of waste rock slopes, evidence of surface seeps from the adit, and condition of vegetation.	Steel grate is scheduled for replacement	Managed in IC
RA 9	Y (Meets Guideline)	Y	Adit was backfilled to a sufficient depth to eliminate future erosion to ensure long term stability.	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, RA 9 adit closure condition, condition of crown pillar, evidence of slumping of waste rock slopes, evidence of surface seeps from the adit, and condition of vegetation.	No maintenance required	Managed in IC
Eagle 1	Y (Meets Guideline)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	Monitor 12 Zone	Y	No residual tailings	Inspection of pit wall stability, vegetation condition, evidence of human visitation, sand cover over areas with elevated gamma, & status of flooded pit	No maintenance required	Managed in IC
ACE 10	Y (Lack of Disturbance- No Readings)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC and portion free released

URA 5	Y (Risk Assessment)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	Monitor AC-14	Y	Tailing spills identified in Ace Catchment Area I and Ace Stope Area were excavated and disposed of underground, covered with 600mm of waste rock or left undisturbed (if inaccessible).	Inspections of areas where residual tailings remain on URA 5 property	No maintenance required	Managed in IC
EXC URA 5	Y (Risk Assessment)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	Y	Accessible tailing spills were covered with 600 mm of waste rock. Tailings at Ace Catchment I were removed.	Inspection of evidence of past tailing spill area for evidence of disturbance, the condition of waste rock slope, and the condition of vegetation.	No maintenance required	Managed in IC
URA 3	Y (Risk Assessment)	Y	25373 Raise secured with a stainless steel cap in 2017.	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	Inspection of evidence of recent human visitation, the condition of stainless steel raise cap.	Stainless steel cap will require periodic material assessments.	Managed in IC and portion free released
ACE 5	Y (Lack of Disturbance- No Readings)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC
JO-NES	Y (Meets Guideline)	Y	810394 Vent Raise and 820694 Vent Raise filled with waste rock in 1982 and covered with a concrete cap. In 2017, stainless steel caps were placed over the concrete caps. Adit was filled with waste rock from site.	Yes, no indication of instability or subsidence identified.	NA	Y	No residual tailings	Inspection of evidence of recent human visitation, general pit wall stability, evidence of significant pit wall failure, evidence of significant sluffing of waste rock within the former pit, condition of stainless steel caps and adit, condition of vegetation.	Stainless steel caps will need periodic material assessments.	Managed in IC and portion free released
HAB 2A	Y (Meets Guideline)	Y	D013810 Raise (645553E; 6611886N) was made secure via installation of stainless steel cap in 2017.	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	Inspection of evidence of recent human visitation, condition of stainless-steel caps installed on D013810 raise and condition of vegetation	Stainless steel cap will need periodic material assessment	Managed in IC
ACE MC	Y (Risk Assessment)	Y	Ace Shaft closed with concrete cap in 1984, secured by covering concrete cap with stainless steel cap in 2016. 103 Raise temporarily sealed in 1984, then sealed with concrete cap in 1985. Secured in 2017 by covering concrete cap with stainless steel cap. 201 Raise was backfilled at decommissioning with no evidence of material settling, additional sorted waste rock was placed on the raise.	Yes, no indication of instability or subsidence identified.	NA	Y	Residual tailings were present on property. Accessible residual tailings were covered with 600mm of waste rock.	Evidence of recent human visitation, past tailings spill areas for evidence of disturbance, condition of vegetation, condition of the waste rock, condition of the backfilled and stainless steel capped raises.	Stainless steel caps will need periodic material assessments.	Managed in IC
URA FR	Y (Lack of Disturbance- No Readings)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	Monitor AC-14	N	No residual tailings	Condition of vegetation, condition of the waste rock seeps, evidence of flow from previously flowing sealed boreholes.	No maintenance required	Managed in IC
URA 4	Y (Meets Guideline)	Y	Fine Ore Bin Raise, Surface Dump Raise, Fay Shaft, and 024094 Vent Raise all were permanently secured with stainless steel cap in 2020, 2018, 2020 and 2017 respectively. Custom Ore Raise, Custom Ore Raise and Access to Custom Crusher (Adit) closed in 2020 with engineered waste rock covers.	No indication of instability or subsidence identified	N/A	Y	Accessible tailings were covered with 600mm of waste rock. Inaccessible areas were assessed on individual basis.	Evidence of recent human visitation, past tailings spill areas for evidence of disturbance, condition of vegetation, condition of the waste rock, condition of the stainless steel capped mine openings and the engineered rock covered mine openings.	Stainless steel caps will require periodic material assessments	Managed in IC
ACE 7	Y (Meets Guideline)	NA	Shaft adit closed during operation and is now buried, adit closure is sufficient and no additional investigation required.	Yes, no indication of instability or subsidence identified.	N/A	Y	No residual tailings	Evidence of recent human visitation, condition of the waste rock, condition of vegetation.	No maintenance required	Managed in IC
ACE 8	Y (Meets Guideline)	Y	Verna Shaft (645470E: 6606022N) closed with concrete cap in 1982, secured by replacing concrete cap with a stainless steel cap in 2018	Yes, no indication of instability or subsidence identified.	N/A	Y	No residual tailings	Evidence of recent human visitation, condition of the waste rock, condition of vegetation, condition of the stainless steel cap.	Stainless steel cap will require periodic material assessments	Managed in IC
ACE 1	Y (Risk Assessment)	Y	105#2 Raise closed with reinforced concrete cap during September 1982, resecured with engineered rock cover in 2018. 2157 Raise and Finger Raise sealed during summer 1984 with concrete caps, further secured in 2017 by covering the existing concrete caps with stainless steal caps. 195 Access Raise and 195 Raise were sealed in summer of 1984, field verification conducted in 2019 and additional sorted waste rock placed above the area.	Placement of cover consisting of 1.5 to 2 meter berm over identified areas of risk placed in September 2016. No indication of instability or subsidence identified	NA	N	Residual tailings covered with 600mm of waste rock, residual tailings in inaccessible areas left undisturbed	Evidence of human visitation, condition of vegetation, past tailings spill areas for evidence of disturbance, evidence of crown pillar subsidence, condition of the stainless steel caps and the covered raises.	Stainless steel caps will need periodic material assessments.	Managed in IC and Free Release
ACE 3	Y (Meets Guideline)	Y	Bored Vent Raise had a concrete cover installed in 1984, permanently sealed in 2017 with a stainless steel cap over the concrete cap.	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of the stainless steel capped raise.	Stainless steel cap will require periodic material assessments	Managed in IC
ACE 9	Y (Risk Assessment)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	NA	N	Residual tailings from pipeline infrastructure dismantling were removed. Other accessible tailings were covered with 600mm of waste rock. Inaccessible areas left undisturbed.	Evidence of recent human visitation, past tailings spill areas for evidence of disturbance, evidence of significant erosion along the creek channel, and condition of vegetation	No maintenance required	Managed in IC

EXC URA 7	Y (Lack of Disturbance- No Readings)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	Monitor at AC-14	N	No residual tailings	No monitoring required	NA	Managed in IC
GC 2	Y (Meets Guideline)	NA	No mine openings to surface	NA	NA	N	Tailings considered inaccessible, showed signs of revegetation or were within Marie Reservoir drainage basin, and were left undisturbed.	Evidence of human visitation, past tailings spill areas for evidence of disturbance, condition of vegetation.	No maintenance required	Managed in IC
NW 3 Ext	Y (Meets Guideline)	NA	Verna mine 026594 Ventilation Raise has a stainless steel cap covering the existing concrete cap, 026594 Finger Raise and Verna Manway had concrete caps replaced with stainless steel caps.	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of stainless steel caps.	Stainless steel caps will require periodic material assessments	Managed in IC
NW 3	Y (Meets Guideline)	NA	72 Zone Portal (645831E: 6605769N) was sealed with waste rock by backfilling to a depth of 17m in 1982.	Yes, no indication of instability or subsidence identified.	NA	N	No residual tailings	Evidence of recent human visitation, condition of the waste rock, condition of vegetation, condition of the 72 Zone Portal plug.	No maintenance required	Managed in IC
ACE 14	Y (Risk Assessment)	NA	No mine openings to surface	Yes, no indication of instability or subsidence identified.	N/A	N	Tailings considered inaccessible, showed signs of revegetation or were within Marie Reservoir drainage basin, and were left undisturbed.	Evidence of recent human visitation, past tailings spill areas for evidence of disturbance, condition of vegetation.	No maintenance required	Managed in IC
EXC ACE 15	Y (Lack of Disturbance- No Readings)	NA	No mine openings to surface	NA	NA	N	No residual tailings	No monitoring required	No maintenance required	Managed in IC and Free Release
EMAR 1	Y (Meets Guideline)	Y	No mine openings to surface	Yes, no indication of instability or subsidence identified.	Monitor at DB-6	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of pit wall, condition of waste rock, evidence of crown pillar subsidence, water quality monitoring downstream of Dubyna Lake (DB-6).	No maintenance required	Managed in IC
EXC 1	Y (Meets Guideline)	Y	Vertical mine openings: 013904 Raise and 013905 Raise were permanently sealed by covering original concrete cap with a stainless steel cap in 2017. Vertical Mine opening Heater Raise was permanently sealed by replacing concrete cap with stainless steel cap in 2019. Two sealed adits: Haulage Adit and The Service Adit both had two walls constructed of 2" by 6" timbers with reinforced wire and 6" shotcrete applied to outside of form to prohibit access to shaft collar and entrance of Adit. The Vent Plant Raise located in the Haulage Adit was capped in 1975 and further secured with waste rock.	Yes, no indication of instability or subsidence identified.	Monitor at AN-5	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of waste rock, evidence of crown pillar subsidence, condition of the three stainless steel capped raises and two sealed adits	Stainless steel caps will require periodic material assessments	Managed in IC
HAB 1	Y (Meets Guideline)	Y	013918 Raise, 013909 Raise and 013929 Raise were backfilled with waste rock during mining of small pit, 013927 Raise was backfilled with waste rock and capped with concrete cap during original decommissioning. In 2017 a stainless steel cap covered the concrete cap.	Yes, no indication of instability or subsidence identified.	Monitor at AN-5	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of the waste rock, evidence of crown pillar subsidence, condition of the beaver dam at the outlet of Beatrice Lake and evidence of flow from the southwest arm of Beatrice Lake, condition of the backfilled and stainless steel capped raises, water quality monitoring at the outlet of Pistol Lake (AN-5)	Stainless steel cap will require periodic material assessments.	Managed in IC and Free Release
HAB 2	Y (Meets Guideline)	Y	The Hab shaft was made secure in 2018 when the original concrete cap was replaced with a stainless steel cap.	Yes, no indication of instability or subsidence identified.	Monitor at AN-5	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of waste rock, condition of the stainless steel cap, water quality monitoring at the outlet of Pistol Lake (AN-5).	Stainless steel cap will require periodic material assessments.	Managed in IC
URA 1	Y (Meets Guideline)	Y	NA	NA	NA	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of the waste rock, condition of cover on Lowe Fay Pit, condition of the previously flowing boreholes BH-001, BH-002, BH-003, BH-004, BH-005, BH-006, BH-007, BH-15, and BH-31, and evidence of any seepage from former open pit (Lower Fay Pit).	No maintenance required	Proposed for IC
URA 7	Y (Meets Guideline)	Y	CB-1 Access Raise (engineered rock cover), Sorting Plant Raise and Sorting Plant Bin (both engineered rock cover), and Waste Haul Adit (backfilled).	NA	NA	Y	All accessible tailings were covered with 600 mm of waste rock.	Evidence of recent human visitation, condition of vegetation, condition of waste rock, evidence of disturbance to covered tailings, condition of mill cover and note areas of any subsidence, and condition of engineered rock covered mine openings and backfilled openings and related ID plates.	No maintenance required	Proposed for IC
URA 6 EXC URA 6 ACE 19	Y (Risk Assessment)	Y	NA	NA	Monitor at TL-7	NA	No residual tailings	Evidence of recent human visitation, condition of vegetation, inspection of Minewater outflow channel for blockages of the channel (sloughing, beaver dams, etc.), note condition of obsolete Minewater saddle dam, and evidence of beaver dams.	No maintenance required	Proposed for IC

ACE 17 EXC ACE 17 EXCE 18 EXC ACE 14 ACE 15 EX GC 2 GORE GC 4 EXC GC 4	Y (Meets Guideline)	NA	No mine openings to surface	NA	Monitor at TL-4	Y	Residual tailings were present on properties. Accessible residual tailings were covered with 600mm of waste rock. Inaccessible areas left undisturbed.	Evidence of recent human visitation, condition of vegetation, regular inspection of residual tailings deltas, condition of cover, and evidence of disturbance to the covered tailings delta and tailings line right of way, check secondary outlet of Marie Reservoir and powerline right-of-way. geotechnical inspection of Marie Outlet structure, and evidence of beaver dam (Marie Reservoir Outlet).	No maintenance required	Proposed for IC
GC 1 NW 2 GORE 1 GC 3 NW 1 EXC GC 3 GC 5 GORE 2 LEE 4 LEE 3 LEE 2 EXC LEE 3	Y (Meets Guideline)	NA	No mine openings to surface	NA	Monitor at TL-3	Y	Residual tailings were present on properties. Residual tailing on the delta are covered with 1.0m to 1.6 m of material (waste rock, sand, and general fill). Inaccessible areas left undisturbed.	Evidence of recent human visitation, condition of vegetation, regular inspection of residual tailings deltas, condition of cover, evidence of disturbance to the covered tailings delta and tailings line right of way, geotechnical inspection of Fookes Outlet structure and Delta, subsidence of waste disposal area, and evidence of beaver dam (Fookes Reservoir Outlet).	No maintenance required	Proposed for IC
BOLGER 1	Y (Meets Guideline)	Y	No mine openings to surface	NA	Monitor at AC-6A	Y	No residual tailings	Evidence of recent human visitation, condition of vegetation, condition of waste rock, regular inspection of waste rock slope, pit wall stability, channel, channel slope, and water quality at AC-6A.	No maintenance required	Proposed for IC

APPENDIX B

APPENDIX B

Beaverlodge

Decommissioned Beaverlodge Mine/Mill Site

2024 Geotechnical Inspection Report

September 2024

Table of Contents

1.0 INTRODUCTION

From May 27 – May 29, 2024, Cameco Corporation (Cameco) personnel were on site to conduct the annual geotechnical inspection.

The 2015 geotechnical inspection completed by SRK concluded that overall; the Fookes cover, and the two outlet structures were performing as expected. The report concluded that it would be reasonable for Cameco to move towards final close out and a return to Institutional Control for the properties associated with the cover and outlet structures (*SRK*, *2016*). SRK recommended that in the meantime, documented inspections by Cameco and/or regulators should continue on an annual basis. A follow-up inspection was completed in 2020 by SRK, who noted that there were no observable changes to the landform and no concerns identified. Following the 2020 inspection, SRK recommended that Cameco continue with annual inspections using the existing inspection protocols, and that once the properties are transferred to the IC Program that they are inspected every five years for two cycles, then less frequently after that if the areas remain stable.

With the transfer of the Ace, Hab and Dubyna properties into the IC Program in 2024 the geotechnical inspections related to the crown pillars were not completed as part of this inspection. The geotechnical inspection completed in 2024 consisted of inspecting conditions at the Fookes Delta, and the two outlet spillways at Fookes and Marie reservoirs. The Zora Creek Stream Reconstruction project was inspected on July 23, 2024.

Figure 1 provides the locations of the Fookes Delta, the outlet structures for Fookes and Marie reservoirs, and the location of the Zora Creek Stream Reconstruction project.

Figure 1. Geotechnical Inspection Locations

2.0 OUTLET STRUCTURE INSPECTIONS (FOOKES & MARIE RESERVOIR)

Both spillway structures consist of a rip-rap lined open channel (with trapezoidal cross-section), which discharge into a rip-rap lined stilling basin. The rip-rap lining in both the spillway channels and the stilling basins was intruded with grout for added erosion protection; however, the rip-rap in the spillway was designed to be stable in the absence of grout intrusion. The spillways are capable of passing a 500-year flood event with a depth of 0.3 m (680 L/sec) and 0.35 m (760 L/sec) at the entrances of the Fookes and Marie reservoir outlet spillways, respectively.

The cracking and displacement of the grout-intruded rip-rap within the two spillways was anticipated in their original designs and does not affect the performance of either outlet spillway. Additional cracking and ice-jacking are anticipated over time, but the condition of the two outlet spillways continues to be satisfactory and is expected to remain so moving forward (SRK 2021).

2.1 General Observations

Spring of 2024 saw a return to more normal snowpack and spring precipitation, following 4 years of above average snowpack and precipitation. In 2024, freshet came early and the snowpack was largely gone by the end of April. April and May 2024 were warmer than normal which contributed to the early freshet.

Comparisons of photos between inspection years is presented in **Section 4.0**. Photos taken in 2024 were from late May. Due to the early freshet and the abnormally mild May the vegetation growth in 2023 and 2024 was more developed than in 2022.

2.2 Inspection Checklist for Outlet Structures

The specific elements to be evaluated during these inspections include the following:

I. Check the condition of the spillway channel, with a view to confirming the grout-intruded rip-rap is still in place.
II. Check the condition of the rip-rap on either side of the spillway, with a view to confirming no erosion has occurred due to overtopping associated with an extreme flood event.
III. Document conditions with photographs.

2.3 Marie Reservoir Outlet Inspection

I. Check the condition of the spillway channel, with a view to confirming the grout-intruded rip-rap is still in place.

Previously, SRK identified that the grout-intruded rip-rap is relatively intact, except near the spillway entrance where one large block and several smaller ones on the right side of the spillway (looking downstream from Marie Reservoir) have been displaced due to ice-jacking.

In addition to the comparison photos provided in **Section 4.0,** photos taken during the 2024 inspection providing photographic record of the condition of the Marie Reservoir spillway channel are included in **Appendix A**. The spillway channel remains in a similar condition as observed in previous inspections.

The observations and photographic record from the 2024 inspection support the observations made by SRK that the spillway continues to perform as designed (*SRK 2021*).

II. Check the condition of the rip-rap on either side of the spillway, with a view to confirming no erosion has occurred due to overtopping associated with an extreme flood event

It has been noted that higher than normal water levels over the last number of years have resulted in some natural debris and dimensional lumber along the leading edge of the rip-rap on either side of the spillway as well as along the edges of the channel. Following the 2022 inspection, all dimensional lumber was removed from the area as part of the final clean-up in preparation for transferring properties to the Province of Saskatchewan's Institutional Control Program. Despite the increased flows the spillway appears to be performing as expected with no erosion of the rip-rap embankment on either side of the spillway. No new debris was noted in the channel in 2024.

Despite the unusually high flows observed from 2020 to 2023 the Marie Reservoir outlet spillway has, in general, changed little since 2004. Photographic comparison to previous inspection photos are provided in **Section 4.0**. The grout-intruded rip-rap is relatively intact except near the spillway entrance where one large block slab and several smaller ones on the right side of the spillway (looking downstream from Marie Reservoir) have been displaced due to ice-jacking. However, the blocks appear to have settled into a stable position (**Appendix A, Photo A1**).

As noted in previous geotechnical inspections beaver activity at the outlet of Marie Reservoir has resulted in the presence of a small dam. The crest of the beaver dam appears to be a similar height to previous. Sapling growth is evident on the dam, which may be a sign that the beaver is not actively maintaining the structure. This condition will continue to be monitored during future inspections. There are currently no plans to remove the beaver dam as it is naturally occurring. A photo of the Marie Outlet structure documenting the beaver dam is provided in **Section 4.0**.

2.4 Fookes Reservoir Outlet Inspection

I. Check the condition of the spillway channel, with a view to confirming the grout-intruded rip-rap is still in place

Similar to the Marie Outlet, the grout-intruded rip-rap along the length of the Fookes Reservoir outlet spillway shows signs of cracking. In addition, there has been some ice-jacking, with the most significant displacements located near the upper part of the spillway (i.e., on the sides of the spillway, within 5 to 6 m of the spillway entrance) (**Appendix B, Photo B1)**. The base of the channel does not show signs of significant displacement, and the middle to lower parts of the spillway remain intact.

In addition to the comparison photos provided in **Section 4.0,** photos taken during the 2024 inspection providing photographic record of the condition of the Fookes Reservoir spillway channel are included in **Appendix B**. Following the 2022 inspection, all dimensional lumber was removed from the area as part of the final clean-up in preparation for transferring properties to the Province of Saskatchewan's Institutional Control Program. No new debris was noted in 2024.

II. Check the condition of the rip-rap on either side of the spillway, with a view to confirming no erosion has occurred due to overtopping associated with an extreme flood event

Despite the increased flows the spillway appears to be performing as expected with no erosion of the rip-rap embankment on either side of the spillway. Photographic comparison to previous inspection photos is provided in **Section 4.0**.

3.0 FOOKES DELTA

3.1 General Observations

Historically, the area along the northeast side of the Fookes Delta has contained standing water. The Fookes Delta cover in this area was purposefully graded to establish an overall preferential gradient towards Fookes Reservoir. Figure 2 provides an aerial photo of the cover, with the surface drainage paths identified. The drainage channels on the delta provide an overall gradient towards Fookes Reservoir although some ponding of water was anticipated along the northern edge of the delta during freshet and precipitation events due to the relatively shallow gradient at that spot (SRK 2008).

During the 2024 inspection of Fookes Delta, it was noted that the drainage area running along the north side of the delta contained water and was performing as designed. Wetland type grasses are growing well in this area. The drainage channel as it approached Fookes Reservoir was dry. The small amount of ponded water observed at the base of the north access ramp on the waste rock cover during the 2022 inspection, was dry in 2023 and 2024.

Generally, the cover was in good condition showing no areas of excessive erosion, despite greater than normal precipitation and the elevated water levels seen in Fookes Reservoir over the past number of years. The east and west berms were in good condition with no evidence they have been breached by vehicular traffic. In 2022, there was some localized ATV traffic noted on the Fookes Delta cover resulting from remediation work conducted on the delta (removing piezometer pipes), however no new disturbance was noted since then. Vegetation is well established within 50 m of the shoreline and the engineered drainage structures. Vegetation continues to gradually encroach and thicken over much of the delta.

Photographic comparison to previous inspection photos is provided in **Section 4.0**. Photos showing the conditions encountered during the site inspection are provided in **Appendix C**.

3.2 Inspection Checklist

I. Check for evidence of new tailing boils or tailings exposure due to frost action

II. Check for evidence of significant erosion of the cover material

   a. Trench along the northeast edge of the delta (sand flows, erosion of waste rock, slumping, etc.) – maintain photographic and GPS record (identify areas of concern on map).

   b. Cover limit along its contact with Fookes Reservoir – maintain photographic and GPS record (identify areas of concern on map) where sand from the delta cover extends into the reservoir.

III. Ensure erosion-protection devices are performing as expected on former north access road

   a. Waterbars (chevrons)

   b. Diversion ditches

c. Erosion of cover adjacent to the former access road

IV. Ensure earthen berms are in place to limit access to the delta

3.3 Fookes Cover Inspection

I. Check for evidence of new tailing boils or tailings exposure due to frost action

No new boil development was noted on the delta.

II. Check for evidence of significant erosion of the cover material

The shoreline, where the edge of the sand cover contacts Fookes Reservoir, was inspected and was in good condition. Photos taken in 2024 continue to show significant vegetation coverage along the shoreline.

The 2024 inspection showed that water is being captured in the drainage channels as per design and there is no evidence of any significant erosion of the cover. The drainage channel continues to vegetate heavily as can be seen in the photos in Section 4 and **Figure 2**.

The Fookes Delta cover is in good condition and showed no sign of excessive erosion. As vegetation continues to establish on the shoreline, it will increase the stability of the cover.

III. Ensure erosion protection devices are performing as expected on former north access road

As part of the design and installation of the covers in 2005 and 2007, the area considered most vulnerable to erosion was in the area on and below the access ramp at the northwest corner of the delta (*SRK, 2010*). The general condition of the ramp is very good. Access to this ramp is closed off by a windrow of material at the top of the ramp. The water bars (chevrons, **Figure 3**) are performing as expected and continue to show little sign of erosion (**Appendix C, Photo C1**).

In addition to the chevrons, run-out structures were installed to carry away excessive water during extreme run-off events. These run-out structures are also in good shape with no eroded material beyond that observed during previous inspections (**Appendix C, Photo C3**).

IV. Ensure earthen berms are in place to limit access to the delta

Since the earthen berms protecting the east and west access points to the Fookes Delta were repaired and reinforced in 2011 and 2012 respectively, there has not been any new evidence of passenger vehicular traffic accessing the delta. No new disturbance was noted on the delta in 2024. A photo of the berm located on the east access point is provided in Appendix C (**Photo C7**).

Figure 2 Fookes Overview

Figure 3. Fookes chevron and runout structure

4.0 PHOTOGRAPHIC COMPARISONS

Beaver dam constuction at the outlet structure for Marie Reservoir

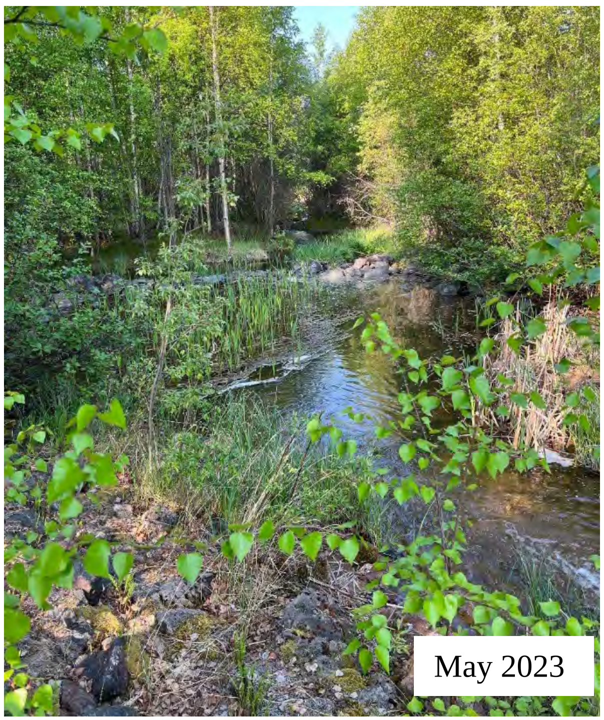

May 2022


May 2023

Marie Outlet Structure looking upstream

Marie Outlet Structure looking downstream


May 2022


May 2023

May 2024

Marie Reservoir Outlet Structure

– Ice jacked block of grout intruded rip-rap

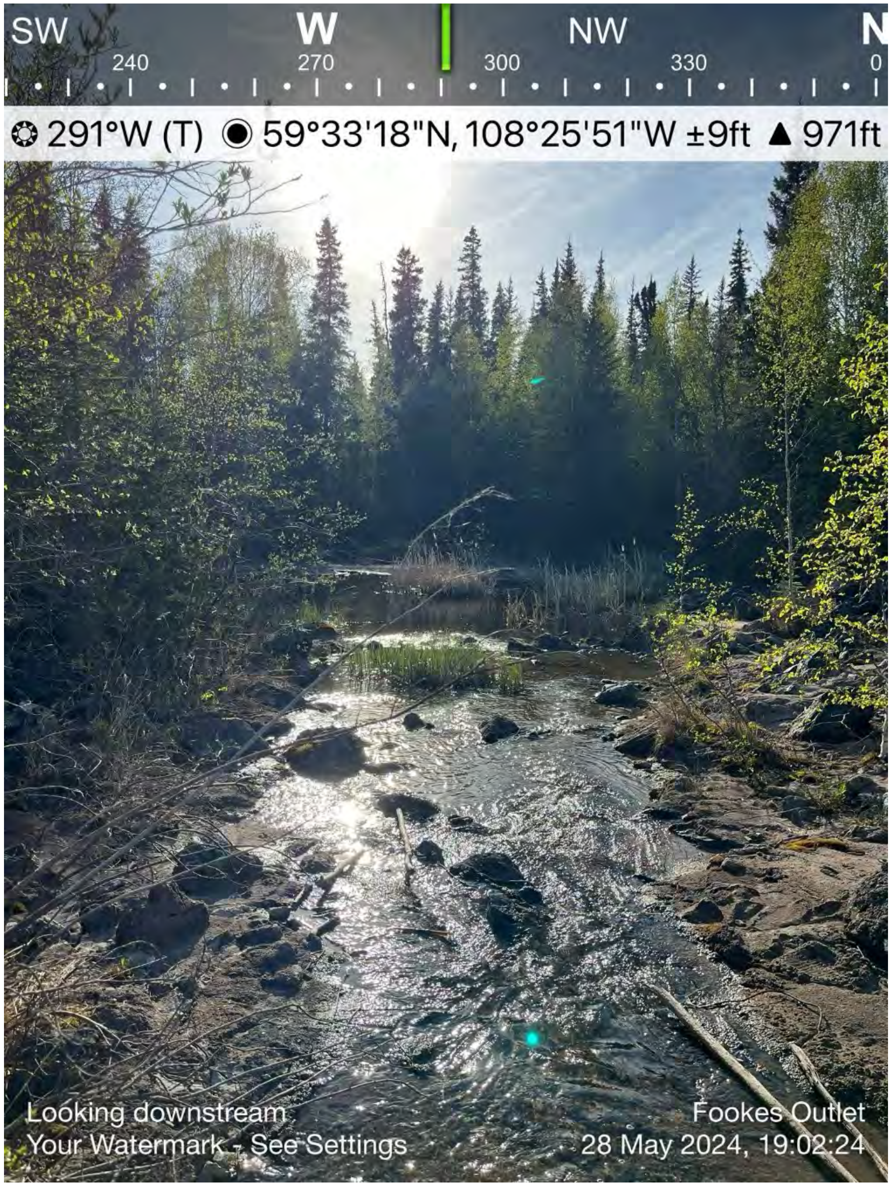
Fookes Outlet Structure looking upstream


May 2022


May 2023


May 2024

Fookes Outlet Structure looking downstream



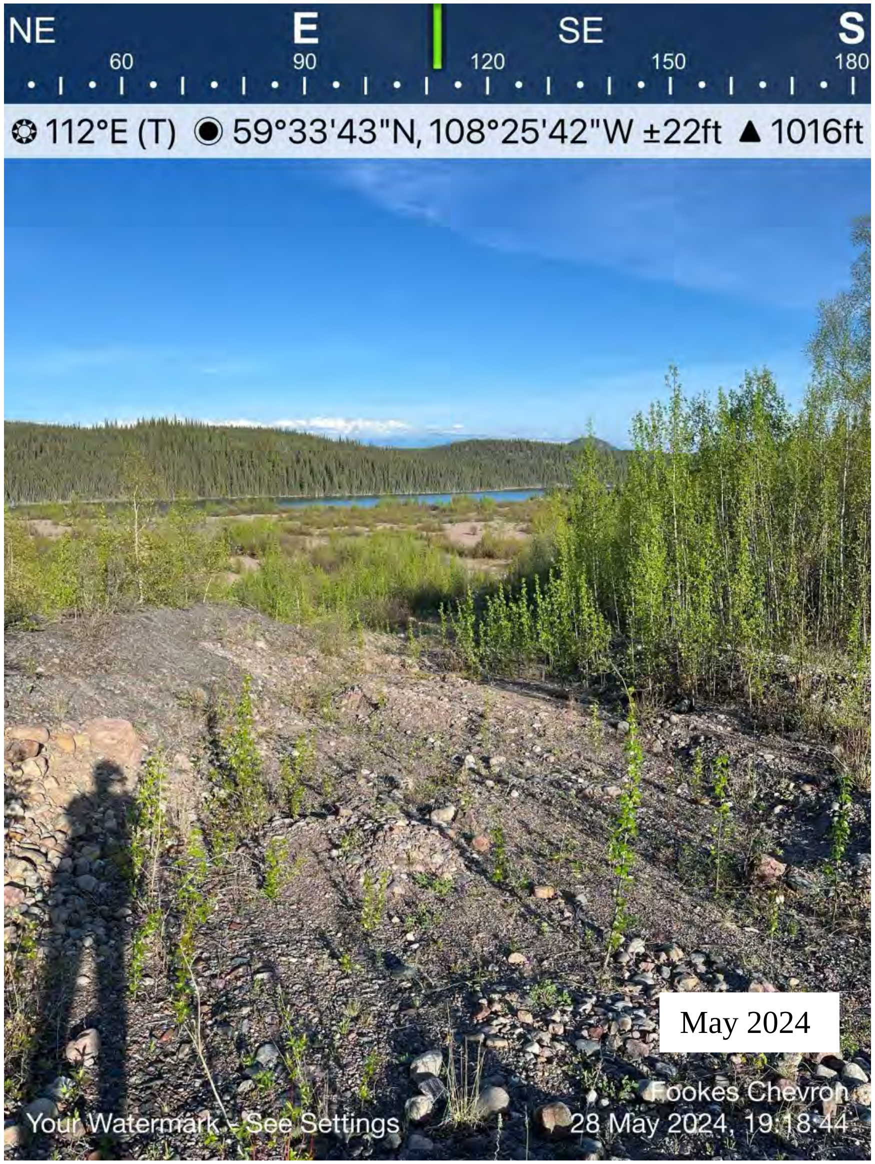
Drainage area looking NW towards access point on hill

Fookes Cover Shoreline

May 2023

Note: pictures are not taken from the exact same locations

Chevrons in place on north access point to the Fookes Delta



5.0 ZORA STREAM RECONSTRUCTION

Remedial work completed at the Bolger Pit site from 2014 to 2016 included the excavation of a channel through the existing Bolger Waste Rock Pile and the relocation of the excavated waste rock to the Bolger Pit. The intent of this work was to improve water quality, specifically uranium concentrations, in both Zora Creek and Verna Lake and to re-establish a more natural Zora Creek flow path.

In the Zora Creek Design Report, it was recommended to complete a geotechnical inspection in each of the first two years following construction. Subsequently, SRK completed geotechnical inspections, in 2017 and 2018, of the reconstructed Zora Creek flow path. Both the 2017 and 2018 inspections found that there were no immediate or significant areas of concern with regards to the performance or geotechnical stability of the reconstructed flow path. Continued monitoring of water quality and the potential for accumulated sediment was recommended. In addition, it was recommended that the next geotechnical inspection occur in 2023, or earlier if requested by Cameco. Cameco requested a geotechnical inspection for the area be completed in 2020 to align with other geotechnical inspections occurring at the decommissioned Beaverlodge properties.

The 2020 SRK inspection identified that from a geotechnical perspective, it would be reasonable for Cameco to transfer the properties associated with the Bolger Pit and the Drainage Channel to the IC Program (SRK 2021). However, in the interim it was recommended that Cameco continue with annual inspections of the area as part of the annual regulatory inspection. It was also noted that involvement by a geotechnical engineer should not be required except in the unlikely event that significant geotechnical concerns arise.

The Zora Creek Stream Reconstruction area was inspected on July 23, 2024. The inspection was completed in the morning and there was dense smoke from a nearby forest fire (Murmac Bay of Beaverlodge Lake). Overall, the conditions observed have not changed significantly from previous years. It was noted that there was minimal flow through the channel during the inspection. All photos referenced below are provided in Appendix D. The results of the 2024 assessment of the Bolger Pit and the Drainage Channel can be summarized as follows:

- The beaver dam located at the outlet of Zora Lake (inlet to the stream reconstruction) remains intact, with significant vegetation growth on it (Photo D06).
- The embankments along the sides of the channel remain stable with no evidence of sloughing or instability. Fine material that was placed on the waste rock along the lower bench to allow vehicle traffic during construction has, in places, settled into the voids in the underlying waste rock (Photos D07, D08).
- Vegetation along the downstream portion of the channel (near the stilling basin) is now well established and thickening (Photos D03, D04). Vegetation along the eastern portion of the reconstruction is also establishing with grasses, alders and willows (Photo D05).

6.0 REFERENCES

SRK Consulting (2008). Beaverlodge Decommissioning: 2007 Construction Activities at the Fookes Lake Delta. Report prepared for Cameco Corporation, February 2008.

SRK Consulting (2010). Beaverlodge Project: Inspection of Fookes Delta and Outlet Structures at Fookes Reservoir and Marie Reservoir. Report prepared for Cameco Corporation, September 2010.

SRK Consulting (2016). Beaverlodge Project: Inspection of Select Areas within the Fookes and Marie Reservoirs and Ace Creek Catchment. Report prepared for Cameco Corporation, January 2016.

SRK Consulting (Canada) Inc. (2021). Beaverlodge Project – 2020 Geotechnical Inspection Report - Decommissioned Beaverlodge Mine/Mill Site. Prepared for Cameco Corporation

7.0 APPENDICES

Appendix A – Marie Reservoir Outlet photos

Appendix B – Fookes Reservoir Outlet photos

Appendix C – Fookes Delta photos

Appendix D – Zora Stream Reconstruction photos

Appendix A
Marie Outlet Photos

Photo A1 – Marie Reservoir Spillway ice jacked block near entrance inlet (May 2024)

Photo A2 - Marie Reservoir Spillway inlet May 2024; beaver dam first noted in 2018

Photo A3 – Marie Reservoir Spillway (water flowing into stilling basin) (May 2024)

Photo A4 – Marie Reservoir Spillway looking northeast (May 2024)

Appendix B
Fookes Outlet Photos

Photo B1 – Fookes Reservoir Spillway looking into Fookes Reservoir

Photo B2 – Fookes Reservoir Spillway looking upstream

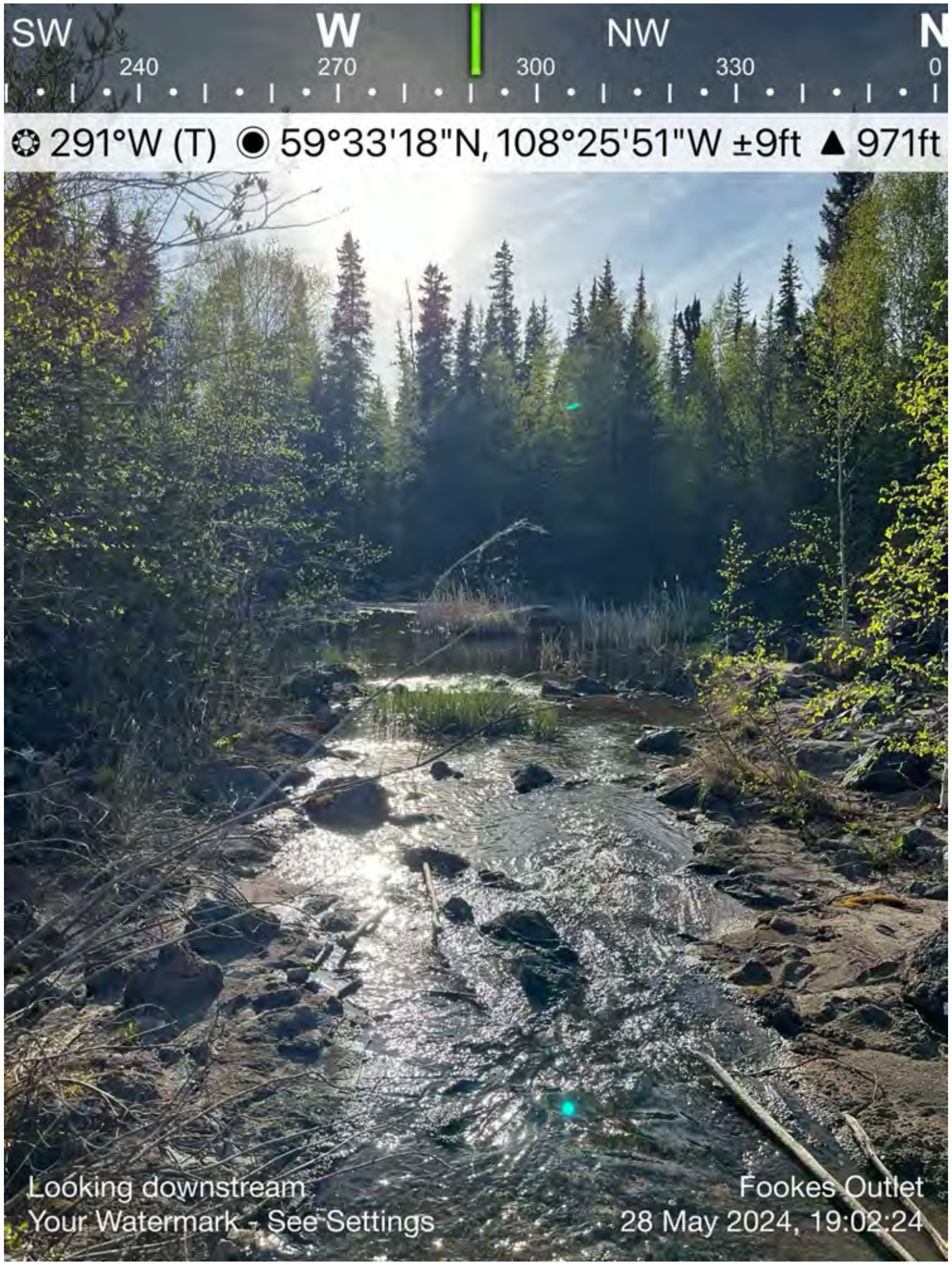


Photo B3 – Fookes Reservoir Spillway looking downstream (mid channel)

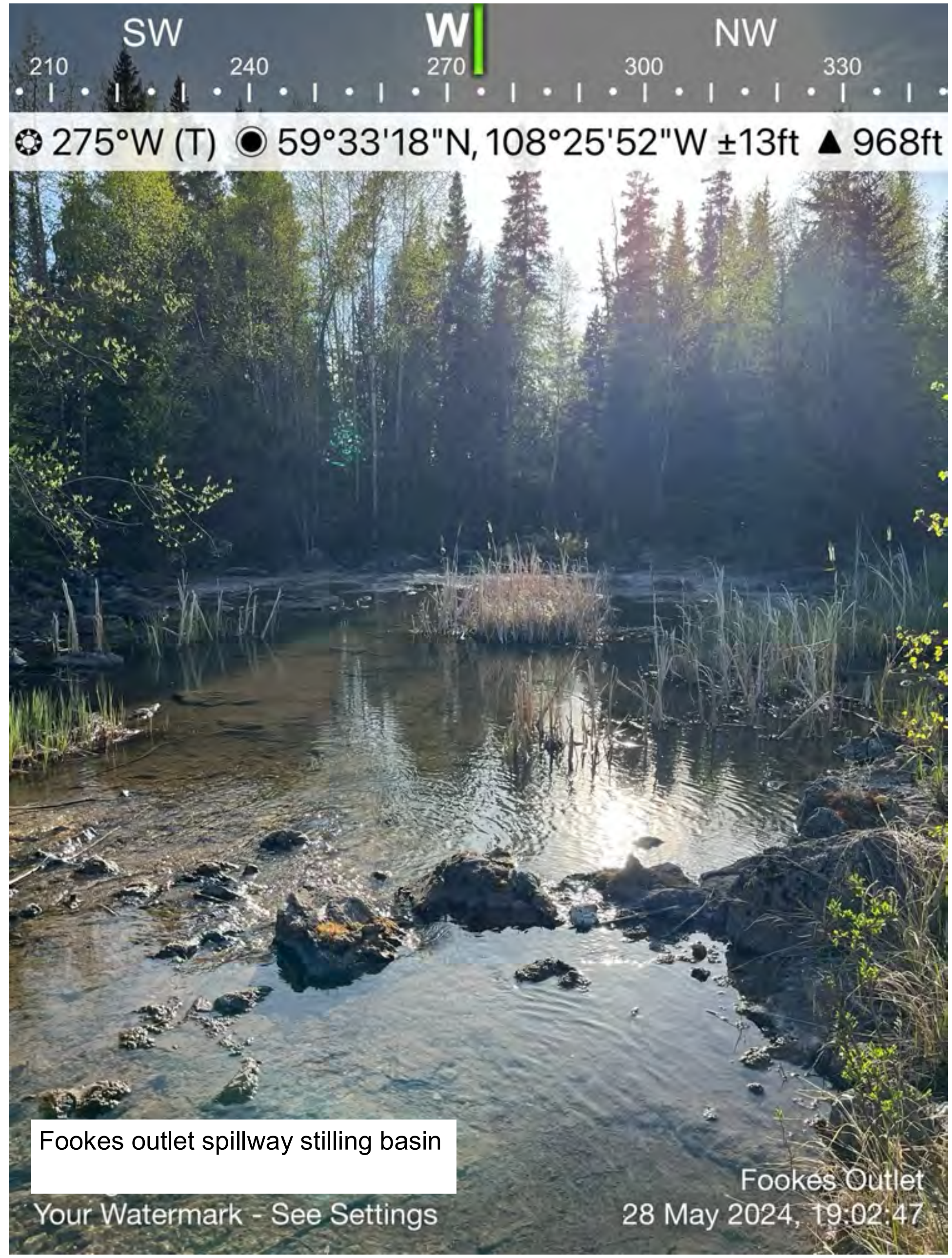


Photo B4 – Fookes Reservoir Spillway stilling basin

Photo B5 – Fookes Reservoir Spillway showing broken rip-rap on north side of channel.

Appendix C

Fookes Delta Photos

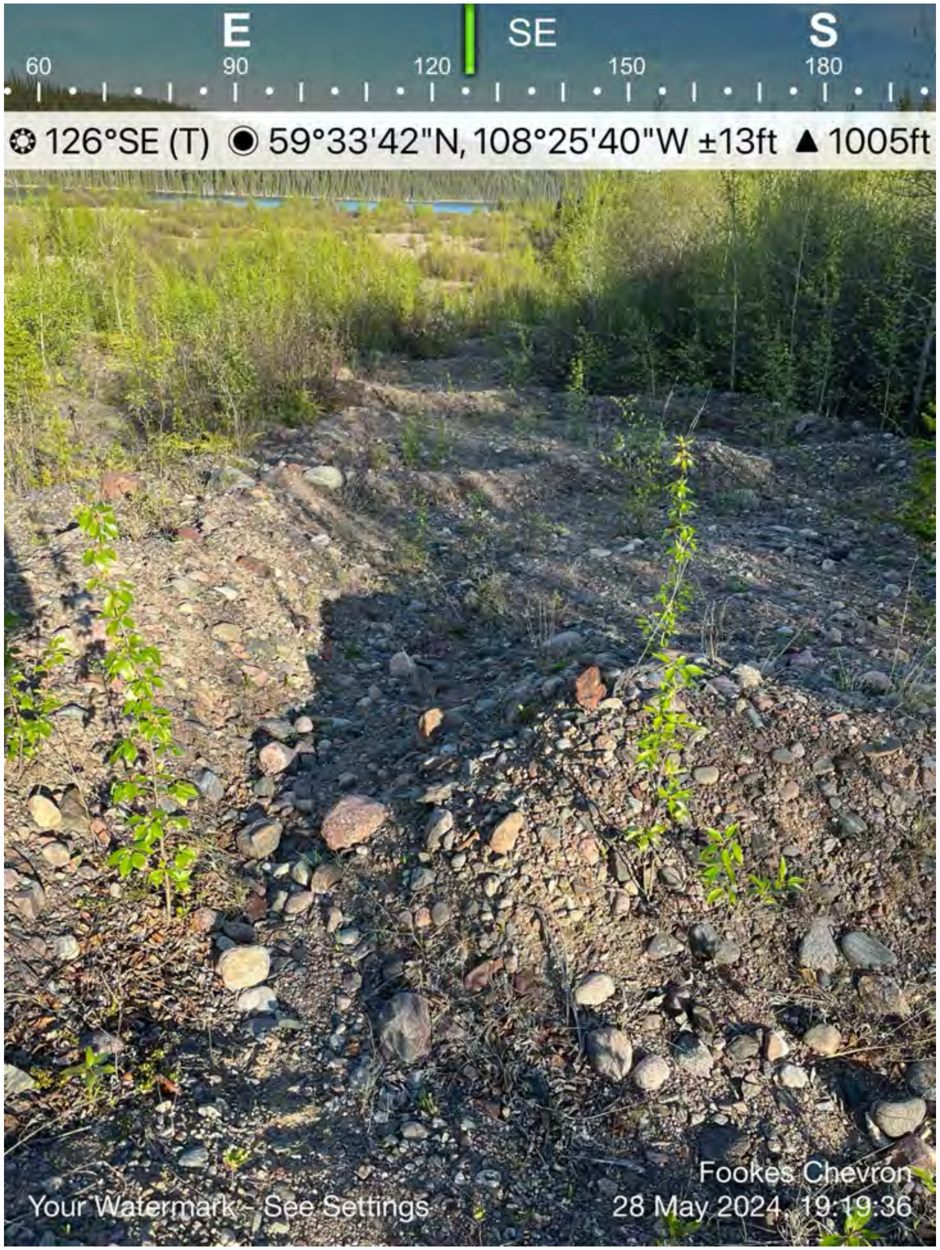


Photo C1 – Chevrons in place on north access point to the Fookes delta looking south (May 2024)

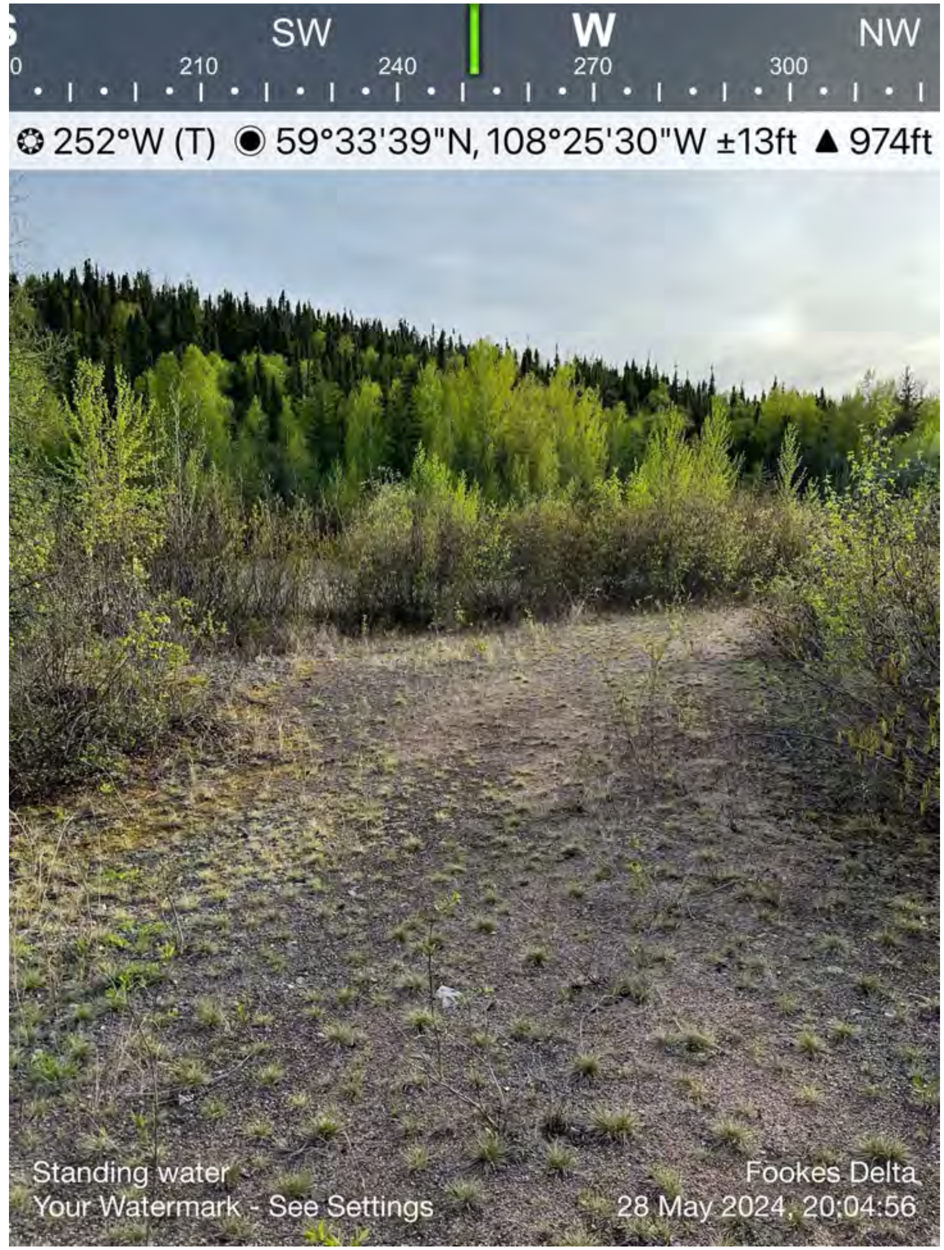


Photo C2 – no evidence of recently ponded water (May 2024).

Ponded water was observed on waste rock cover at bottom of the north access road during freshet in 2022.

Photo C3 – Chevron run-out structure along north access road

Photo C4 – Drainage collection area on edge of Fookes Tailings Delta approximately 100m from access point

Photo C5a-b – Panoramic views of the Fookes cover (Photos taken May 2024) vegetations is yet to fully leaf-out

Photo C6 – View of vegetation establishing along drainage channel (May 2024).

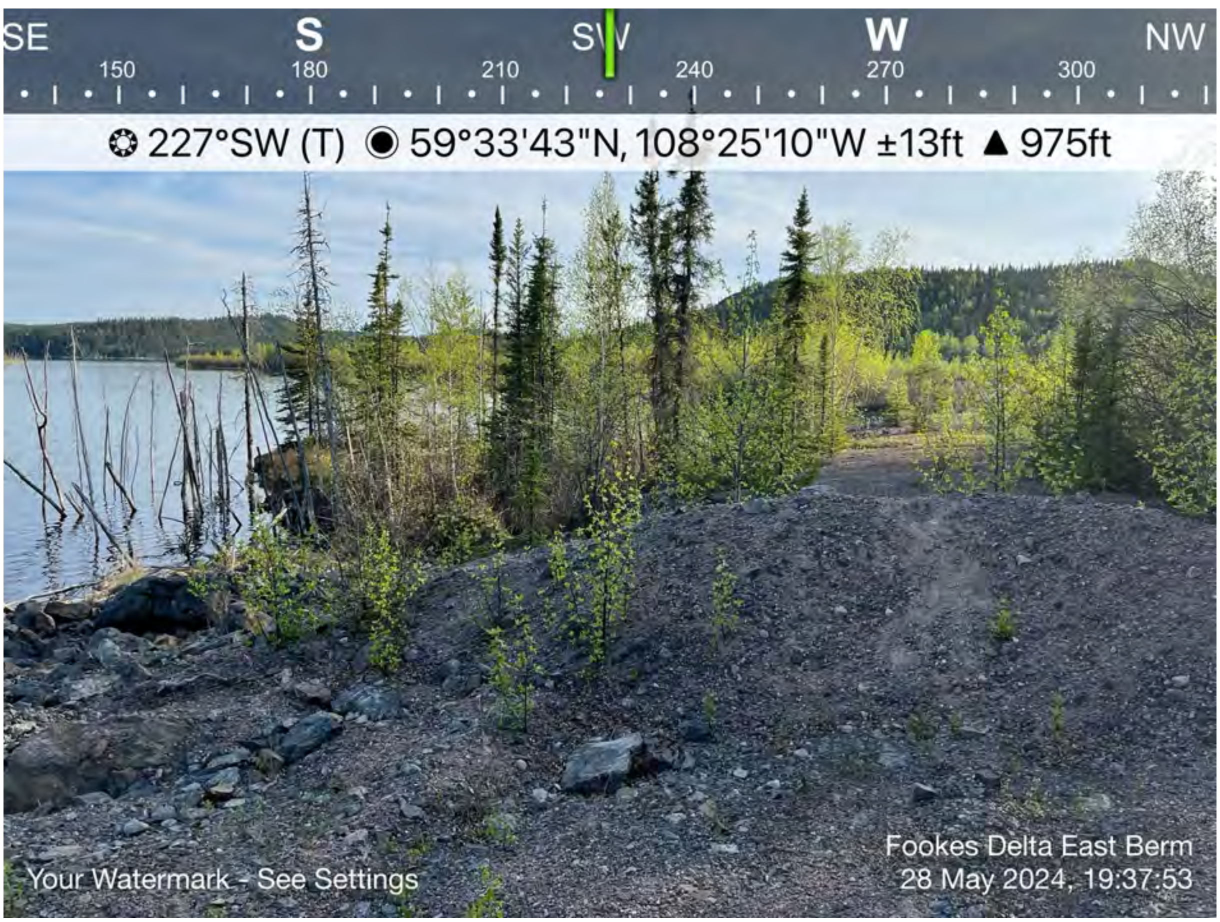


Photo C7 – View of east berm looking onto the delta. No evidence of traffic crossing the berm (May 2024).

Photo C8—Fookes Reservoir shoreline (looking south). Note vegetation along shoreline is well established

Photo C9—Fookes Reservoir shoreline (looking south).

Appendix D
Zora Creek Reconstruction Photos

Photo D01—View from level crossing looking downstream towards Verna Lake (July 2024)

Photo D02—View from level crossing looking upstream towards Zora Lake. Pollen is accumulating along the edges of the channel (July 2024)

Photo D03—View near stilling basin looking upstream (July 2024)

Photo D04—View near stilling basin, looking downstream at stilling basin (July 2024). Vegetation is now well established near the stilling basin.

Photo D05—View of Zora Creek looking upstream towards beaver dam (at outlet of Zora Lake). Note vegetation beginning to establish (July 2024)

Photo D06—View of well-established beaver dam at the outlet of Zora Lake, looking downstream (July 2024)

Photo D07—View of bottom bench with fine material covering waste rock to allow vehicular traffic during remediation (July 2024)

Photo D08—Settled fine material along bottom bench. Material is settling into voids in the underlying waste rock (July 2024)

APPENDIX C

APPENDIX C

Table 1: Borehole summary including the coordinates of exploration drill holes located to date in and adjacent to the former Eldorado Beaverlodge properties. The table also identifies the condition of each hole when it was initially identified and the year in which each was permanently plugged.

Area	Designation	Coordinate System: WGS 84 UTM Zone 12		Status When Located	Year Remediated	Associated Property
		Easting	Northing			
Ace	AC 01	644022.013	6605350.955	Dry	2013	ACE MC
	AC 02	643881.016	6605325.928	Dry	2013	ACE MC
	AC 03	643969.014	6605393.956	Dry	2013	ACE MC
	AC 04	643958.014	6605381.941	Dry	2013	ACE MC
	AC 05	643943.013	6605376.906	Dry	2013	ACE MC
	AC 06	643929.017	6605371.911	Dry	2013	ACE MC
	AC 07	643914.011	6605366.988	Dry	2013	ACE MC
	AC 09	643888.017	6605351.946	Dry	2013	ACE MC
	AC 10	643876.015	6605374.894	Dry	2013	ACE MC
	AC 11	643965.016	6605324.914	Dry	2013	ACE MC
	AC 12	643877.017	6605339.931	Dry	2013	ACE MC
	AC 13	643857.016	6605337.938	Dry	2013	ACE MC
	AC 14	643848.015	6605331.908	Dry	2013	ACE MC
	AC 15	643792.014	6605338.902	Dry	2013	ACE MC
	AC 16	643560.257	6605183.669	Dry	2017	ACE 1
	AC 17	644021.3	6604729.1	Dry	2017	ACE 9
	AC 18	642872.1	6604789.8	Dry	2018	ACE URA 5
	AC 22	645034	6605863	2 holes/Dry	2019	
	AC 23	645038	6605837	Dry	2019	
	AC 24	643327	6605101	2 holes/1 flowing	2021	ACE 1
Lower Ace	BH-001	641929	6604081	Discharging	2012	
	BH-002	641956	6604091	Discharging	2011	
	BH-003	641922	6604146	Discharging	2011	
	BH-004	641932	6604142	Discharging	2012	
	BH-005	641966	6604143	Discharging	2011	
	BH-006	641972	6604165	Discharging	2011	
	BH-007	642090	6604218	Discharging	2011	URA 1
	BH-009	642110	6604137	Discharging	2012	URA FR
	BH-011	642224.883	6604354.110	Dry	2021	URA 1
	BH-012	642224.798	6604351.877	Dry	2021	URA 1
	BH-014	642168	6604158	Discharging	2011	URA FR
	BH-15	642101.665	6604192.497	Dry/past discharge	2016	URA 1
	BH-16	643009.193	6604465.019	Dry	2017	URA 6
	BH-17	642993.852	6604455.146	Dry	2017	URA 6
	BH-18	642995.637	6604466.051	Dry	2017	URA 6
	BH-19	642978.88	6604452.098	Dry	2017	URA 6

Lower Ace	BH-20	643007.541	6604467.124	Dry	2017	URA 6
	BH-21	642966.862	6604445.757	Dry	2017	URA 6
	BH-22	642959.407	6604439.281	Dry	2017	URA 7
	BH-23	642954.958	6604432.3	Dry	2017	URA 7
	BH-24	642940.515	6604415.339	Dry	2017	URA 7
	BH-25	642930.8	6604406.299	Dry	2017	URA 7
	BH-26	642972.143	6604451.532	Dry	2017	URA 6
	BH-27	643250.316	6604979.231	Dry	2017	URA 5
	BH-28	643113.492	6604895.363	Dry	2017	URA 5
	BH-29	643174.26	6604925.548	Dry	2017	URA 5
	BH-30	643285.271	6604977.469	Dry	2017	URA 5
	BH-31	642101.048	6604195.52	Discharging	2017	URA 1
	BH-32	642260.649	6604592.012	Dry	2017	URA 1
	BH-33	642423.877	6604597.892	Dry	2017	URA 7
	BH-34	642401.708	6604647.831	Dry	2017	URA 3
	BH-35	642268.019	6604629.757	Dry	2017	URA 3
	BH-36	643698.938	6605341.629	Dry	2017	ACE MC
	BH-37	642456.049	6604665.374	2 holes/dry	2017	URA 4
	BH-38	642424.846	6604667.596	Dry	2017	URA 4
	BH-39	643709.725	6605142.015	Dry	2017	ACE MC
	BH-40	642242.735	6604550.461	Dry	2017	URA 1
	BH-41	642296.4	6604025.8	Dry	2017	URA FR
	BH-42	642552.3	6604731	Dry	2017	URA 4
	BH-43	642254	6604397	Dry	Covered with debris	URA 1
	BH-44	642402	6604639	Dry	2019	URA 3
	BH-45	643250	6604981	2 holes/Dry	2019	URA 5
	BH-46	643610.340	6605209.997	Dry	2021	ACE MC
	BH-47	642306.845	6604621.952	Dry	2021	URA 1
Ace-Verna	Ace 01	645193.055	6605813.101	Dry	2016	ACE 8
	EXC 01	644740.299	6605272.359	Dry	2016	ACE 3
	Ace 02	645409.239	6605930.196	Dry	2017	ACE 8
	Ace 03	645627.645	6605877.357	Dry	2017	ACE 8
	Ace 04	645187.707	6605816.337	Dry	2017	ACE 8
Dubyna	DB 01	648069.018	6608350.909	Dry	Not located**	EMAR 1
	DB 02	648021.018	6608416.903	Discharging	2011	
	DB 03	648010.017	6608430.961	Discharging	2012	
	DB 04	648009.018	6608430.921	Dry	2013	
	DB 05	648074.019	6608329.926	Dry	2013	EMAR 1
	DB 06	648059.016	6608350.96	Dry	Not located**	EMAR 1
	DB 07	648060.013	6608305.962	Dry	2013	EMAR 1
	DB 08	648047.018	6608326.964	Dry	2013	EMAR 1
	DB 09	648004.013	6608445.996	Dry	2011	EMAR 1

Dubyna	DB 10	647927.019	6608395.914	Dry	2013	EMAR 1
	DB 11	647906.016	6608372.901	Dry	2013	EMAR 1
	DB 12	647907.015	6608373.943	Dry	2013	EMAR 1
	DB 13	647922.017	6608349.899	Dry	2013	EMAR 1
	DB 13A	647937.016	6608388.951	Dry	2013	EMAR 1
	DB 14	647942.019	6608319.921	Discharging	2011	EMAR 1
	DB 15	647912.017	6608307.923	Dry	2013	EMAR 1
	DB 16	648002.017	6608424.96	Discharging	2012	EMAR 1
	DB 17	647310.016	6608147.994	Dry	2013	
	DB 18	647296.012	6608143.988	Dry	2013	
	DB 19	647294.014	6608148.926	Dry	2013	
	DB 20	647291.018	6608147.917	Dry	2013	
	DB 21	647289.015	6608145.943	Dry	2013	
	DB 22	647285.016	6608153.923	Dry	2013	
	DB 23	647282.019	6608145.891	Dry	2013	
	DB 24	647351.018	6608172.904	Dry	2013	
	DB 25	648014.014	6608458.988	Discharging	2011	
	DB 26	647374.017	6608190.976	Dry	2013	
	DB 27	647379.02	6608180.916	Dry	2013	
	DB 28	647715.679	6608234.967	Dry	2017	JO-NES
	DB 29	647513.47	6608225.766	Dry	2017	JO-NES
	DB 30	647413.386	6608235.144	Dry	2017	JO-NES
	DB 31	647411.222	6608290.178	Dry	2017	JO-NES
	DB 32	647603.393	6608298.979	Dry	2017	JO-NES
	DB 33	646948.652	6608333.328	Dry	2017	
	DB 34	645934.9	6607576	2 holes/dry	2016	
	DB 35	645991.5	6607578.2	Dry	2017	
	DB 36	647421	6608222	Dry	2017	JO-NES
	DB 37	647661.2	6608361.3	Dry	2017	JO-NES
	DB 38	647561.2	6608066.9	Dry	2017	JO-NES
	DB 39	647742.5	6608236	Dry	2017	JO-NES
	DB 40	647593.6	6608297.4	Dry	2017	JO-NES
	DB 41	647611	6608249.4	Dry	2018	JO-NES
	DB 42	647579.4	6608258.1	Dry	2018	JO-NES
	DB 43	647579.4	6608255	Dry	2018	JO-NES
	DB 44	647585.8	6608256.1	Dry	2018	JO-NES
	DB 45	647572	6608231.8	Dry	2018	JO-NES
	DB 46	647521.1	6608238.1	2 holes/Dry	2018	JO-NES
	DB 47	647572.5	6608251.3	Dry	2018	JO-NES
	DB 48	647575.6	6608248.3	Dry	2018	JO-NES
	DB 49	647572.3	6608242.3	Dry	2018	JO-NES
	DB 50	647558.3	6608239.3	Dry	2018	JO-NES

	DB 51	647547	6608230.5	Dry	2018	JO-NES
	DB 52	647578.7	6608236.1	Dry	2018	JO-NES
	DB 53	647427.7	6608225.5	Dry	2018	JO-NES
	DB 54	647419	6608244.3	Dry	2018	JO-NES
	DB 55	647413.4	6608238.8	Dry	2018	JO-NES
	DB 56	647395.2	6608229.4	Dry	2018***	
	DB 57	647406.3	6608226.8	Dry	2018	JO-NES
Dubyna	DB 58	647417.4	6608225.7	Dry	2018	JO-NES
	DB 60	647613.1	6608506.8	2 holes/Dry	2018	
	DB 61	647683.9	6608518.9	Dry	2018	
	DB 62	647785.2	6608518.5	Dry	2018	
	DB 63	647703.9	6608176.9	Dry	2018	JO-NES
	DB 64	647946	6608148	Dry	2021	EMAR 1
	HAB 01	645518.015	6612550.898	Dry	2013	HAB 1
	HAB 02	645531.009	6612559.987	Dry	2013	HAB 1
	HAB 03	645560.017	6612566.911	Dry	2013	HAB 1
	HAB 04	645559.011	6612570.997	Dry	2013	HAB 1
	HAB 05	645570.017	6612585.916	Dry	2013	HAB 1
	HAB 06	645516.013	6612592.957	Dry	2013	HAB 1
	HAB 07	645490.014	6612737.978	Dry	2013	
	HAB 08	645473.016	6612730.963	Dry	2013	
	HAB 09	645458.015	6612730.938	Dry	2013	
	HAB 10	645444.016	6612727.941	Dry	2013	
	HAB 11	645428.014	6612729.995	Dry	2013	
	HAB 12	645531.017	6612306.94	Dry	2013	HAB 1
	HAB 13	645454.012	6612205.961	Dry	2013	EXC 1
	HAB 14	645203.016	6612156.978	Dry	2013	EXC 1
	HAB 15	645180.016	6612129.889	Dry	2013	HAB 3
Hab	HAB 16	645197.013	6612184.948	Dry	2013	EXC 1
	HAB 17	645236.014	6612327.921	Dry	2013	HAB 1
	HAB 18	645265.016	6612338.968	Dry	2013	HAB 1
	HAB 19	645265.016	6612338.968	Dry	2013	HAB 1
	HAB 20*	645244.013	6612340.94	Dry	No Remediation	HAB 1
	HAB 21*	645216.013	6612306.969	Dry	No Remediation	HAB 1
	HAB 22*	645206.015	6612316.948	Dry	No Remediation	
	HAB 23	645196.016	6612315.891	Dry	2013	
	HAB 24*	645157.014	6612278.93	Dry	No Remediation	
	HAB 25*	645195.017	6612271.932	Dry	No Remediation	
	HAB 26*	645193.013	6612334.948	Dry	No Remediation	
	HAB 27	645199.014	6612341.981	Dry	2013	
	HAB 28	645237.012	6612367.979	Dry	2013	HAB 1
	HAB 29	645186.014	6612187.977	Dry	2013	

	HAB 30	645196.016	6612166.962	Dry	2013	EXC 1
	HAB 31	645188.016	6612161.97	Dry	2013	
	HAB 32	645188.016	6612161.97	Dry	2013	
	HAB 33	645184.017	6612166.942	Dry	2013	
	HAB 34	645185.015	6612332.966	Dry	2013	
	HAB 35	645170.015	6612318.896	Dry	2013	
	HAB 36	645146.014	6612300.909	Dry	2013	
	Hab 37	645635.866	6611795.114	Dry	2016	EXC 2
	Hab 38	645957.616	6612503.136	Dry	2016	HAB 6
	HAB 39	645944.833	6612429.845	Dry	2016	HAB 6
	Hab 40 & 41	645134.075	6611789.562	2 holes/dry	2016	HAB 3
	Hab 42 & 43	645047.948	6611855.227	2 holes/dry	2016	HAB 3
	Hab 44	645155.8	6612277.4	Dry	2016	
	Hab 45	645120.288	6612036.091	Dry	2017	HAB 3
	Hab 46	645119.989	6612043.82	Dry	2017	HAB 3
	Hab 47	645737.923	6612087.024	Dry	2017	HAB 2A
	Hab 48	645053.768	6611971.583	Dry	2017	HAB 3
	Hab 49 & 50	645291.031	6612001.84	2 holes/dry	2017	HAB 2
	Hab 51	644786.442	6611947.92	Dry	2017	
	Hab 52	645309.971	6612079.678	Dry	2017	HAB 2
	Hab 53	644794.3	6611948.2	Dry	2017	
	Hab 54	645613.7	6611925.2	Dry	2017	HAB 2A
Hab	Hab 55	645670.8	6612093.7	Dry	2017	HAB 2A
	Hab 56	645653.1	6612056.8	Dry	2017	HAB 2A
	Hab 57	645680.6	6612065.6	Dry	2017	HAB 2A
	Hab 58	644798.2	6612050.6	Dry	2017	HAB 2A
	Hab 59	645648.7	6611994.7	Dry	2017	HAB 2A
	Hab 60	645671.6	6612016.6	Dry	2017	HAB 2A
	Hab 61	645622.4	6611980.3	Dry	2017	HAB 2A
	Hab 62	645076.2	6611788.8	Dry	2017	HAB 3
	Hab 63	645737	6612086.1	Dry	2018	HAB 2A
	Hab 64	645685.9	6612061.4	Dry	2018	HAB 2A
	Hab 65	645655.5	6612055.3	Dry	2018	HAB 2A
	Hab 66	645412	6611924	Dry	2019	HAB 2A
	Hab 67	645332	6611876	Dry	2019	HAB 2A
	Hab 68	645631	6612339	Dry	2019	HAB 1
	Hab 69	645276	6612220	Dry	2021	EXC 1
	Hab 70 & 71	645704	6612168	Dry	2021	EXC 1
	VR 01	645583.015	6605976.917	Dry	2013	ACE 8
	VR 02	645612.016	6605959.984	Dry	2013	ACE 8
Verna-Bolger	VR 03	645987.422	6606161.403	Dry	2016	BOLGER 1
	VR 04	644794.274	6611948.222	Dry	2017	

	VR 05	645751.166	6606305.443	Dry	2017	BOLGER 1
	VR 06	645976.488	6606405.551	Dry	2017	
	VR 08 & 09	645934.866	6607575.955	2 holes/dry	2016	
	VR 10	645991.476	6607578.159	Dry	2017	
	VR 11	646037.829	6605999.498	Dry	2021	NW 3
	VR 12	645997.589	6605976.863	Dry	2021	NW 3
	VR 13	646052.176	6605975.309	Dry	2021	NW 3
	VR 14	646001.812	6605948.268	Dry	2021	NW 3
	VR 15	645995.007	6605897.840	Dry	2021	NW 3
	VR 16	645946.764	6605852.599	Dry	2021	NW 3
	VR 17	645885.294	6605830.366	Dry	2021	NW 3
	VR 18	645925.276	6605820.439	Dry	2021	NW 3
	VR 19	645917.392	6605771.530	Dry	2021	NW 3
	VR 20	646013.386	6605836.910	Dry	2021	NW 3
	VR 21	646027.817	6605820.750	Dry	2021	NW 3
	VR 22	646132.041	6605638.424	Dry	2021	NW 3
	VR 23	645702.416	6605821.699	Dry	2021	NW 3
	VR 26	645981.109	6605927.954	Dry	2021	NW 3
	VR 27	646027.259	6605884.492	Dry	2021	NW 3
	EG 01	640289.749	6607204.128	Dry	2016	EAGLE 1
Eagle	EG 02	640322.527	6607209.033	Dry	2016	EAGLE 1
	EG 03	640292.348	6607226.853	Dry	2016	EAGLE 1
	EG 04	640328.697	6607263.213	Dry	2016	EAGLE 1
Eagle	EG 05	640351.111	6607264.052	Dry	2016	EAGLE 1
	EG 06	640486.081	6607170.013	Dry	2016	EAGLE 1
	MC 1	638979.011	6604055.98	Dry	2013	RA 9
Martin Lake	OP 01	647251.597	6607892.5	Dry	2017	
	OP 02	646998.6	6605635.1	Dry	2017	
	OP 03	647108.6	6605695.2	Dry	2017	
	BH-8202	641471	6604205	Dry	2017	
Off Property[1]	BH-NW01	641343.6	6604130.1	Discharging	2017	
	AC 19[2]	647069	6605704	Dry	2019	
	AC 20[2]	647055	6605663	Dry	2019	
	AC 21[2]	647001	6605642	Dry	2019	

*Recent exploration activity (Not Eldorado/Cameco)
**DB 01 and DB-06 were found to be dry when first identified; however, boreholes could not be relocated despite extensive searches when remediation equipment was brought to the site.
***Assuming DB 56 was remediated in 2018 with other boreholes.
Note: AC 08, VR 07, and DB 59 have been removed from past records due to coordinate error and are not reflected in the 238 identified below.
Note: Total number of boreholes is 238, this includes 229 remediated (all with an associated year), 6 were not remediated due to being recent exploration (HB 20, Hab 21, Hab 22, HAB 24, HAB 25, and HAB 26), 2 were not located (DB 01 and DB 06), and 1 was covered with debris (BH-43).

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[1] The 'Off Property' areas were operated as part of the former Eldorado Beaverlodge activities; however, these areas were not listed in the *Eldorado Resources Limited Decommissioning Approval AECB-DA-142-0*. In addition, these areas do not appear on the current Beaverlodge surface lease or in the Canadian Nuclear Safety Commission licence; however, Cameco intends to prepare these areas for transfer into the IC Program and has remediated the boreholes identified in these areas accordingly.
[2] Previously listed under the "Ace" area mistakenly. These boreholes are located off Beaverlodge property, in the Moran Pit area.

APPENDIX D

APPENDIX D

Canadian Association for Laboratory Accreditation Inc.

CALA

Certificate of Accreditation

SRC Environmental Analytical Laboratories
Saskatchewan Research Council
143-111 Research Drive
Saskatoon, Saskatchewan

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

CANADIAN ASSOCIATION FOR LABORATORY ACCREDITATION INC.
CALA

Accreditation No.: 1002472
Issued On: 2/8/2024
Accreditation Date: 1/3/2005
Expiry Date: 8/8/2026

President and CEO

ilac-MRA CALA

Certificate of Accreditation

Certificat d'accréditation

scc ccn

Bureau Veritas Canada (2019) Inc.
Bureau Veritas (Calgary)

2021 – 41st Avenue, N.E., Calgary, Alberta, T2E 6P2, Canada

SCC file number: / Dossier du CCN nº : 151043

Initial accreditation date: / Date de la première accréditation :2016-08-30

having been assessed by the Standards Council of Canada (SCC) and found to conform with the requirements of ISO/IEC 17025:2017 and the conditions for accreditation established by SCC is hereby recognized as an

ACCREDITED TESTING LABORATORY

for the specific tests or types of tests listed in the scope of accreditation approved by SCC and found on the SCC website at www.scc.ca.

ayant fait l'objet d'une évaluation du Conseil canadien des normes (CCN), et ayant été trouvé conforme aux exigences énoncées dans ISO/IEC 17025:2017 et aux conditions d'accréditation établies par le CCN, est de ce fait reconnu comme étant un

LABORATOIRE D'ESSAIS ACCRÉDITÉ

pour les essais ou types d'essais énumérés dans la portée d'accréditation approuvée par le CCN et figurant dans le site Web du CCN au www.ccn.ca.

Vice-President – Accreditation Services / Vice-président – Services d'accréditation

Issued on: / Délivré le :2024-07-19

The validity of this certificate, including the date of last re-accreditation and its expiry can be confirmed by the accompanying Scope of Accreditation document in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. The accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF communiqué dated April 2017).

Pour vérifier la validité du présent certificat, y compris la date de la dernière réaccréditation et la date d'expiration du certificat, consulter la portée d'accréditation qui se trouve dans le répertoire des laboratoires accrédités dans le site Web du CCN au www.ccn.ca.

Ce laboratoire est accrédité conformément à la Norme internationale reconnue ISO/IEC 17025:2017. Cette accréditation démontre la compétence technique d'un organisme pour une portée définie et l'exploitation d'un système de management de la qualité de laboratoire (cf. communiqué conjoint ISO-ILAC-IAF date d'avril 2017).

Standards Council of Canada
Open a world of possibilities.

Conseil canadien des normes
Un monde de possibilités à votre portée.

Canada

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: **Bureau Veritas Canada (2019) Inc.**

Location Name or Operating as (if applicable): Bureau Veritas (Calgary)

Contact Name: Rhonda Reid

Address: 2021-41st Avenue, N.E.
Calgary, Alberta
T2E 6P2

Telephone: 403 735-2271

Fax: 403 291-9468

Website: www.bvna.com

Email: Calgary-QA-Staff-AB@bureauveritas.com

SCC File Number:	151043
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Biological Chemical/Physical
Program Specialty Area:	Environmental Testing (ET)
Initial Accreditation:	2016-08-30
Most Recent Accreditation:	2024-12-03
Accreditation Valid to:	2028-08-30

APPENDIX E

APPENDIX E

AN-5

		Date	2024-04-27	2024-06-27	2024-09-30
Group	Parameter	Unit			
Major Ions	Alkalinity	mg/l	83	70	97
	Bicarbonate	mg/l	101	85	118
	Calcium	mg/l	25	22	32
	Carbonate	mg/l	< 1	< 1	< 1
	Chloride	mg/l	0.8	0.5	0.7
	Cond-L	µS/cm	189	176	228
	Hardness	mg/l	88	77	109
	Hydroxide	mg/l	< 1	< 1	< 1
	Potassium	mg/l	1.1	0.9	1.3
	Sodium	mg/l	3.3	2.7	3.7
	Sulfate	mg/l	14	16	18
	Sum of Ions	mg/l	152	132	184
Nutrients	Nitrate	mg/l		< 0.04	
	Organic Carbon	mg/l		12	
	Total Phosphorus	mg/l		< 0.01	
Physical Parameters	pH-Field	pH Unit	7.2	8.2	7.5
	Specific Conductivity-Field	µS/cm	130	171	216
	pH-Laboratory	pH Unit	7.17	7.59	7.96
	Temperature	°C	2.8	18.9	8.1
	Total Dissolved Solids	mg/l	159	134	159
	Total Suspended Solids	mg/l	1	< 1	2
Total Metals	Arsenic	µg/l	0.4	0.3	0.3
	Barium	mg/l	0.10	0.092	0.14
	Copper	mg/l	0.0015	0.0015	0.0003
	Iron	mg/l	0.96	0.11	0.065
	Lead	mg/l	0.0002	< 0.0001	< 0.0001
	Molybdenum	mg/l	0.0030	0.0030	0.0048
	Nickel	mg/l	0.0008	0.0006	0.0006
	Selenium	mg/l	< 0.0001	0.0001	0.0001
	Uranium	µg/l	152	99	162
	Zinc	mg/l	0.0007	0.0007	0.0008
Radionuclides	Lead-210	Bq/L		0.04	
	Polonium-210	Bq/L		0.04	
	Radium 226	Bq/L	0.72	0.48	0.62

DB-6

Group	Parameter	Unit	2024-04-27	2024-06-27	2024-09-30	2024-12-15	2025-03-30
Major Ions	Alkalinity	mg/l	83	70	97	85	90
	Bicarbonate	mg/l	101	85	118	106	110
	Calcium	mg/l	25	22	32	34	35
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	0.8	0.5	0.7	0.6	0.7
	Cond-L	µS/cm	189	176	228	212	225
	Hardness	mg/l	88	77	109	106	109
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	1.1	0.9	1.3	1	1.1
	Sodium	mg/l	3.3	2.7	3.7	1.9	2
	Sulfate	mg/l	14	16	18	17	18
	Sum of Ions	mg/l	152	132	184	166	172
Nutrients	Nitrate	mg/l		< 0.04			
	Organic Carbon	mg/l		12			
	Total Phosphorus	mg/l		< 0.01			
Physical Parameters	pH-Field	pH Unit	7.2	8.2	7.5	7.7	7.1
	Specific Conductivity-Field	µS/cm	130	171	216	412	162
	pH-Laboratory	pH Unit	7.17	7.59	7.96	7.31	7.28
	Temperature	°C	2.8	18.9	8.1	1.1	0.4
	Total Dissolved Solids	mg/l	159	134	159	168	161
	Total Suspended Solids	mg/l	1	< 1	2	2	< 1
Total Metals	Arsenic	µg/l	0.4	0.3	0.3	0.1	0.1
	Barium	mg/l	0.10	0.092	0.14	0.05	0.053
	Copper	mg/l	0.0015	0.0015	0.0003	0.0005	0.0008
	Iron	mg/l	0.96	0.11	0.065	0.052	0.081
	Lead	mg/l	0.0002	< 0.0001	< 0.0001	< 0.0001	0.0001
	Molybdenum	mg/l	0.0030	0.0030	0.0048	0.0015	0.0014
	Nickel	mg/l	0.0008	0.0006	0.0006	0.0002	0.0002
	Selenium	mg/l	< 0.0001	0.0001	0.0001	0.0001	0.0003
	Uranium	µg/l	152	99	162	99	91
	Zinc	mg/l	0.0007	0.0007	0.0008	0.0007	0.0024
Radionuclides	Lead-210	Bq/L		0.04			
	Polonium-210	Bq/L		0.04			
	Radium 226	Bq/L	0.72	0.48	0.62	0.04	0.04

AC-6A

Group	Parameter	Unit	2024-05-21	2024-06-27	2024-07-27	2024-08-29
Major Ions	Alkalinity	mg/l	99	104	105	102
	Bicarbonate	mg/l	121	127	128	124
	Calcium	mg/l	41	41	41	42
	Carbonate	mg/l	< 1	< 1	< 1	< 1
	Chloride	mg/l	0.6	0.5	0.5	0.4
	Cond-L	µS/cm	281	290	284	281
	Hardness	mg/l	137	137	137	142
	Hydroxide	mg/l	< 1	< 1	< 1	< 1
	Potassium	mg/l	1.1	0.8	0.9	0.8
	Sodium	mg/l	2.1	2.1	2.1	2.3
	Sulfate	mg/l	45	40	39	42
	Sum of Ions	mg/l	219	220	220	220
Nutrients	Nitrate	mg/l		< 0.04		
	Organic Carbon	mg/l		8.3		
	Total Phosphorus	mg/l		< 0.01		
Physical Parameters	pH-Field	pH Unit	7.9	7.9	7.7	7.5
	Specific Conductivity-Field	µS/cm	298	293	316	
	Temperature-Water	°C	13	19.2	17.5	16.6
	pH-Laboratory	pH Unit	7.58	7.88	7.94	7.68
	Total Dissolved Solids	mg/l	184	221	187	190
	Total Suspended Solids	mg/l	2	< 1	< 1	< 1
Total Metals	Arsenic	µg/l	0.2	0.2	0.2	0.2
	Barium	mg/l	0.024	0.024	0.022	0.024
	Copper	mg/l	0.0010	0.0004	< 0.0002	0.0004
	Iron	mg/l	0.0060	0.0064	0.030	0.012
	Lead	mg/l	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	Molybdenum	mg/l	0.0014	0.0012	0.0009	0.0012
	Nickel	mg/l	0.0002	< 0.0001	< 0.0001	< 0.0001
	Selenium	mg/l	0.0002	0.0002	0.0002	0.0002
	Uranium	µg/l	370	274	202	259
	Zinc	mg/l	0.0005	< 0.0005	< 0.0005	< 0.0005
Radionuclides	Lead-210	Bq/L		0.06		
	Polonium-210	Bq/L		0.006		
	Radium 226	Bq/L	0.07	0.09	0.08	0.10

AC-8

Group	Parameter	Unit	Date 2024-06-27
Major Ions	Alkalinity	mg/l	46
	Bicarbonate	mg/l	56
	Calcium	mg/l	14
	Carbonate	mg/l	< 1
	Chloride	mg/l	1.0
	Cond-L	µS/cm	102
	Hardness	mg/l	46
	Hydroxide	mg/l	< 1
	Potassium	mg/l	0.7
	Sodium	mg/l	1.4
	Sulfate	mg/l	5.1
	Sum of Ions	mg/l	81
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	7.9
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.1
	Specific Conductivity-Field	µS/cm	106
	pH-Laboratory	pH Unit	7.07
	Temperature	°C	18.9
	Total Dissolved Solids	mg/l	77
	Total Suspended Solids	mg/l	< 1
Total Metals	Arsenic	µg/l	< 0.1
	Barium	mg/l	0.021
	Copper	mg/l	0.0005
	Iron	mg/l	0.019
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0009
	Nickel	mg/l	0.0001
	Selenium	mg/l	< 0.0001
	Uranium	µg/l	10
	Zinc	mg/l	< 0.0005
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.01

AC-14

		Date	2024-03-30	2024-06-27	2024-09-30	2025-01-30	2025-03-30
Group	Parameter	Unit					
Major Ions	Alkalinity	mg/l	53	47	50	52	50
	Bicarbonate	mg/l	65	57	61	63	61
	Calcium	mg/l	17	15	17	17	17
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	1.2	1.1	1.4	1.3	1.4
	Cond-L	µS/cm	119	108	122	122	120
	Hardness	mg/l	56	49	56	56	56
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	0.9	0.7	0.6	0.8	0.8
	Sodium	mg/l	1.8	1.5	2.1	1.8	1.8
	Sulfate	mg/l	6.4	5.6	8.6	6.3	6
	Sum of Ions	mg/l	109	84	94	94	92
Nutrients	Nitrate	mg/l		< 0.04			
	Organic Carbon	mg/l		7.7			
	Total Phosphorus	mg/l		< 0.01			
Physical Parameters	pH-Field	pH Unit	8.4	8.2	8.2	7.8	7.9
	Specific Conductivity-Field	µS/cm	146	122	120	137	85
	Temperature-Water	°C	2.2	15	12.1	0.1	0.7
	pH-Laboratory	pH Unit	7.06	7.11	7.91	6.93	7.67
	Total Dissolved Solids	mg/l	97	88	98	102	90
	Total Suspended Solids	mg/l	2	1	2	1	< 1
Total Metals	Arsenic	µg/l	0.2	0.1	0.2	0.1	0.1
	Barium	mg/l	0.026	0.022	0.024	0.024	0.025
	Copper	mg/l	0.0039	0.0005	0.0004	0.0007	0.0005
	Iron	mg/l	0.046	0.049	0.039	0.046	0.046
	Lead	mg/l	0.0009	< 0.0001	0.0002	0.0001	< 0.0001
	Molybdenum	mg/l	0.0010	0.0009	0.0010	0.0010	0.001
	Nickel	mg/l	0.0004	0.0002	0.0003	0.0002	0.0002
	Selenium	mg/l	0.0001	< 0.0001	0.0001	0.0001	0.0001
	Uranium	µg/l	21	16	36	17	15
	Zinc	mg/l	0.010	< 0.0005	0.0013	0.0012	0.0006
Radionuclides	Lead-210	Bq/L		< 0.02			
	Polonium-210	Bq/L		0.01			
	Radium 226	Bq/L	0.09	0.04	0.04	0.03	0.02

AN-3

		Date	2024-06-27
Group	Parameter	Unit	
Major Ions	Alkalinity	mg/l	68
	Bicarbonate	mg/l	83
	Calcium	mg/l	19
	Carbonate	mg/l	< 1
	Chloride	mg/l	0.6
	Cond-L	µS/cm	140
	Hardness	mg/l	65
	Hydroxide	mg/l	< 1
	Potassium	mg/l	0.7
	Sodium	mg/l	1.8
	Sulfate	mg/l	3.7
	Sum of Ions	mg/l	113
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	8.9
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.3
	Specific Conductivity-Field	µS/cm	181
	pH-Laboratory	pH Unit	7.60
	Temperature	°C	13.8
	Total Dissolved Solids	mg/l	104
	Total Suspended Solids	mg/l	< 1
Total Metals	Arsenic	µg/l	< 0.1
	Barium	mg/l	0.016
	Copper	mg/l	0.0005
	Iron	mg/l	0.0082
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0018
	Nickel	mg/l	0.0002
	Selenium	mg/l	< 0.0001
	Uranium	µg/l	1.8
	Zinc	mg/l	< 0.0005
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.007

TL-3

		Date	2024-06-27	2024-12-15
Group	Parameter	Unit		
Major Ions	Alkalinity	mg/l	121	123
	Bicarbonate	mg/l	148	150
	Calcium	mg/l	30	33
	Carbonate	mg/l	< 1	< 1
	Chloride	mg/l	1.9	1.9
	Cond-L	µS/cm	273	291
	Hardness	mg/l	96	106
	Hydroxide	mg/l	< 1	< 1
	Potassium	mg/l	1.0	1.2
	Sodium	mg/l	19	20
	Sulfate	mg/l	18	19
	Sum of Ions	mg/l	223	231
Nutrients	Nitrate	mg/l	< 0.04	
	Organic Carbon	mg/l	8.3	
	Total Phosphorus	mg/l	< 0.01	
Physical Parameters	pH-Field	pH Unit	8.5	7.9
	Specific Conductivity-Field	µS/cm	282	379
	pH-Laboratory	pH Unit	8.33	8.04
	Temperature	°C	15.2	0.9
	Total Dissolved Solids	mg/l	176	202
	Total Suspended Solids	mg/l	2	< 1
Total Metals	Arsenic	µg/l	0.7	0.7
	Barium	mg/l	0.044	0.049
	Copper	mg/l	0.0014	0.0015
	Iron	mg/l	0.055	0.0072
	Lead	mg/l	0.0003	0.0008
	Molybdenum	mg/l	0.0091	0.010
	Nickel	mg/l	0.0004	0.0004
	Selenium	mg/l	0.0026	0.0028
	Uranium	µg/l	208	205
	Zinc	mg/l	< 0.0005	0.0005
Radionuclides	Lead-210	Bq/L	0.11	
	Polonium-210	Bq/L	0.12	
	Radium 226	Bq/L	1.8	1.7

TL-4

		Date	2024-06-27	2024-12-15
Group	Parameter	Unit		
Major Ions	Alkalinity	mg/l	119	129
	Bicarbonate	mg/l	145	157
	Calcium	mg/l	27	32
	Carbonate	mg/l	< 1	< 1
	Chloride	mg/l	1.8	2
	Cond-L	µS/cm	264	301
	Hardness	mg/l	88	103
	Hydroxide	mg/l	< 1	< 1
	Potassium	mg/l	1.1	1.3
	Sodium	mg/l	21	23
	Sulfate	mg/l	15	18
	Sum of Ions	mg/l	216	239
Nutrients	Nitrate	mg/l	< 0.04	
	Organic Carbon	mg/l	10	
	Total Phosphorus	mg/l	< 0.01	
Physical Parameters	pH-Field	pH Unit	8.4	8
	Specific Conductivity-Field	µS/cm	255	340
	pH-Laboratory	pH Unit	8.30	8.03
	Temperature	°C	18.2	0.6
	Total Dissolved Solids	mg/l	205	220
	Total Suspended Solids	mg/l	2	< 1
Total Metals	Arsenic	µg/l	0.7	1.0
	Barium	mg/l	0.084	0.11
	Copper	mg/l	0.0009	0.0007
	Iron	mg/l	0.035	0.016
	Lead	mg/l	< 0.0001	0.0005
	Molybdenum	mg/l	0.0069	0.011
	Nickel	mg/l	0.0006	0.0007
	Selenium	mg/l	0.0014	0.0017
	Uranium	µg/l	174	236
	Zinc	mg/l	< 0.0005	< 0.0005
Radionuclides	Lead-210	Bq/L	0.10	
	Polonium-210	Bq/L	0.03	
	Radium 226	Bq/L	1.8	2.4

TL-7

		Date	2024-04-27	2024-06-27	2024-09-30	2024-12-15	2025-03-30
Group	Parameter	Unit					
Major Ions	Alkalinity	mg/l	116	126	124	130	140
	Bicarbonate	mg/l	142	154	151	159	171
	Calcium	mg/l	28	29	30	32	36
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	2.5	2.6	2.3	3	2
	Cond-L	µS/cm	257	279	282	308	321
	Hardness	mg/l	90	94	97	104	116
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	1.2	1.0	1.4	1.4	1.4
	Sodium	mg/l	19	22	22	24	24
	Sulfate	mg/l	15	15	17	18	18
	Sum of Ions	mg/l	213	229	231	243	259
Nutrients	Nitrate	mg/l		< 0.04			
	Organic Carbon	mg/l		9.6			
	Total Phosphorus	mg/l		< 0.01			
Physical Parameters	pH-Field	pH Unit	7.8	7.7	7.9	7.7	7.6
	Specific Conductivity-Field	µS/cm	174	292	249	326	231
	pH-Laboratory	pH Unit	7.52	8.12	8.18	7.69	7.67
	Temperature	°C	2.8	17.9	9	0.6	2.9
	Total Dissolved Solids	mg/l	163	181	180	228	215
	Total Suspended Solids	mg/l	< 1	< 1	2	< 1	< 1
Total Metals	Arsenic	µg/l	1.0	0.8	0.6	0.8	1
	Barium	mg/l	0.36	0.38	0.39	0.25	0.2
	Copper	mg/l	0.0006	0.0007	< 0.0002	0.0006	0.0009
	Iron	mg/l	0.10	0.037	0.025	0.019	0.093
	Lead	mg/l	< 0.0001	< 0.0001	0.0001	0.0004	0.0002
	Molybdenum	mg/l	0.0082	0.0065	0.0076	0.010	0.01
	Nickel	mg/l	0.0005	0.0005	0.0004	0.0006	0.0006
	Selenium	mg/l	0.0017	0.0013	0.0010	0.0016	0.0018
	Uranium	µg/l	225	151	191	249	244
	Zinc	mg/l	0.0007	0.0006	0.0005	0.0011	0.0014
Radionuclides	Lead-210	Bq/L		< 0.02			
	Polonium-210	Bq/L		0.01			
	Radium 226	Bq/L	1.9	1.9	1.9	1.4	3

TL-9

		Date	2024-03-30	2024-06-27	2024-09-30	2025-01-30	2025-03-30
Group	Parameter	Unit					
Major Ions	Alkalinity	mg/l	152	91	91	130	141
	Bicarbonate	mg/l	185	111	111	159	172
	Calcium	mg/l	32	16	16	31	36
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	4	3.1	2.8	2.6	2
	Cond-L	µS/cm	327	214	213	292	333
	Hardness	mg/l	111	63	63	103	118
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	1.4	0.9	0.8	1.3	1.4
	Sodium	mg/l	26	19	22	22	24
	Sulfate	mg/l	18	13	14	17	19
	Sum of Ions	mg/l	275	169	172	240	262
Nutrients	Nitrate	mg/l		0.08			
	Organic Carbon	mg/l		10			
	Total Phosphorus	mg/l		< 0.01			
Physical Parameters	pH-Field	pH Unit	8.1	8.5	8.6	7.1	7.8
	Specific Conductivity-Field	µS/cm	281	221	212		231
	pH-Laboratory	pH Unit	7.81	8.01	8.06	7.70	7.7
	Temperature	°C	4.4	15.4	9.7	0	0
	Total Dissolved Solids	mg/l	226	139	155	196	217
	Total Suspended Solids	mg/l	2	2	3	1	< 1
Total Metals	Arsenic	µg/l	1.0	1.0	0.9	0.7	0.7
	Barium	mg/l	0.72	0.43	0.44	0.36	0.35
	Copper	mg/l	0.0029	0.0006	< 0.0002	0.0009	0.0012
	Iron	mg/l	0.036	0.027	0.026	0.011	0.016
	Lead	mg/l	0.0004	0.0001	0.0004	0.0002	0.0002
	Molybdenum	mg/l	0.0074	0.0064	0.0052	0.0094	0.0095
	Nickel	mg/l	0.0006	0.0004	0.0003	0.0005	0.0005
	Selenium	mg/l	0.0022	0.0015	0.0015	0.0021	0.0021
	Uranium	µg/l	194	150	115	228	242
	Zinc	mg/l	0.0059	0.0008	0.0006	0.0007	0.0025
Radionuclides	Lead-210	Bq/L		0.04			
	Polonium-210	Bq/L		0.04			
	Radium 226	Bq/L	2.2	1.6	1.3	1.2	1.8

BL-3

		Date	2024-06-27	2025-03-02
Group	Parameter	Unit		
Major Ions	Alkalinity	mg/l	68	74
	Bicarbonate	mg/l	83	90
	Calcium	mg/l	20	23
	Carbonate	mg/l	< 1	< 1
	Chloride	mg/l	10	12
	Cond-L	µS/cm	229	252
	Hardness	mg/l	70	82
	Hydroxide	mg/l	< 1	< 1
	Potassium	mg/l	1.1	1.3
	Sodium	mg/l	16	18
	Sulfate	mg/l	26	29
	Sum of Ions	mg/l	161	179
Nutrients	Nitrate	mg/l	< 0.04	
	Organic Carbon	mg/l	3.7	
	Total Phosphorus	mg/l	< 0.01	
Physical Parameters	pH-Field	pH Unit	8.4	7.3
	Specific Conductivity-Field	µS/cm	246	261
	pH-Laboratory	pH Unit	7.59	7.61
	Temperature	°C	14.2	6
	Total Dissolved Solids	mg/l	136	156
	Total Suspended Solids	mg/l	1	< 1
Total Metals	Arsenic	µg/l	0.2	0.3
	Barium	mg/l	0.036	0.051
	Copper	mg/l	0.0012	0.0017
	Iron	mg/l	0.013	0.0014
	Lead	mg/l	< 0.0001	0.0001
	Molybdenum	mg/l	0.0031	0.0036
	Nickel	mg/l	0.0017	0.0020
	Selenium	mg/l	0.0018	0.0020
	Uranium	µg/l	120	127
	Zinc	mg/l	0.0022	0.0068
Radionuclides	Lead-210	Bq/L	< 0.02	
	Polonium-210	Bq/L	0.005	
	Radium 226	Bq/L	0.05	0.08

BL-4

Group	Parameter	Unit	Date: 2024-06-27
Major Ions	Alkalinity	mg/l	67
	Bicarbonate	mg/l	82
	Calcium	mg/l	19
	Carbonate	mg/l	< 1
	Chloride	mg/l	10
	Cond-L	µS/cm	227
	Hardness	mg/l	68
	Hydroxide	mg/l	< 1
	Potassium	mg/l	1.1
	Sodium	mg/l	16
	Sulfate	mg/l	26
	Sum of Ions	mg/l	159
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	3.6
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.3
	Specific Conductivity-Field	µS/cm	232
	pH-Laboratory	pH Unit	7.57
	Temperature	°C	15.2
	Total Dissolved Solids	mg/l	129
	Total Suspended Solids	mg/l	1
Total Metals	Arsenic	µg/l	0.2
	Barium	mg/l	0.032
	Copper	mg/l	0.0011
	Iron	mg/l	0.0044
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0029
	Nickel	mg/l	0.0017
	Selenium	mg/l	0.0018
	Uranium	µg/l	116
	Zinc	mg/l	0.0023
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.03

BL-5

		Date	2024-06-27
Group	Parameter	Unit	
Major Ions	Alkalinity	mg/l	67
	Bicarbonate	mg/l	82
	Calcium	mg/l	19
	Carbonate	mg/l	< 1
	Chloride	mg/l	10
	Cond-L	µS/cm	226
	Hardness	mg/l	68
	Hydroxide	mg/l	< 1
	Potassium	mg/l	1.1
	Sodium	mg/l	16
	Sulfate	mg/l	26
	Sum of Ions	mg/l	159
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	3.6
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.3
	Specific Conductivity-Field	µS/cm	243
	pH-Laboratory	pH Unit	7.60
	Temperature	°C	13.6
	Total Dissolved Solids	mg/l	144
	Total Suspended Solids	mg/l	< 1
Total Metals	Arsenic	µg/l	0.2
	Barium	mg/l	0.032
	Copper	mg/l	0.0005
	Iron	mg/l	0.0071
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0029
	Nickel	mg/l	0.0002
	Selenium	mg/l	0.0018
	Uranium	µg/l	115
	Zinc	mg/l	0.0016
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.03

ML-1

		Date	2024-06-27	2024-12-15
Group	Parameter	Unit		
Major Ions	Alkalinity	mg/l	59	65
	Bicarbonate	mg/l	72	79
	Calcium	mg/l	17	21
	Carbonate	mg/l	< 1	< 1
	Chloride	mg/l	6.1	7.2
	Cond-L	µS/cm	168	197
	Hardness	mg/l	58	71
	Hydroxide	mg/l	< 1	< 1
	Potassium	mg/l	1.0	1.4
	Sodium	mg/l	8.8	11
	Sulfate	mg/l	14	17
	Sum of Ions	mg/l	123	141
Nutrients	Nitrate	mg/l	< 0.04	
	Organic Carbon	mg/l	6.4	
	Total Phosphorus	mg/l	< 0.01	
Physical Parameters	pH-Field	pH Unit	8.3	8.8
	Specific Conductivity-Field	µS/cm	176	234
	pH-Laboratory	pH Unit	7.47	7.31
	Temperature	°C	16.6	0.4
	Total Dissolved Solids	mg/l	133	147
	Total Suspended Solids	mg/l	2	< 1
Total Metals	Arsenic	µg/l	0.2	0.2
	Barium	mg/l	0.037	0.044
	Copper	mg/l	0.0005	0.0018
	Iron	mg/l	0.020	0.0066
	Lead	mg/l	< 0.0001	0.0004
	Molybdenum	mg/l	0.0016	0.0021
	Nickel	mg/l	0.0001	0.0003
	Selenium	mg/l	0.0007	0.0009
	Uranium	µg/l	51	56
	Zinc	mg/l	0.0008	0.0070
Radionuclides	Lead-210	Bq/L	< 0.02	
	Polonium-210	Bq/L	< 0.005	
	Radium 226	Bq/L	0.008	0.006

CS-1

		Date	2024-06-27
Group	Parameter	Unit	
Major Ions	Alkalinity	mg/l	61
	Bicarbonate	mg/l	74
	Calcium	mg/l	18
	Carbonate	mg/l	< 1
	Chloride	mg/l	6.6
	Cond-L	µS/cm	175
	Hardness	mg/l	62
	Hydroxide	mg/l	< 1
	Potassium	mg/l	1.0
	Sodium	mg/l	9.4
	Sulfate	mg/l	15
	Sum of Ions	mg/l	128
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	6.7
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.2
	Specific Conductivity-Field	µS/cm	195
	pH-Laboratory	pH Unit	7.46
	Temperature	°C	17.6
	Total Dissolved Solids	mg/l	118
	Total Suspended Solids	mg/l	3
Total Metals	Arsenic	µg/l	0.2
	Barium	mg/l	0.039
	Copper	mg/l	0.0006
	Iron	mg/l	0.042
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0017
	Nickel	mg/l	0.0003
	Selenium	mg/l	0.0008
	Uranium	µg/l	55
	Zinc	mg/l	0.0015
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.01

CS-2

		Date	2024-06-27
Group	Parameter	Unit	
Major Ions	Alkalinity	mg/l	60
	Bicarbonate	mg/l	73
	Calcium	mg/l	17
	Carbonate	mg/l	< 1
	Chloride	mg/l	6.5
	Cond-L	µS/cm	174
	Hardness	mg/l	59
	Hydroxide	mg/l	< 1
	Potassium	mg/l	1.0
	Sodium	mg/l	9.3
	Sulfate	mg/l	14
	Sum of Ions	mg/l	125
Nutrients	Nitrate	mg/l	< 0.04
	Organic Carbon	mg/l	6.8
	Total Phosphorus	mg/l	< 0.01
Physical Parameters	pH-Field	pH Unit	8.5
	Specific Conductivity-Field	µS/cm	187
	pH-Laboratory	pH Unit	7.52
	Temperature	°C	18.6
	Total Dissolved Solids	mg/l	107
	Total Suspended Solids	mg/l	2
Total Metals	Arsenic	µg/l	0.2
	Barium	mg/l	0.038
	Copper	mg/l	0.0006
	Iron	mg/l	0.048
	Lead	mg/l	< 0.0001
	Molybdenum	mg/l	0.0017
	Nickel	mg/l	0.0003
	Selenium	mg/l	0.0008
	Uranium	µg/l	56
	Zinc	mg/l	0.0052
Radionuclides	Lead-210	Bq/L	< 0.02
	Polonium-210	Bq/L	< 0.005
	Radium 226	Bq/L	0.01

ZOR-01

Group	Parameter	Unit	2024-03-30	2024-04-27	2024-05-21	2024-06-27	2024-07-27	2024-08-29	2024-09-30	2024-10-26
Major Ions	Alkalinity	mg/l	112	41	96	99	98	94	98	101
	Bicarbonate	mg/l	137	50	117	121	120	115	120	123
	Calcium	mg/l	36	12	31	30	31	32	32	34
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3
	Cond-L	µS/cm	247	92	218	184	223	217	228	233
	Hardness	mg/l	125	41	108	105	109	112	112	118
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	0.9	0.4	0.7	0.7	0.7	0.7	0.8	0.8
	Sodium	mg/l	1.9	0.7	1.7	1.7	1.8	1.8	1.9	1.8
	Sulfate	mg/l	19	6.6	17	17	17	17	18	19
	Sum of Ions	mg/l	204	73	175	178	179	175	182	187
Nutrients	Nitrate	mg/l				< 0.04				
	Organic Carbon	mg/l				8.5				
	Total Phosphorus	mg/l				< 0.01				
Physical Parameters	pH-Field	pH Unit	8.5	7.4	7.8	7.9	8.1	8.5	7.9	7.6
	Specific Conductivity-Field	µS/cm	255	61	226	227	221	205	217	237
	pH-Laboratory	pH Unit	7.62	6.90	7.47	8.05	8.06	7.93	8.13	7.90
	Temperature	°C	1.1	4.1	11	18.5	18.3	16.8	11.1	4.9
	Total Dissolved Solids	mg/l	165	60	138	145	141	141	143	148
	Total Suspended Solids	mg/l	< 1	< 1	10	1	2	< 1	2	< 1
Total Metals	Arsenic	µg/l	0.1	< 0.1	0.2	0.2	0.2	0.2	0.1	0.2
	Barium	mg/l	0.026	0.0098	0.023	0.022	0.021	0.022	0.023	0.023
	Copper	mg/l	0.0002	0.0003	0.0004	0.0004	0.0002	0.0006	< 0.0002	0.0003
	Iron	mg/l	0.0028	0.0066	0.012	0.0057	0.011	0.013	0.022	0.010
	Lead	mg/l	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	Molybdenum	mg/l	0.0009	0.0004	0.0007	0.0010	0.0008	0.0009	0.0008	0.0008
	Nickel	mg/l	0.0001	< 0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	Selenium	mg/l	0.0002	< 0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	Uranium	µg/l	17	5.6	23	17	16	15	15	17
	Zinc	mg/l	< 0.0005	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Radionuclides	Lead-210	Bq/L				< 0.02				
	Polonium-210	Bq/L				0.02				
	Radium 226	Bq/L	0.03	0.007	0.04	0.04	0.03	0.03	0.03	0.03

ZOR-02

Group	Parameter	Unit	2024-04-27	2024-05-21	2024-06-27	2024-07-27	2024-08-29	2024-09-30	2024-10-26
Major Ions	Alkalinity	mg/l	71	93	101	102	102	114	116
	Bicarbonate	mg/l	87	113	123	124	124	139	142
	Calcium	mg/l	30	39	40	43	44	56	58
	Carbonate	mg/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	Chloride	mg/l	0.4	0.4	0.4	0.3	0.3	1	< 1
	Cond-L	µS/cm	211	263	286	289	289	374	379
	Hardness	mg/l	97	128	133	142	146	181	190
	Hydroxide	mg/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	Potassium	mg/l	0.7	0.7	0.8	0.8	0.8	0.9	0.9
	Sodium	mg/l	1.3	1.7	1.8	1.9	2.0	2.5	2.4
	Sulfate	mg/l	33	40	40	42	43	71	74
	Sum of Ions	mg/l	158	203	214	221	224	281	289
Nutrients	Nitrate	mg/l			0.38				
	Organic Carbon	mg/l			7.5				
	Total Phosphorus	mg/l			< 0.01				
Physical Parameters	pH-Field	pH Unit	7.8	8	8.1	8	8.5	8.2	7.8
	Specific Conductivity-Field	µS/cm	144	293	301	318	265	391	399
	pH-Laboratory	pH Unit	7.46	7.49	8.12	8.06	7.95	8.22	8.08
	Temperature	°C	3.2	5.6	13.2	14.9	14.3	9.2	3.5
	Total Dissolved Solids	mg/l	140	171	229	191	188	253	241
	Total Suspended Solids	mg/l	< 1	< 1	1	2	< 1	< 1	< 1
Total Metals	Arsenic	µg/l	0.1	0.2	0.2	0.2	0.2	0.2	0.1
	Barium	mg/l	0.018	0.020	0.022	0.023	0.025	0.033	0.032
	Copper	mg/l	0.0011	0.0023	0.0017	0.0014	0.0018	0.0013	0.0015
	Iron	mg/l	0.030	0.18	0.059	0.13	0.060	0.090	0.093
	Lead	mg/l	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	Molybdenum	mg/l	0.0008	0.0012	0.0012	0.0014	0.0013	0.0014	0.0013
	Nickel	mg/l	0.0002	0.0005	0.0002	0.0003	0.0002	0.0002	0.0002
	Selenium	mg/l	0.0002	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003
	Uranium	µg/l	291	453	339	327	320	523	556
	Zinc	mg/l	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007	< 0.0005
Radionuclides	Lead-210	Bq/L			0.11				
	Polonium-210	Bq/L			0.03				
	Radium 226	Bq/L	0.17	0.26	0.23	0.22	0.23	0.27	0.18

APPENDIX F

APPENDIX F

DB-6 FB - Beaverlodge QA/QC Report
Sample Date: 09/30/2024

Parameter	DB-6 FB		DB-6 TB		Absolute Difference	Absolute Difference >
	Results	Entered DL	Results	Entered DL		
Alkalinity (mg/l)	< 1	1	< 1	1	0.00	No
Arsenic (µg/l)	< 0.1	0.1	< 0.1	0.1	0.00	No
Barium (mg/l)	< 0.0005	0.0005	< 0.0005	0.0005	0.00	No
Bicarbonate (mg/l)	< 1	1	< 1	1	0.00	No
Calcium (mg/l)	< 0.1	0.1	< 0.1	0.1	0.00	No
Carbonate (mg/l)	< 1	1	< 1	1	0.00	No
Chloride (mg/l)	< 0.1	0.1	< 0.1	0.1	0.00	No
Copper (mg/l)	< 0.0002	0.0002	< 0.0002	0.0002	0.00	No
Hardness (mg/l)	< 1	1	< 1	1	0.00	No
Hydroxide (mg/l)	< 1	1	< 1	1	0.00	No
Iron (mg/l)	0.0033	0.0005	< 0.0005	0.0005	1.47	Yes
Lead (mg/l)	< 0.0001	0.0001	< 0.0001	0.0001	0.00	No
Molybdenum (mg/l)	< 0.0001	0.0001	< 0.0001	0.0001	0.00	No
Nickel (mg/l)	0.0002	0.0001	< 0.0001	0.0001	0.67	Yes ✓
pH-Laboratory (pH Unit)	5.83	0.07	5.66	0.07	0.03	No
Potassium (mg/l)	< 0.1	0.1	< 0.1	0.1	0.00	No
Radium 226 (Bq/L)	< 0.005	0.005	< 0.005	0.005	0.00	No
Selenium (mg/l)	< 0.0001	0.0001	< 0.0001	0.0001	0.00	No
Sodium (mg/l)	0.2	0.1	0.2	0.1	0.00	No
Specific Conductivity-Laboratory (µS/cm)	< 1	1	< 1	1	0.00	No
Sulfate (mg/l)	< 0.2	0.2	< 0.2	0.2	0.00	No
Sum of Ions (mg/l)	< 1	1	< 1	1	0.00	No
Total Dissolved Solids (mg/l)	< 5	5	< 5	5	0.00	No
Total Suspended Solids (mg/l)	1	1	1	1	0.00	No
Uranium (µg/l)	< 0.1	0.1	< 0.1	0.1	0.00	No
Zinc (mg/l)	< 0.0005	0.0005	< 0.0005	0.0005	0.00	No

AC-14 - Beaverlodge QA/QC Report
Sample Date: 01/30/2025

Parameter	AC-14		BLIND-1		Absolute Difference	Absolute Difference >
	Results	Entered DL	Results	Entered DL		
Alkalinity (mg/l)	52	1	50	1	0.04	No
Arsenic (µg/l)	0.1	0.1	0.1	0.1	0.00	No
Barium (mg/l)	0.024	0.0005	0.024	0.0005	0.00	No
Bicarbonate (mg/l)	63	1	61	1	0.03	No
Calcium (mg/l)	17	0.1	17	0.1	0.00	No
Carbonate (mg/l)	< 1	1	< 1	1	0.00	No
Chloride (mg/l)	1.3	0.1	1.3	0.1	0.00	No
Copper (mg/l)	0.0007	0.0002	0.0007	0.0002	0.00	No
Hardness (mg/l)	56	1	56	1	0.00	No
Hydroxide (mg/l)	< 1	1	< 1	1	0.00	No
Iron (mg/l)	0.046	0.0005	0.047	0.0005	0.02	No
Lead (mg/l)	0.0001	0.0001	0.0001	0.0001	0.00	No
Molybdenum (mg/l)	0.0010	0.0001	0.0010	0.0001	0.00	No
Nickel (mg/l)	0.0002	0.0001	0.0002	0.0001	0.00	No
pH-Field (pH Unit)	7.8		7.8		0.00	No
pH-Laboratory (pH Unit)	6.93	0.07	6.95	0.07	0.00	No
Potassium (mg/l)	0.8	0.1	0.9	0.1	0.12	No
Radium 226 (Bq/L)	0.03	0.005	0.02	0.005	0.40	No
Selenium (mg/l)	0.0001	0.0001	0.0001	0.0001	0.00	No
Sodium (mg/l)	1.8	0.1	1.8	0.1	0.00	No
Specific Conductivity-Field (µS/cm)	137		137		0.00	No
Specific Conductivity-Laboratory (µS/cm)	122	1	117	1	0.04	No
Sulfate (mg/l)	6.3	0.2	6.5	0.2	0.03	No
Sum of Ions (mg/l)	94	1	92	1	0.02	No
Temperature-Water (°C)	0.1		0.1		0.00	No
Total Dissolved Solids (mg/l)			90	5	0.00	No
Total Suspended Solids (mg/l)	1	1	< 1	1	0.00	No
Uranium (µg/l)	17	0.1	18	0.1	0.06	No
Zinc (mg/l)	0.0012	0.0005	0.0016	0.0005	0.29	No

TL-4 DUPLICATE - Beaverlodge QA/QC Report
Sample Date: 06/27/2024

Parameter	TL-4		TL-4 DUPLICATE		Absolute Difference	Absolute Difference >	
	Results	Entered DL	Results	Entered DL			
Arsenic (µg/l)	0.7	0.1	0.82	0.20	0.16	No	
Barium (mg/l)	0.084	0.0005	0.090	0.010	0.07	No	
Copper (mg/l)	0.0009	0.0002	< 0.0010	0.0010	0.11	No	
Iron (mg/l)	0.035	0.0005	< 0.060	0.060	0.53	Yes	✓
Lead (mg/l)	< 0.0001	0.0001	0.00025	0.00020	0.86	Yes	✓
Lead-210 (Bq/L)	0.10	0.02	< 0.10	0.10	0.00	No	
Molybdenum (mg/l)	0.0069	0.0001	0.0081	0.00020	0.16	No	
Nickel (mg/l)	0.0006	0.0001	0.00070	0.00050	0.15	No	
Polonium-210 (Bq/L)	0.03	0.005	0.032	0.010	0.06	No	
Radium 226 (Bq/L)	1.8	0.01	0.96	0.0050	0.61	Yes	✓
Selenium (mg/l)	0.0014	0.0001	0.0016	0.00020	0.13	No	
Uranium (µg/l)	174	0.1	180	0.10	0.03	No	
Zinc (mg/l)	< 0.0005	0.0005	< 0.0030	0.0030	1.43	Yes	✓

BLIND-6 - Beaverlodge QA/QC Report
Sample Date: 09/30/2024

Parameter	TL-7		BLIND-6		Absolute Difference	Absolute Difference >
	Results	Entered DL	Results	Entered DL		
Alkalinity (mg/l)	124	1	123	1	0.01	No
Arsenic (µg/l)	0.6	0.1	0.6	0.1	0.00	No
Barium (mg/l)	0.39	0.0005	0.39	0.0005	0.00	No
Bicarbonate (mg/l)	151	1	150	1	0.01	No
Calcium (mg/l)	30	0.1	30	0.1	0.00	No
Carbonate (mg/l)	< 1	1	< 1	1	0.00	No
Chloride (mg/l)	2.3	0.1	2.3	0.1	0.00	No
Copper (mg/l)	< 0.0002	0.0002	0.0002	0.0002	0.00	No
Hardness (mg/l)	97	1	97	1	0.00	No
Hydroxide (mg/l)	< 1	1	< 1	1	0.00	No
Iron (mg/l)	0.025	0.0005	0.026	0.0005	0.04	No
Lead (mg/l)	0.0001	0.0001	0.0001	0.0001	0.00	No
Molybdenum (mg/l)	0.0076	0.0001	0.0075	0.0001	0.01	No
Nickel (mg/l)	0.0004	0.0001	0.0005	0.0001	0.22	No
pH-Field (pH Unit)	7.9		7.9		0.00	No
pH-Laboratory (pH Unit)	8.18	0.07	8.16	0.07	0.00	No
Potassium (mg/l)	1.4	0.1	1.3	0.1	0.07	No
Radium 226 (Bq/L)	1.9	0.02	1.9	0.005	0.00	No
Selenium (mg/l)	0.0010	0.0001	0.0010	0.0001	0.00	No
Sodium (mg/l)	22	0.1	23	0.1	0.04	No
Specific Conductivity-Field (µS/cm)	249		249		0.00	No
Specific Conductivity-Laboratory (µS/cm)	282	1	278	1	0.01	No
Sulfate (mg/l)	17	0.2	17	0.2	0.00	No
Sum of Ions (mg/l)	231	1	230	1	0.00	No
Temperature-Water (°C)	9		9		0.00	No
Total Dissolved Solids (mg/l)			183	5	0.00	No
Total Suspended Solids (mg/l)	2	1	2	1	0.00	No
Uranium (µg/l)	191	0.1	185	0.1	0.03	No
Zinc (mg/l)	0.0005	0.0005	0.0006	0.0005	0.18	No