AGNICO EAGLE

Meadowbank Complex

Closure and Post-Closure Monitoring Plan

NOVEMBER 2025

Version 1

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is the sole owner of the Meadowbank Complex, which consists of two gold mines: the Meadowbank Mine (latitude: 65° 1′ 7″ N, longitude: 96° 4′ 26″ W) and the Whale Tail Mine (latitude: 65° 24’ 36” N, longitude: 96° 41’ 41” W), both of which are located within the Kivalliq District of Nunavut, Canada. Both components of the Meadowbank Complex are approaching Closure, thus an updated Closure and Reclamation Plan (Meadowbank Complex CRP; Agnico Eagle 2025) was required. Sections 4 and 6 of the Meadowbank Complex CRP (Agnico Eagle 2025) provide the Closure objectives and criteria for successful Closure of the Meadowbank Complex.

The Nunavut Water Board (NWB) Licence, the Nunavut Impact Review Board (NIRB) Project Certificate, and the Metal and Diamond Mining Effluent Regulations (MDMER) require operational monitoring for the Meadowbank Complex. However, there is currently no consolidated plan that details monitoring for the Closure and Post-Closure phases of the Meadowbank Complex’s lifecycle. To address this gap, and to monitor progress towards Agnico Eagle’s Closure objectives a Closure and Post-Closure Monitoring Plan (CPCMP) was developed, as a companion document to the Meadowbank Complex CRP (Agnico Eagle 2025). The CPCMP is a living document and is the first version of the framework that will be updated on a regular basis to reflect changes in monitoring program design as the Meadowbank Complex progresses through Closure to Post-Closure. In general, the CPCMP will consist of two main monitoring phases: the Closure monitoring phase, and the Post-Closure monitoring phase. Geotechnical, water quantity, and water quality monitoring will occur through out these stages. Site inspections and an environmental site assessment (ESA) will also be conducted. Once the site transitions into Closure, the CPCMP will become the primary document related to monitoring activities, most of the operational plans will have expired. Moving forward, once the Final Closure Plan (FCP) is submitted, the CPCMP will become an independent document but linked to the FCP.

Given the CPCMP’s broad scope, it is intended to function as a framework for all things related to Closure monitoring, similar to how the Aquatic Effects Monitoring Plan (AEMP) is used during operations, in conjunction with several other monitoring programs. As such, there are several components to the CPCMP, which are summarized below.

Adaptive Reduction Framework

The Meadowbank Complex has a long Closure phase (described in Section 3), which is ultimately dictated by the rate at which open pits are inundated, and the water quality of the resulting pit lakes. Because of the duration of Closure and the amount of information that will be collected during Closure monitoring, Agnico Eagle proposes the implementation of an Adaptive Reduction Framework.

The Adaptive Reduction Framework would work in conjunction with the Closure timeline provided in Section 3 and support decommissioning activities through the reduction of monitoring efforts for mine components that are in their final configuration. The framework also aims to provide adequate monitoring to protect the environment, while providing an efficient means to do so. To achieve this, the Adaptive Reduction Framework would do the following:

1. Determine if monitoring is required.
2. Provide guidance on the reduction or removal of parameters, monitoring frequencies, or monitoring stations.

To determine if Closure/Post-Closure monitoring is required, the Adaptive Reduction Framework would first assess the status of a given component, as some components may not require Closure or Post-Closure monitoring. For instance, if the only impact to a natural waterbody was removal and pumping of water, pumps and infrastructure have been removed, and its condition following decommissioning is comparable to that of pre-mining conditions, then little or no monitoring is required, as it is assumed that this waterbody would be in Post-Closure. The Adaptive Reduction Framework, however, would still require monitoring of the following categories of mine components:

- Contact water management infrastructure (e.g., attenuation ponds, pit lakes).
- Tailings associated infrastructure (e.g., the Meadowbank Tailings Storage Facility [TSF]).
- PAG/ML sources (e.g., Portage Waste Rock Storage Facility [WRSF]).
- Areas of potential geotechnical instability (e.g., dikes, dams, WRSFs).
- Areas associated with hazardous wastes or potential contamination (e.g., spills).

For the above components, monitoring would continue as determined by the Meadowbank Complex's Closure Water Licence, with data collected during Closure monitoring used to assess if there are long-term trends that indicate geotechnical or geochemical stability, after which monitoring efforts would be reduced or eliminated all together.

Water Quantity and Quality Monitoring

Several water monitoring programs will be continued from operations, and into Closure and Post-Closure:

- The Core Receiving Environment Monitoring Plan (CREMP; Azimuth 2024)
- The Water Management Plans (Agnico Eagle 2024a; Agnico Eagle 2024b)
- The Water Quality and Flow Plans (which informs water management; Agnico Eagle 2015; Agnico Eagle 2019)

These monitoring plans will continue to monitor water quality parameters identified in the Meadowbank Complex Water Licenses (2AM-MEA1530 and 2AM-WTP1830), at the intervals and intensities outlined in the respective plans (e.g., operational monitoring). Site inspections will monitor the following, to be proactively capture issues that may arise, and allow for early intervention if necessary:

- seepage from dams
- water levels (pits, ponds, or other managed reservoirs)
- general surface erosion, tension cracks, and/or anomalies on dams, the TSF, and WRSFs

As with geotechnical monitoring efforts, water quantity and quality parameters will continue to be monitored until they meet their respective Adaptive Reduction Framework.

Geotechnical Monitoring

Geotechnical monitoring during Closure will mirror that used during operations, as stability of major components of the Meadowbank Complex (e.g., TSF; WRSFs) generally have strict requirements around their monitoring and decommissioning. In general, routine review of collected instrumentation data will continue throughout Closure, and into Post-Closure (if necessary), with reduction in monitoring and data review occurring only once the Adaptive Reduction Framework requirements have been met. Geotechnical monitoring will follow Agnico Eagle standards, best practices and will comply with the OMS for each applicable structure.

Tailings Storage Facility Monitoring

The TSF monitoring program will generally include monitoring for physical stability (field visits for TSF inspections and instrumentations) and chemical stability (water quality sampling). The monitoring will be conducted through a series of instrumentation downloads and sampling to confirm that Closure is proceeding as expected. Additionally, a Qualified Person will conduct geotechnical inspections and dam safety reviews.

The chemical stability of the TSF will be monitored via site wide water quality monitoring with other water quality monitoring efforts listed in the Water Licence. Information collected will be used to confirm previous water quality monitoring predictions. During sampling, the field staff will walk the perimeter of the ponds, looking for areas of active oxidation or seepage. Photos will be taken of any changes from the previous inspection.

Waste Monitoring

Waste monitoring will mainly focus on hazardous wastes. Additionally, an event monitoring program will be conducted following any accidental release by a spill or an emergency as per Spill Contingency and Emergency Response plans.

Environmental Site Assessment Work

Environmental Site Assessment work will occur during the operational phase of the Meadowbank Complex in 2024 and is expected to continue beyond the onset of Closure (Section 4.2.5) but conclude shortly thereafter. Current ESA work is geared towards ruling out areas that are at lower risk of requiring remediation, as a more detailed ESA will be completed until after the demolition phase, to assess areas. Soil samples will be collected and analyzed in an accredited laboratory to assess areas of potential environmental concern (APEC). As this work is focused on identification and removal of contaminants, there is no expected adaptive reduction, given that areas of contaminated soil will be identified and remediated. Once the margins of all identified contaminated areas are deemed clean, the Meadowbank Complex will have met is objective for chemical stability, and no further monitoring is expected.

TABLE OF CONTENTS

DOCUMENT CONTROL

Version	Date	Section	Page	Revision
A	November 2024			Pre-Nunavut Water Board submission; for review by KivIA and CIRNAC of Closure and Post-Closure Monitoring Plan framework. This plan is as an Appendix to the Meadowbank Complex Closure and Reclamation Plan
1	November 2025			Development of new plan “Closure and Post-Closure Monitoring Plan” to support the Closure and Reclamation Plan for Meadowbank Complex. As the closure of Meadowbank Mine and Whale Tail Mine are integral to one another, this Plan has amalgamated licenses 2AM-MEA1530 and 2AMWTP1830.

Prepared by:

Agnico Eagle Mines Limited – Meadowbank Division

ACRONYMS

Abbreviation	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
AEMP	Aquatic Effects Monitoring Program
Agnico Eagle	Agnico Eagle Mines Limited – Meadowbank Division
APEC	area of potential concern
AWAR	All Weather Access Road
BTEX	benzene, toluene, ethylbenzene, and xylene
CCME	Canadian Council of Ministers of the Environment
CD	Camp Dike
CDA	Canadian Dam Association
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CPCMP	Closure and Post-Closure Monitoring Program
CREMP	Core Receiving Environment Monitoring Program
CRP	Closure and Reclamation Plan
EC	Electrical conductivity
ECCC	Environment and Climate Change Canada
EEM	Environmental Effects Monitoring
ESA	environmental site assessment
HHERA	Human Health and Ecological Risk Assessment
IIBA	Inuit Impact Benefit Agreement
MDMER	Metal and Diamond Mining Effluent Regulations
MVLWB	Mackenzie Valley Land and Water Board
NCIS	North Cell Internal Structure
NIRB	Nunavut Impact Review Board
NPAG/NML	Non-potential acid generating/non-metal leaching
NTI	Nunavut Tunngavik Incorporated
NWB	Nunavut Water Board
OMS	Operations, Maintenance, and Surveillance
PAG/ML	Potential acid generating materials/metal leaching
PHC	Petroleum Hydrocarbons
QA	Quality assurance
QC	Quality control
SD	Saddle Dam
SWD	Stormwater Dike
TARP	Trigger Action Response Plan
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TPL	Third Portage Lake
TSF	Tailings Storage Facility

Abbreviation	Definition
TSS	Total Suspended Solids
WRSF	Waste Rock Storage Facility

LIST OF UNITS

Unit	Definition
Bq/L	becquerels per litre
m^3	cubic metres
Km	kilometre
L	litre
M	metre
Mbgs	metres below ground surface
µS/cm	microsiemens per centimetre
mg/l	milligrams per litre
mL	millilitre
Mm	millimetres
NTU	Nephelometric Turbidity Unit
T	Tonne

1 INTRODUCTION

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is the sole owner of the Meadowbank Complex, which consists of two gold mines: the Meadowbank Mine (latitude: 65° 1′ 7″ N, longitude: 96° 4′ 26″ W) and the Whale Tail Mine (latitude: 65° 24’ 36” N, longitude: 96° 41’ 41” W) both of which are located within the Kivalliq District of Nunavut, Canada.

The Meadowbank Complex is located approximately 110 km north of Baker Lake in the Kivalliq District of Nunavut, Canada and consists of the Meadowbank Mine and the Vault Pit (8 km northeast of the Meadowbank Mine), and the Whale Tail Mine; the second major component of the Meadowbank Complex located approximately 50 km northwest of the Meadowbank Mine. An additional location, the Baker Lake Marshalling Area, is an ancillary component of the Meadowbank Complex, and is the sole seaport for supplies and concentrate. A 110-km access road (the All-Weather Access Road; AWAR) connects the Baker Lake Marshalling Area to the Meadowbank Mine, while the Whale Tail Haul Road connects the Meadowbank and Whale Tail mines.

The Meadowbank Complex is nearing the end of its lifecycle, and thus a near-final Closure and Reclamation Plan (CRP) has been developed (Agnico Eagle 2025). This Closure and Post-Closure Monitoring Program (CPCMP) aims to support the Meadowbank Complex CRP, and provide a clear picture of when, where, and what will be monitored in Closure and Post-Closure, while addressing requirements of the Closure Water Licence.

1.1 Project History

The Meadowbank Mine was first licensed by the Nunavut Water Board (NWB) in 2008, with commercial production commencing in March 2010. In 2013, exploratory activities for the Whale Tail Mine began, with the intention that the new mine would provide additional ore to the Meadowbank Mine mill. In July 2018, Meadowbank Mine’s original permit (i.e., Water Licence) was renewed and amended in to allow for ore from Whale Tail Mine to be hauled and processed at the Meadowbank Mine. The permit also updated the volume of allowed tailings generated at the Meadowbank Mine, due to the extended life of mine. Permitting efforts resulted in a brief pause in production, until processing of ore from Whale Tail Mine was approved in Q4 of 2019. Shortly after, exploration identified further reserves at Whale Tail Mine, which would require the creation of an additional pit (the IVR pit) and underground operations. In 2020, another Water Licence amendment allowed for an additional four years of production from the Whale Tail Mine. Then, in Q4 of 2020, the IVR pit became productive, and in August 2022, underground operations reached commercial production.

Agnico Eagle was approved for an extension to the IVR open pit resulting in an extended mine life, which will conclude in 2028. The Closure phase of the Meadowbank Complex’s life cycle is expected to commence in 2028, and last until 2045, followed by a three-year Post-Closure period.

1.2 Regulatory Summary

Agnico Eagle currently operates the facilities as an Approved Project by the Nunavut Impact Review Board (NIRB) and NWB under the following authorizations:

- NIRB Project Certificate No. 004, Amendment 003
- NIRB Project Certificate No. 008, Amendment 001
- 2AM-MEA1530 Type A Water Licence Amended for Mining Undertaking at Meadowbank Site
- 2AM-WTP1830 Type A Water Licence for Mining Undertaking at Whale Tail

In preparation of Closure of the Meadowbank Complex, Agnico Eagle has developed CPCMP that integrates Closure monitoring aspects of key monitoring plans currently submitted to the NWB through the annual reporting process. Where these aspects are not present in existing monitoring plans (e.g., no Closure-specific section), then a Closure monitoring program has been created by considering the operational monitoring plan and tailoring it to meet Closure needs.

2 OBJECTIVES & FRAMEWORK

2.1 Objectives of Monitoring Plan

Agnico Eagle's Closure vision is to return the Meadowbank Complex and affected areas to viable, and wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities (Agnico Eagle 2025). This Closure vision is supported by the three Closure principles of Physical Stability, Chemical Stability, and Future Use and Aesthetics for each component of the Meadowbank Complex. Further information on the integration of Closure vision, principles, objectives, and criteria can be found in Sections 4 and 6 of the Meadowbank Complex CRP (Agnico Eagle 2025). Definitions of each of these Closure principles are provided below, and align with Aboriginal Affairs and Northern Development Canada (AANDC) and Mackenzie Valley Land and Water Board (MVLWB) guidance (e.g., AANDC and MVLWB 2013):

- **Physical Stability:** The components of the reclaimed Meadowbank Complex should be constructed or modified at Closure so that they do not erode, subside, or move under extreme design events, and therefore do not pose a threat to humans, wildlife, or environmental health and safety.
- **Chemical Stability:** The components of the reclaimed Meadowbank Complex should be chemically stable to prevent adverse soil, water and air quality effects that might pose a risk to humans, wildlife or environmental health and safety.
- **Future Use and Aesthetics:** The reclaimed Meadowbank Complex should be compatible with the surrounding lands to the extent possible, and support future land uses compatible with the region at the completion of the reclamation activities.

Therefore, the intent of the CPCMP is to assess the effectiveness of Closure efforts in achieving Agnico Eagle's Closure vision, and to collect and report information required by NWB Type A Water Licenses and NIRB Project Certificates. In this regard, the intent of the CPCMP is to also capture all Closure and Post-Closure monitoring requirements of the Meadowbank Complex by the end of Operations. Finally, the CPCMP is also intended to notify relevant parties of Agnico Eagle's intent to transition from operational monitoring to Closure and Post-Closure monitoring programs.

2.2 Terminology and Related Plans/Studies

The following terminology is used for monitoring components in the CPCMP:

Operations: the phase of a mine's life cycle where mining and milling are occurring. Progressive reclamation may occur, where components that are no longer vital to operations are permanently reclaimed to reduce efforts during **Closure**. During operations, mines conduct environmental and geotechnical monitoring as outlined in their operational permits. Operations may be interrupted due to commodity prices, or other factors. A temporary interruption often results in **Care and Maintenance,** which is a passive state for the mine.

Care and Maintenance: a passive state, where the mine is no longer operating as defined in **Operations**. This state is typically temporary, lasting from months to years. During Care and Maintenance, operators intend to resume activities, thus, facilities within the mine are maintained for a quick restart. Monitoring during this phase aligns closely with monitoring during operations.

Closure: the phase following **Operations**. Ore reserves are exhausted, and reclamation activities begin in earnest, now that the mine is in its ultimate configuration, and operational activities have ceased. Tasks, such as backfilling, recontouring, soil placement (if necessary), and pit flooding occur. There is no intention to re-open the mine or conduct additional disturbance.

Closure Monitoring: refers to the monitoring period associated with active on-site reclamation. The extent of this monitoring period is tied directly to the length of the Closure period of a mine.

Post-Closure: the phase following **Closure**. Reclamation and Closure activities are completed; pits are flooded to targeted elevations, engineered covers have been constructed over waste rock storage facilities (WRSFs), and the mine is in the final configuration.

Post-Closure Monitoring: refers to the monitoring period following **Closure,** which is concurrent with the **Post-Closure** stage. Environmental monitoring will be conducted to determine the success of the reclamation measures and confirm that objectives have been achieved.

Operational, Closure, and Post-Closure monitoring is further classified into regulated discharge monitoring and general monitoring as follows:

- **Regulated Discharge Monitoring:** refers to monitoring at regulatory compliance locations. Discharge limits must be achieved at these locations to maintain compliance with the Type A Water Licence and/or federal regulations; for example, Metal and Diamond Mining Effluent Regulations (MDMER) enforcement action may be taken if discharge limits are not met. Refer to Appendix A, Section 1.4., for further details.
- **General Monitoring**: is commonly included in a Water Licence to specify additional monitoring requirements and a schedule for these activities. General monitoring covers a wide range of activities, such as geotechnical, soils, and water quality monitoring. These monitoring programs may be subject to regulatory compliance assessments to confirm that sampling was conducted using established methods and protocols, including quality assurance/quality control (QA/QC).

2.3 Framework of Monitoring Plan

This CPCMP has been developed to support the Meadowbank Complex CRP (Agnico Eagle 2025), and outlines the transition of monitoring requirements from the operational phase to the Closure and Post-Closure phases. The CPCMP also addresses consultation and engagement feedback received in preparation of the Meadowbank Complex CRP (Agnico Eagle 2025). As Agnico Eagle progresses to Closure and Post-Closure, the CPCMP will incorporate, where appropriate, regulatory review comments, ongoing fieldwork, direction from the NWB, and input from the Kivalliq Inuit Association (KivIA). Addenda to the CPCMP are anticipated with changes in operational status; these addenda will be submitted with the NWB Reports in accordance with the Type A Water Licenses and shown in Figure 3.0-1. Table 2.3-1 provides the CPCMP monitoring schedule based on all active management or monitoring plans used during operations, which will be updated as an addendum to the NWB Report, or as needed to reflect potential changes in operation. Section 10 of the Meadowbank Complex CRP (Agnico Eagle 2025) provides detailed information on activities. As a result of Agnico Eagle's progressive Closure activities, some components (e.g., freshwater sumps) of the Meadowbank Complex could be in Post-Closure states prior to 2028, or shortly thereafter, and will therefore require minimal or no monitoring, depending on their purpose in operations and potential for environmental impact.

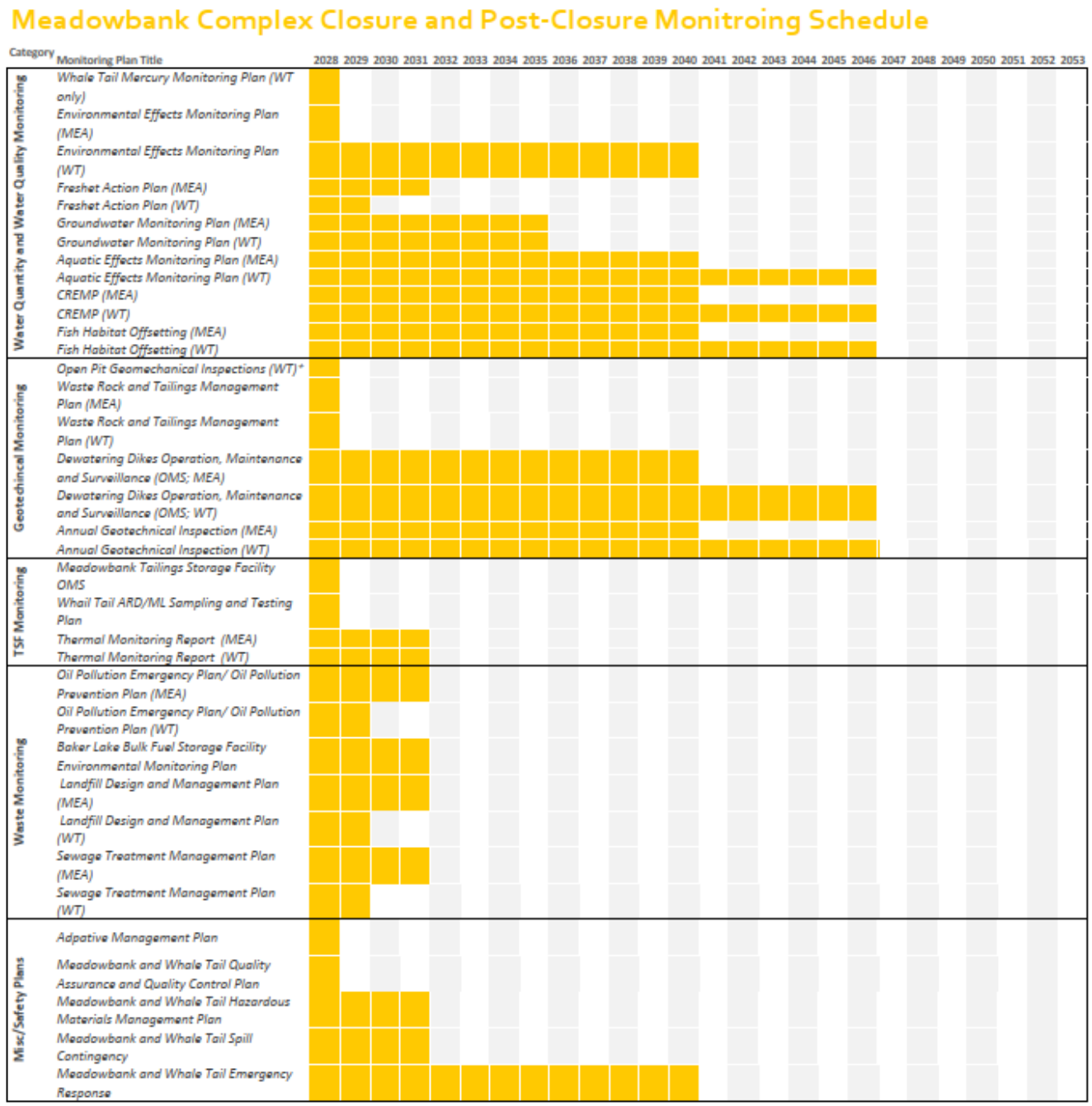


Table 2.3-1: Conceptual Closure and Post-Closure Monitoring Schedule (Place Holder)

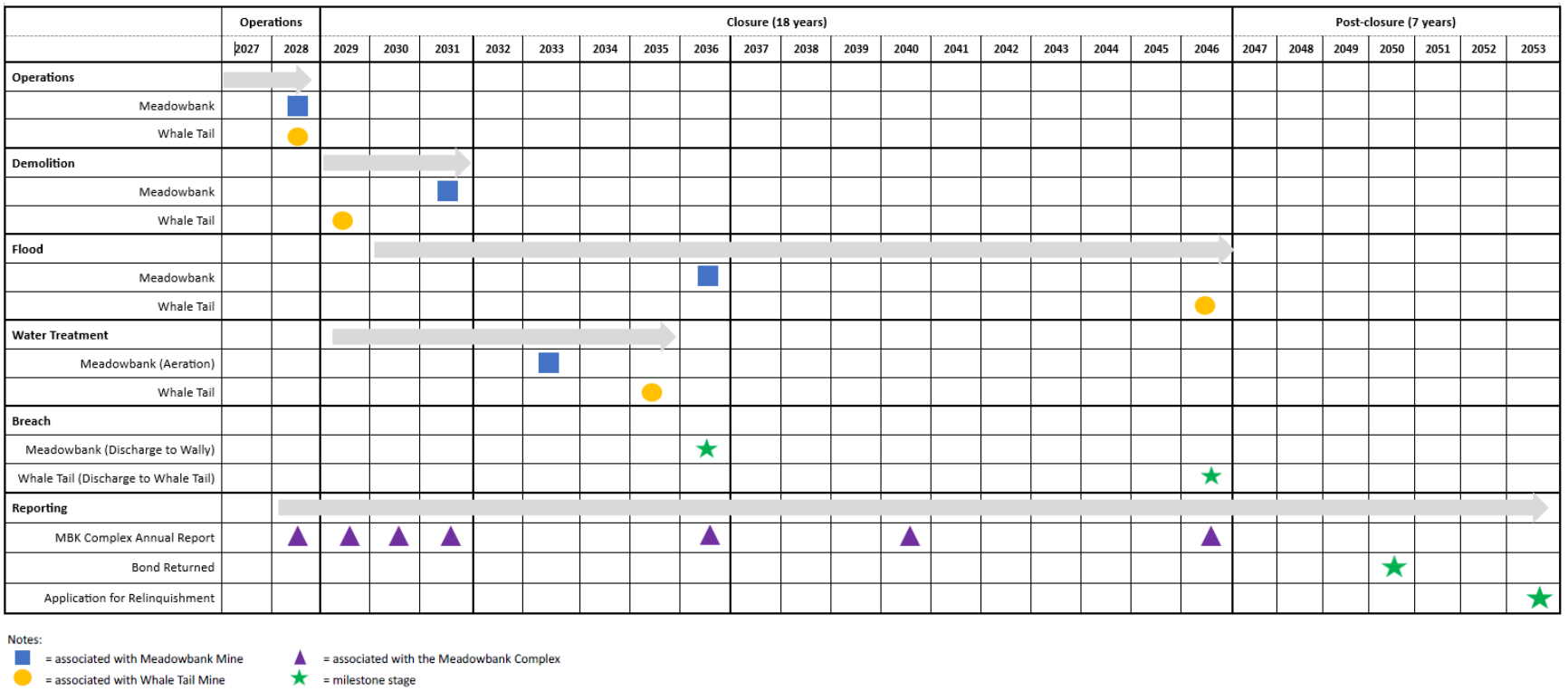
3 SUMMARY OF FINAL CLOSURE

As this CPCMP is an appendix intended to support the Meadowbank Complex CRP (Agnico Eagle 2025), readers are directed to Section 6 of that document, which provides the most current plan for the reclamation and Closure of all components of the Meadowbank Complex. A summary of major Closure activities is provided below:

- At the onset of Closure, any infrastructure that cannot practicably be removed from the Meadowbank Complex will either report to an on-site landfill, or to the underground workings.
- The Tailings Storage Facility (TSF) will receive a non-potential acid generating/non-metal leaching (NPAG/NML) material cover system.
- All WRSFs that contain potential acid generating/metal leaching (PAG/ML) material will receive a NPAG/NML thermal cover.
- At the onset of Closure, all pits will be flooded.
- Once water quality in the pits meets NWB criteria and is suitable for release to the environment, perimeter dikes will be breached, which will reconnect the pit lakes to the adjacent environment, initiating the Post-Closure stage for the open pits.

Figure 3.0-1 provides an overview of the Closure schedule for the Meadowbank Complex. A more detailed schedule can be found in Section 10 of the Meadowbank Complex CRP (Agnico Eagle 2025).
Figure 3.0-2 to Figure 3.0-6 provide an overview of the mine area and spatial extent of the CPCMP.

Figure 3.0-1: General Closure Schedule of the Meadowbank Complex



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= associated with Whale Tail Mine
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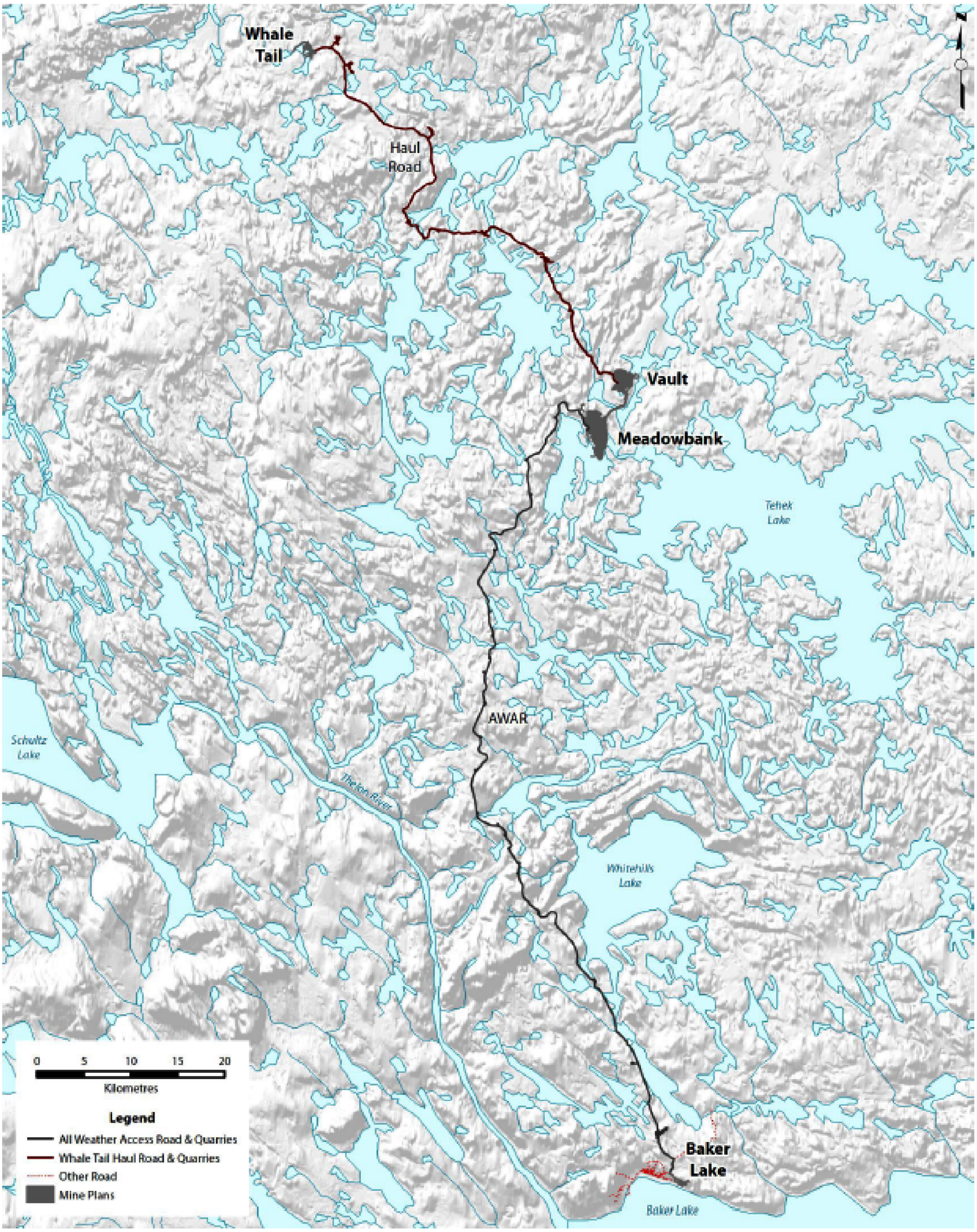

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
CLOSURE AND POST-CLOSURE MONITORING PLAN

TITLE

MEADOWBANK COMPLEX LOCATION

CONSULTANT

wsp

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PREPARED	CDB
REVIEWED	JDL
APPROVED	JDL

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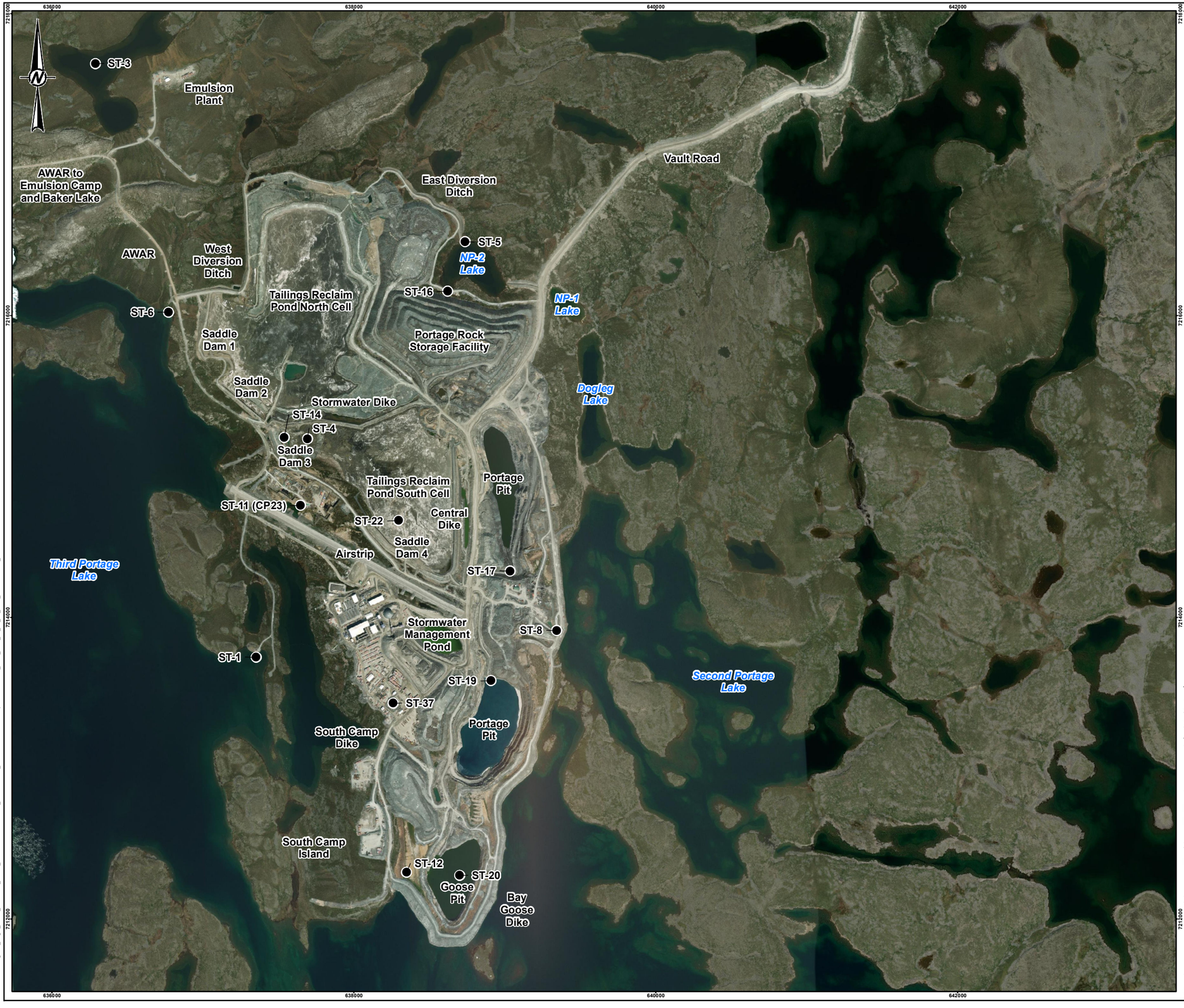

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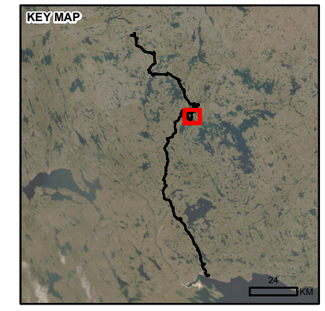
- MONITORING STATION



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CLIENT

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
MONITORING, MITIGATION AND MANAGEMENT PLANS

TITLE

MEADOWBANK OVERVIEW AND MONITORING STATIONS

CONSULTANT

wsp

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PREPARED	CDB
REVIEWED	JDL
APPROVED	JDL

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Wally Lake
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Vault Pit
Vault Attenuation Pond
Phaser Pit
ST-10
BB Phaser Pit
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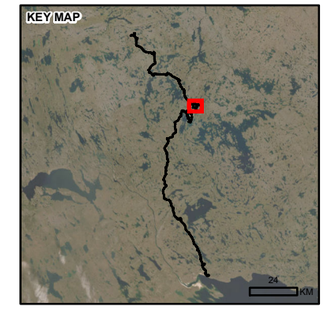
Vault Road

LEGEND

- MONITORING STATION
- FOOTPRINT (2021)

KEY MAP



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CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
MONITORING, MITIGATION AND MANAGEMENT PLANS

TITLE

VAULT AREA OVERVIEW AND MONITORING STATIONS

CONSULTANT

wsp

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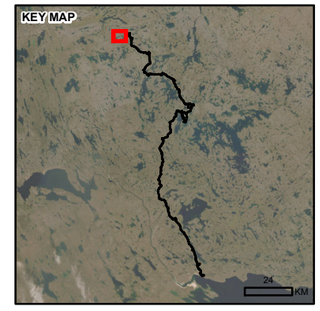
LEGEND

- MONITORING STATION
- FOOTPRINT (2023)

KEY MAP



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COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 14N

CLIENT

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

MEADOWBANK COMPLEX
MONITORING, MITIGATION AND MANAGEMENT PLANS

TITLE

WHALE TAIL PIT MONITORING STATIONS

CONSULTANT

wsp

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PREPARED	CDB
REVIEWED	JDL
APPROVED	JDL

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Meadowbank Complex

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Legend

Lease - Baker Lake Infrastructure

N

4 CLOSURE & POST-CLOSURE MONITORING PLAN

To support the Meadowbank Complex CRP (Agnico Eagle 2025) and Closure efforts for the Meadowbank Complex, a CPCMP is required. As mines transition from operations into Closure, and Post-Closure, their monitoring requirements change (see Appendix A for regulatory requirements of the Meadowbank Complex). With the Meadowbank Complex, this process will be the same; before expiry of the current Water Licence, Agnico Eagle will apply for a Closure Water Licence, which will ultimately dictate the parameters and frequencies required for Closure and Post-Closure monitoring.

As Closure and Post-Closure monitoring progresses, and the ultimate Post-Closure configuration of the Meadowbank Complex becomes more certain, the CPCMP monitoring efforts are expected to reduce, as are monitoring frequencies; thus an Adaptive Reduction Framework is proposed in Section 4.4 to guide this process.

4.1 Operational and Closure Monitoring Plans

The Meadowbank Complex has numerous monitoring and management plans for its operational phase. These are presented in Table 4.1-1. Plans strictly related to operations, such as the *Meadowbank and Whale Tail Mercury Monitoring Plan* will occur until the onset of Closure. These operational plans are identified in Table 4.1-1 (e.g., those with 2028 end dates), and therefore are not included under the purview of the CPCMP as they are no longer required, provided that Agnico Eagle is successful in obtaining a Closure Water Licence from the NWB. Remaining plans and programs will continue following operations, with decreasing frequency, as outlined in the Adaptive Reduction Framework (Section 4.4), until the Meadowbank Complex's Closure criteria are achieved.

Importantly, the cessation of these monitoring programs will also be influenced by the overall Closure timeline, provided in Section 10 of the Meadowbank Complex CRP (Agnico Eagle 2025). Because of this schedule and other variables, monitoring plans that encompass both Meadowbank Mine and Whale Tail Mine may have component-specific portions halt before their counterparts. For instance, as shown in Table 2.3-1, the *Core Receiving Environment Monitoring Plan* (CREMP) efforts at Meadowbank Mine conclude in 2040, while they continue until 2046 at Whale Tail Mine. By monitoring during Closure and Post-Closure, Agnico Eagle can gauge the progress of the Closure of the Meadowbank Complex against meaningful metrics and demonstrate successful Closure.

Table 4.1-1: Operational Monitoring and Management Plans to be Incorporated into the CPCMP

Category and Monitoring Plan Title		Description
Water Quality and Water Management	**Environmental Effects Monitoring Plan**	• Documents the results of fish population surveys and benthic invertebrate community survey in the receiving environment, as well as the sub-lethal toxicity of the effluent. • Monitors the volume and quality of the mine's effluent.
	Whale Tail Mercury Monitoring Program Report	• Monitors methylmercury levels around Whale Tail Lake and adjacent waterbodies, from which changes in hydrology associated with the construction of the Whale Tail Dike caused terrestrial soils to be inundated.
	Freshet Action Plan	• Identifies areas of concern at the Meadowbank Complex that need to be managed in an organized and timely manner during the annual freshet period to prevent adverse environmental and operational impact.
	Aquatic Effects Management Monitoring Plan (AEMP)	• Developed as part of the Environmental Assessment for the project in 2005 and has been formally implemented since 2006, as the primary means to monitor effects in the core receiving environment (CREMP). • AEMP acts as overarching framework for the CREMP and several other monitoring programs. • The AEMP focuses on: o All Monitoring used to identify changes in the aquatic receiving environment due to mine activities o Linkages between monitoring results and adaptive management responses o Lake productivity o Sampling and analysis plans o Monitoring under Fisheries Authorizations o NWB Licence Compliance Monitoring o Benthic Community, sediment and water quality components of the EEM program under the Metal and Diamond Mining Effluent Regulations (MDMER)
	Meadowbank and Whale Tail CREMP Report	• Determines if activities at Meadowbank Mine, Whale Tail Mine, and Baker Lake Marshalling Area are causing changes in water quality, sediment chemistry, phytoplankton, and benthic invertebrates. • Changes within the study area lakes are identified using early warning triggers and statistical analyses to support management decisions with in the AEMP.
	Fish Habitat Offsetting Plan	• Determines whether fish habitat offsetting is ultimately constructed and functioning as intended.
	Habitat Compensation Monitoring Plan	• Demonstrates whether fish habitat compensation features at the Meadowbank Mine are constructed and functioning • as intended
	Groundwater Monitoring Plan	• Documents groundwater and surface water quality for effects related the TSF and in-pit tailings. • Measures water level and samples groundwater and surface water locations for the analysis of chemical parameters listed in Meadowbank and Whale Tail Water Licences, and isotopes of water (oxygen-18 and deuterium).
TSF and WRSFs, and Pit Monitoring Plans	**Meadowbank Tailings Storage Facility OMS**	• Provides plans, procedures, and processes for: o The operation, maintenance, and surveillance of the TSF to ensure that it functions in accordance with the design, meets performance objectives, and links to emergency response planning; o Evaluating performance of the structures, and reporting performance results; and o Managing change. • Aims to provide protocols and information that assist Agnico Eagle in the operation, maintenance, and monitoring of the TSF and identify early signs of malfunction.
	Whale Tail Operational ARD-ML Sampling Testing Plan	• Defines the sampling, analysis, and testing procedures for acid generating and metal leaching potential of waste rock. • Ensures that waste rock, overburden (till), and lake sediments are identified, managed, segregated, and disposed of in an environmentally appropriate manner. • Defines if the waste rock, the overburden, and the lake sediment can be used as construction/Closure material.
	Thermal Monitoring Report	• To observe the freeze back of the Waste Rockfill Storage Facilities at the Meadowbank Mine.
	Waste Rock and Tailings Management Plan	• Describes the management and placement of waste rock within the waste rock storage facilities. • Describes that waste rock is classified with testing as NPAG/NML or PAG/ML, and the management strategy for NPAG/NML and PAG/ML material is different.
Geotechnical Monitoring	**Open Pit Geomechanical Inspection**	• Annually monitors pit stability via third-party as required under the Water Licence for the Whale Tail Mine.
	Meadowbank and Whale Tail Annual Geotechnical Inspection	• Geotechnical inspection of the Meadowbank Complex, in accordance with the requirements of the Water Licences (No. 2AM-MEA1530 and 2AM-WTP1830). • Monitors geotechnical stability and reviews the instrument data available for: o dewatering dikes o structures of the TSF o structures of the all-weather access road (AWAR) and the Whale Tail Mine Haul Road o fuel storage infrastructures at Meadowbank Mine, the Whale Tail Mine and Baker Lake o other site infrastructures such as the jetties of the attenuation ponds, the diversion ditches, the wastewater management pond (Stormwater Pond), and surface water management infrastructures o landfills, and the contaminated soil storage areas (landfarm) o WRSF till plug o the diffusers o erosion and sediment protection structures o airstrip, as well as the retaining walls
	Meadowbank Dewatering Dikes Operation, Maintenance and Surveillance (OMS) **Whale Tail Water Management Infrastructure OMS**	• Provides plans, procedures, and processes for: o The operation, maintenance, and surveillance of dewatering dikes to ensure that it functions in accordance with the design, meets performance objectives, and links to emergency response planning; o Evaluating performance of the structures, and reporting performance results; and o Managing change. • Aims to provide protocols and information that assist Agnico Eagle in the operation, maintenance, and monitoring of the dewatering dikes and identify early signs of malfunction.

Category and Monitoring Plan Title		Description
Waste Monitoring	**Landfarm Design and Management Plan**	• Describes the design features and operational procedures of the landfarm constructed for the storage and treatment of petroleum hydrocarbon contaminated soils. • Objectives of this plan are to: o Provide an overview of the contaminated soil management at the Mine; o Describe the location and design criteria of the landfarm; o Define acceptable types of contaminated soils to be placed in the landfarm and conditions for removal of treated soil; o Define operating procedures and monitoring requirements; and o Describe contingency options for alternate treatment/storage of petroleum hydrocarbons (PHC) soil.
	Meadowbank Oil Pollution Emergency Plan and Oil Pollution Prevention Plan (OPEP and OPPP)	• Explains the necessary actions to stop or minimize the loss of fuel resulting from a mishap at Baker Lake Fuel Farm Oil Handling Facility located in Baker Lake, Nunavut during the ship to shore fuel transfer. • Describes oil pollution scenarios. • Defines the roles and responsibilities of management and responders. • Outlines the measures taken to prevent spills. • Aims to minimize potential health and safety hazards, environmental damage, and cleanup costs.
	Baker Lake Bulk Fuel Storage Facility: Environmental Performance Monitoring Plan	• Aims to adequately assess the environmental performance of the bulk fuel storage tank at Baker Lake. • Provides a summary of the design, installation, operation and maintenance that follows the Canadian Council of Ministers of the Environment (CCME) 2003 Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products. • Gives a summary of the location and environmental setting. • Highlights the NWB Type A water license. • Outlines an environmental assessment to support the recommended environmental monitoring for the ongoing evaluation of the secondary containment.
	Meadowbank Landfill Design and Management Plan	• Outlines the design of the current operational and a conceptual Closure industrial waste landfill as part of Agnico Eagle Meadowbank Mine in Nunavut. • Objectives are summarized as follows: o To define the location, design, and operating procedures to be used in the landfill disposal of nonhazardous solid waste generated at the Meadowbank and Whale Tail Mine; o To define acceptable/non-acceptable types of solid waste to be placed in the Meadowbank and Whale Tail landfill; and o To define operating and monitoring requirements for the landfill.
	Sewage Treatment Plan	• Summarizes the operational and maintenance procedures to be followed at the sewage treatment plant. • The objectives of this plan are summarized as follows: o To define the location, design, and operating procedures to be used in the treatment of sewage generated at the Meadowbank Mine; and o To provide monitoring requirements for sewage treatment plant.
	Hazardous Materials and Waste Management Plan	• The purpose is to provide a consolidated source of information on the safe and environmentally sound transportation, storage, and handling of the major hazardous products that are used at the Meadowbank Complex. • This plan aims to: o Identify and prepare materials and waste inventories; o Allocate clear responsibility for managing hazardous materials; o Describe methods for transport, storage, handling, and use; o Identify means of long-term storage and disposal; and o Prepare contingency and emergency response plans.
Misc Plans	**Adaptive Management Plan**	• Documents specific mitigation measures and associated management actions to be taken when specified thresholds are exceeded.
	Emergency Response Plan	• Provides a consolidated source of information for employees, contractors, and site visitors to respond quickly and efficiently to any foreseeable emergency that would likely occur at the Meadowbank Complex.
	Meadowbank and Whale Tail Spill Contingency Plan	• Provides guidance in the event of a spill. • Aims to minimize the impacts of spills by the establishment of predetermined lines of response and plans of action.

4.2 Closure and Post-Closure Monitoring Plan Details

4.2.1 Site Inspections

Visual site inspections are a vital part of Closure monitoring. Inspections during the Closure period will be carried out as per Part I, Item 10 (2AM-MEA1530) and Part E, Item 10 (2AM-WTP1830). In compliance with these sections of the Licenses, assessments of water management infrastructure will be conducted on a weekly basis during periods of flow in Closure. Weekly inspections of petroleum product storage, containment facilities, and connectors for leaks under Part H, Item 4 (of both 2AM-MEA1530 and 2AM-WTP1830) are also required and will continue in Closure. Additionally, site inspection activities will also monitor for several additional items:

- seepage from dams
- water levels (pits, ponds, or other managed reservoirs)
- general surface erosion, tension cracks, and/or anomalies on dams, the TSF, and WRSFs.

In Closure, Agnico Eagle will schedule the inspections of the Meadowbank Complex components to coincide, where possible, with any regulatory site inspections. In addition, an annual inspection of the TSF and WRSF's will be completed by a Qualified Person during ice-free open water conditions, as required by Meadowbank Complex's 2AM-MEA1530 and 2AM-WTP1830 Water Licenses Part I, Items 10 to 12, both Licenses).

4.2.2 Geotechnical Monitoring

Under 2AM-MEA1530 and 2AM-WTP1830 Water Licenses Part I, Items 10 to 12, Agnico Eagle is required to undertake an annual geotechnical inspection of its facilities between July and September. These inspections are conducted by a Qualified Person. An independent review board will then review the results of these inspections and provide recommendations. These inspections will continue into Closure. Table 4.2-1 provides the components that are routinely inspected by geotechnical engineers and includes dikes, dams, and saddle dams.

In Closure, as in operations, detailed visual inspection of the dewatering dikes will be performed by Agnico Eagle periodically, except for the structures in permafrost (Vault Dike, South Camp Dike, Saddle Dams 1 to 5, North Cell Internal Structure, RF1-2, and Stormwater Dike), which will be inspected monthly from May to September. If necessary, more frequent routine inspections will be conducted, depending on the Trigger Action Response Plan (TARP) level as outlined in the OMS.

Table 4.2-1: Geotechnically Monitored Components of the Meadowbank Complex

Monitoring Locations		
Dewatering Dikes: ▪ East Dike ▪ South Camp Dike ▪ Goose-Bay Dike ▪ Vault Dike ▪ Whale Tail Dike ▪ WRSF Dike ▪ IVR Dike ▪ Mammoth Dike	**Waste Rock Storage Facilities:** ▪ NPAG WRSF ▪ Portage WRSF ▪ Whale Tail WRSF ▪ IVR WRSF ▪ Till Plugs ▪ RF1-RF2 ▪ Stormwater Ponds ▪ Diversion Ditches	**Bulk Fuel Storage:** ▪ Meadowbank Fuel Storage ▪ Whale Tail Fuel Storage ▪ Baker Lake Fuel Storage
Tailings Storage Facilities: ▪ Stormwater Dike ▪ Saddle Dams 1 to 5 ▪ Central Dike ▪ North Cell Internal Structure	**Water Management Infrastructure:** ▪ Underground Ore Stockpile Saline Ditch ▪ Underground WRSF saline Ditch ▪ IVR Diversion Ditch ▪ South Whale Tail Channel ▪ Dewatering Ramps ▪ Attenuation Ponds	**Miscellaneous:** ▪ Sediment and Erosion Control Structures ▪ Shoreline Protection ▪ Sumps ▪ Airstrips ▪ Crusher Retaining Wall ▪ Landfills ▪ Contaminated Soil Storage ▪ Landfarms ▪ Geotechnical Instruments
Reclaim Ponds: ▪ North Cell Pond ▪ South Cell Pond	**Roads:** ▪ AWAR ▪ Whale Tail Haul Road ▪ Site Roads ▪ Bridges ▪ Culverts ▪ Quarries	

WRSF: Waste Rock Storage Facility; AWAR: All-Weather Access Road.

4.2.2.1 Piezometers

Piezometers are installed within the structures at the Meadowbank Complex to measure pore-water pressure and temperature. These piezometers also provide information about the flow of water through structures and foundation materials. The mine environment and geotechnical team review the resulting data regularly for any variation or trends. The installed piezometers are summarized in Table 4.2-2. During Closure, review of piezometer data will continue to provide the basis for the definition of Post-Closure monitoring needs.

Table 4.2-2: Summary of Installed Piezometers by Location

Monitoring Location	Installed Piezometers
East Dike	41 (4 damaged)
Goose-Bay Dike	143
Stormwater Dike	3 (1 inactive)
Central Dike	65 (9 inactive)
Whale Tail Dike	50 (2 inactive)

4.2.2.2 Thermal Regime

The thermal regime of the Meadowbank Complex is monitored using a series of thermistors installed across the site. Currently, thermistors are installed in the dikes, dam structures, and WRSFs of the Meadowbank Complex. The installed thermistors are summarized in Table 4.2-3. Currently, O'Kane Consultants Inc. (O'Kane) is working on the development of a TARP for the Portage WRSF (Agnico Eagle 2024f; Agnico Eagle 2024g). Reporting of freeze-back effectiveness is required in NIRB Project Certificate 004. During Closure, review of thermistor data will continue to provide the basis for the definition of Post-Closure monitoring needs, and reduction of monitoring efforts (including those associated with WRSFs) will align with Section 4.4.1.

Table 4.2-3: Summary of Installed Thermistors by Location

Monitoring Location	Installed Thermistors	Monitoring Location	Installed Thermistors
Central Dike	22 (3 inactive)	**East Dike**	8 (2 inactive)
Whale Tail Dike	42 (1 damaged)	**South Camp Dike**	2
WRSF Dike	9	**Goose-Bay Dike**	33
Mammoth Dike	3	**Vault Dike**	4
IVR Dike	7	**Whale Tail WRSF**	16
Portage WRSF	22	**IVR WRSF**	5

WRSF: Waste Rock Storage Facility

4.2.2.3 Inclinometers

Inclinometer readings are taken and reviewed depending on the TARP level to provide information on deformation within the dike structures. Inclinometer locations are summarized in Table 4.2-4. During Closure, review of inclinometer data will continue, quarterly.

Table 4.2-4: Summary of Installed Inclinometers by Location

Monitoring Location	Installed Inclinometers
East Dike	3 (1 inactive)
Goose-Bay Dike	8
Whale Tail Dike	4

Note: additional instrumentation may be installed if needed and would be updated in the FCP.

4.2.3 Water Quantity and Water Quality Monitoring

Water quantity and quality for the Meadowbank Complex will be managed at Closure and Post-Closure primarily through three Operational monitoring plans:

- Water Quality and Flow Plans (which informs water management)
- CREMP
- Water Management Plans

Each of these plans have distinct functions with the overarching goal of achieving Agnico Eagle's water quality objectives and the chemical stability of the Meadowbank Complex:

- **The *Meadowbank Water Quality and Flow Monitoring Plan*** and the ***Whale Tail Pit Water Quality and Flow Monitoring Program*** detail compliance monitoring for the following items that support overall Agnico Eagle's Closure strategy:
    - non-contact water discharged from diversion ditches during Closure of the Meadowbank Complex and eventually non-contact water from dike seepage
    - monitoring points located within the pit lakes of the Meadowbank Complex and the flooded Whale Tail Attenuation Pond before and after the dikes have been breached during the Late-Closure phase of the mine life
    - runoff from the TSF after Closure (see Section 4.5.4.1)

- ***The CREMP:*** monitors water quality in the receiving environment and determines if activities at Meadowbank, Whale Tail, and Baker Lake are causing changes in water quality, sediment chemistry, plankton, and benthic invertebrates. Agnico also monitors fish as part of the MDMER Environmental Effects Monitoring (EEM) requirements on a three-year cycle; findings from the EEM are included as a component of the Aquatic Effects Monitoring Program (AEMP). The purpose of the CREMP is to act as a framework of early warning triggers and action thresholds to support management decisions within the AEMP; the latter of which is the overarching 'umbrella' program that integrates results of individual, but related, monitoring programs for the purpose of implementing management actions before unacceptable adverse impacts occur to aquatic life.

- **The *Water Management Plans*** provide detail on water management at the Meadowbank Complex, and include items, such as pit filling schedules, and guide overall water management (with consideration given to water quality) at the Meadowbank Complex. These plans are not discussed further within this section.

4.2.3.1 Compliance Monitoring

Existing water monitoring locations retained at Closure are shown in Figure 3.0-3 to Figure 3.0-5 for the Meadowbank Complex, and are required under the existing Water Licenses for the Meadowbank Complex. In Closure, monitoring will continue to occur at the same locations and for the same analytical requirements as in operations. Table 4.2-5 and Table 4.2-8 provide further details on timing, while Table 4.2-6, Table 4.2-7, and Table 4.2-9 provide sampling requirements and other monitoring details. All water quality samples collected during Closure will be used to confirm water quality model predictions. As Closure directly results in reconfiguration of the Meadowbank Complex, existing monitoring locations will be maintained as long as practicable. Section 4.4 of this document provides Agnico Eagle's plans for removing monitoring stations as Closure progresses. Once Closure activities are complete, the removed monitoring station(s) will be replaced, if necessary and practicable. During Closure monitoring, data will be used to confirm progress towards Closure criteria related to water quantity and quality (e.g., Closure criteria #SW7, #OP1, #OP2, #UG3, #TSF2, #BL6, and #TQ3; [Agnico Eagle 2025]). Seepage surveys and applicable sampling will be carried out as outlined in Table 4.2-10.

Table 4.2-5: Meadowbank Mine Monitoring Details

Station	Description	Phase	Monitoring Parameters*	Frequency	Decommission Date
ST-1	Water intake for camp, mill, and reflooding	Late operations, Closure	Volume (m^3)	Monthly	2036
ST-1W	Water intake for re-flooding	Closure	Volume (m^3)	Monthly	2036
ST-3	Water Intake for Emulsion Plant	Late operations, Closure	Volume (m^3)	Monthly	2028
ST-4	Water Reclaimed from TSF	Late operations, Closure	Volume (m^3)	Monthly	2027
ST-5	Portage Area (east) diversion ditch	Late operations, Closure	Group 3	Monthly during open water	2031
ST-6	Portage Area (west) diversion ditch	Late operations, Closure	Group 3	Monthly during open water	2031
ST-8	East Dike Seepage Discharge	Late operations, Closure	Group 3	Monthly, during open water	2028
ST-11 (CP23)	Tailings Storage Facility	Closure	Group 1	Annually to 2031, then follows CPCMP schedule	2040
ST-12	Portage / Goose Pit Lake	Post-Closure	Full Suite	Annually during open water	2040-2050
ST-13	Vault Pit Lake Discharge	Closure, Post-Closure	Full Suite	annually during open water	2040
ST-14 (THE-11)	Discharge to the TSF from Landfarm sump at mine site	Late operations, Closure	Group 4	Prior to discharge	2036
			Volume (m^3)	Daily during periods of discharge	
ST-16	Portage Rock Storage	Closure	Group 1	Bi-annually during open water	2031
ST-17/ST-19	Portage Pit Lake	Late operations, Closure	Group 2	Bi-annually during open water	2036
ST-20	Goose Island Pit Lake	Closure	Group 2	Bi-annually during open water	2036
ST-22	TSF	Closure (drainage runoff)	Group 2	Bi-annually during open water	2028
ST-24	Vault Rock Storage	Closure	Group 1	Bi-annually during	2028
ST-26	Vault Pit Lake	Closure	Group 2	Bi-annually during open water	2050
ST-S-1 to TBD	Seeps (to be determined)	Late operations, Closure	Group 1	Monthly or as found	2028
ST-GW-1 to TBD	Groundwater wells (to be determined) as required under Groundwater Monitoring Plan referred to in Part I Item 6	Early operations, late operations, Closure	Group 2	Annually; Biannually**	2028
ST-AEMP-1 to TBD	Receiving AEMP and CREMP	Late operations, Closure, Post-Closure	Group 2	A minimum of 5 events per year at CREMP stations. Ideally 3 during open water and 2 during winter (through ice). TPL Wally Lk, SPL, NP2, NP1 and Dogleg ponds to be monitored monthly during open water (July, Aug, and Sept). Monthly field limnology data collected throughout year at smaller number of locations.	2046
ST-37	Secondary containment sump at the Bulk Fuel Storage Facility at Meadowbank	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent	2031
ST-38	Secondary containment sump at the Bulk fuel Storage Facility in Baker Lake Jet-A containment	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent	2031
ST-40 (MEA-4)	Secondary containment sump at the Bulk Fuel Diesel Storage Facility in Baker Lake	Late operations, Closure	Group 4	Prior to discharge or transfer of Effluent	2031

* Refer to Table 4.2-6 parameters; ** NIRB Project Certificate 004 Term & Condition 8 requires biannual monitoring specific to the camp area, for salinity, major ion concentrations, and dissolved metal load for the life of the project. TSF: Tailings Storage Facility; m^3: cubic metres; AEMP: Aquatic Effects Monitoring Program; CREMP: Core Receiving Environment Monitoring Program; TPL: Third Portage Lake

Table 4.2-6: Meadowbank Mine Monitoring Group Parameters

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia nitrogen, total metals (aluminum, arsenic, barium, cadmium, chloride, chromium, copper, fluoride, iron, lead, manganese, mercury, molybdenum, nickel, nitrite, nitrate, selenium, silver, thallium, zinc), sulphate, TDS, TSS, total cyanide. If CN total is detected, then further analysis of CN Free and CN WAD will be triggered.
2	**Total and Dissolved Metals:** aluminum, antimony, arsenic, boron, barium, beryllium, cadmium, copper, chromium, iron, lithium, manganese, mercury, molybdenum, nickel, lead, selenium, tin, strontium, titanium, thallium, uranium, vanadium, and zinc. **Nutrients:** Ammonia-nitrogen, total Kjeldahl nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate, total phosphorous, total organic carbon, total dissolved organic carbon, and reactive silica. **Conventional Parameters:** bicarbonate alkalinity, chloride, carbonate alkalinity, conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, and TSS, turbidity. **Total cyanide and free cyanide** If the CN total is detected above 0.05 mg/L in a receiving environment monitoring station, then further analysis of CN WAD will be triggered.
3	MDMER deleterious substances (i.e., total cyanide, arsenic, copper, lead, nickel, zinc, un-ionized ammonia, radium 226, total suspended solids, pH), sulphate, turbidity, and total aluminum.
4	pH, total arsenic, total copper, total lead, total nickel, TSS, BTEX, total petroleum hydrocarbons.
Full Suite	Group 2, TPH, Turbidity.

TDS: Total Dissolved Solids; TSS: Total Suspended Solids; CN: Cyanide; WAD: Weak Acid Dissociable; MDMER: Metal and Diamond Mining Effluent Regulations; BTEX: benzene, toluene, ethylbenzene, and xylene; EEM: Environmental Effects Monitoring, TPH: Total Petroleum Hydrocarbons.

Table 4.2-7: Summary of Sampling Requirements for Each Parameter

Parameter	Minimum Volume (ml)	Bottle Type	Preservation	Holding Time
pH	250	250 mL, glass, or plastic, filled to the top	4°C	Analyze immediately
Conductivity	125		4°C	28 days
Hardness	250	250 mL plastic, filled to the top	4°C, HNO_3	6 months
Oil and Grease (total)	1,000	1 L amber glass	4°C, H_2SO_4	28 days
Turbidity	125	250 mL, glass, or plastic, filled to the top	4°C	48 hours
TDS	125		4°C	7 days
TSS	125		4°C	7 days
Total Alkalinity	250		4°C	14 days
Bicarbonate Alkalinity	250		4°C	14 days
Carbonate Alkalinity	250		4°C	14 days
Total Cyanide	125		4°C, NaOH	14 days
Free Cyanide	125		4°C, NaOH	14 days
BTEX	40 (per vial)	3 X 40 mL, glass, filled to the top	4°C	7 days
TPH	1,000	1L, glass	4°C, $H2SO_4$	28 days
Total metals by ICP-MS	125	250 ml Plastic	4°C, HNO_3	6 months
Dissolved metals by ICP-MS	125	250 ml Plastic	4°C, filtered HNO_3	6 months
Ammonia-nitrogen Total Kjeldahl nitrogen	250	250 ml glass or plastic, filled to the top	4°C, H_2SO_4	28 days
Nitrate	125		4°C	48 hours
Nitrite	125		4°C	48 hours
Orthophosphate	125		4°C	14 days
Total phosphorus	125		4°C, H_2SO_4	28 days
Total organic carbon, dissolved organic carbon	125	250 ml glass	4°C, H_2SO_4	28 days
Chloride, fluoride, sulphate	125	250 ml plastic	4°C	28 days
Radium-226	500	1 L plastic	4°C, HNO_3	1 month
Reactive silica	250	500 ml plastic	4°C	28 days

°C: degrees Celsius; TDS: Total Dissolved Solids; TSS: Total Suspend Solids; mL: millilitre; L: Litre; HNO3: Nitric Acid; H2SO4: Sulfuric Acid; NaOH: Sodium Hydroxide; BTEX: Benzene, Toluene, Ethylbenzene and Xylene; TPH: Total Petroleum Hydrocarbons; ICP-MS: inductively coupled plasma mass spectrometry.

Table 4.2-8: Whale Tail Mine Monitoring Details

Station	Description	Phase	Monitoring Parameters*	Frequency	Decommission Date
ST-S-1 to TBD	Seeps (to be determined)	Closure	Group 1	Monthly, or as found	2028
ST-GW-1 to TBD	Groundwater well, (to be determined) as required under the *Groundwater Monitoring Plan* dated May 2019	Closure	Group 2	Annually	2028
ST-WT-1	Whale Tail Attenuation Pond, pre-treatment	Closure	Group 1	Four times per calendar year	2028
ST-WT-3	Whale Tail WRSF pond prior to pumping to Attenuation Pond	Closure	Group 1	Four times per calendar year, when water is present	2029
ST-WT-5	Water intake from Nemo Lake	Closure	Volume (m^3)	Monthly	2029
ST-WT-6	Lake A47	Closure	Group 2	Monthly during open water	2031
ST-WT-8	Water Intake from Whale Tail Lake	Closure	Volume (m^3)	Monthly	2028
ST-WT-9	Whale Tail Lake (North Basin) (as the basin fills and when it is connected to the Whale Tail Lake (South Basin) and prior to or when connected to the downstream environment)	Closure, Post-Closure	Group 1 Group 2 (Post-Closure)	Four times per calendar year	2046
ST-WT-10	Whale Tail Pit Lake (as it fills)	Closure, Post-Closure	Group 2	Four times per calendar year	2046
ST-WT-11	Sewage Treatment Plant	Closure	Group 1	Four times per calendar year	2029
ST-WT-12	Secondary containment at Whale Tail Bulk Fuel Storage Facility	Closure	Group 4	Prior to discharge or transfer of effluent	2029
ST-WT-13	Lake A45	Closure	Group 3 and Volume (m^3)	Monthly during open water until water levels have returned to baseline level	2028
ST-WT-14	Lake A16 outlet	Closure	Group 2	Monthly, during open water	2046
ST-WT-15	Lake A15	Closure	Group 2	Monthly, during open water	2046
ST-WT-16	Whale Tail Bulk Fuel Storage Facility Powerhouse	Closure	Group 4 and Volume (m^3)	Prior to discharge of effluent (Group 4); during transfer (volume)	2028
ST-WT-19	IVR Pit Lake (as the pit fills)	Closure	Group 2	Four times per calendar year	2031
ST-WT-23	IVR Attenuation Pond, pre-treatment	Closure	Group 1	Four times per calendar year	2028
ST-WT-25	Whale Tail Pit Lake (North Wall)	Closure	Group 2	Four times per calendar year	2028
ST-WT-27	Discharge from Landfarm	Closure	Volume (m^3)	During transfer	2029
ST-WT-28	IVR WRSF Pond prior to pumping to Attenuation Pond	Closure	Group 1	Four times per calendar year	2028
ST-AEMP-1 to TBD	Receiving AEMP and CREMP	Late operations, Closure, Post-Closure	Group 2	A minimum of 5 events per year at CREMP stations. Ideally 3 during open water and 2 during winter (through ice): WT, A65, A20, A63, A76, DS1, KAN, INUG and PD Lakes; monitored monthly during open water (July, Aug, and Sept). Monthly field limnology data collected throughout year at smaller number of locations.	2050

*Refer to Compliance Seepage Monitoring for parameters m^3: cubic metres; WRSF: Waste Rock Storage Facility

Table 4.2-9: Whale Tail Mine Monitoring Group Parameters

Group	Parameters
1	pH, turbidity, hardness, alkalinity, ammonia nitrogen, total metals (aluminum, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, zinc), chloride, fluoride, sulphate, nitrite, nitrate, TDS, TSS.
2	**Total and Dissolved metals:** aluminum, antimony, arsenic, boron, barium, beryllium, cadmium, copper, chromium, iron, lithium, lead, manganese, mercury, molybdenum, nickel, selenium, tin, strontium, titanium, thallium, uranium, vanadium, and zinc. **Nutrients:** Ammonia-nitrogen, total Kjeldahl nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate, total phosphorus, total organic carbon, total dissolved organic carbon, and reactive silica. **Conventional Parameters:** bicarbonate alkalinity, chloride, carbonate alkalinity, conductivity, hardness, calcium, potassium, magnesium, sodium, sulphate, pH, total alkalinity, TDS, and TSS, turbidity.
3	MDMER deleterious substances (i.e., arsenic, copper, lead, nickel, zinc, un-ionized ammonia, TSS, pH), sulphate, turbidity, and total aluminum
4	Total arsenic, total copper, total lead, total nickel, total zinc, TSS, BTEX, total petroleum hydrocarbons, pH.
Field Measurements	pH, specific conductivity, DO, and temperature.

TDS: Total Dissolved Solids; TSS: Total Suspend Solids; MDMER: Metal and Diamond Mining Effluent Regulations; BTEX: benzene, toluene, ethylbenzene, and xylene; EEM: Environmental Effects Monitoring; DO: dissolved oxygen.

Table 4.2-10: Water Licence Seepage Monitoring Requirements for the Meadowbank Complex

Seepage Location*	Minimum Frequency of Observation
Seepage (of any kind) through any dike(s)	Monthly
Seepage and runoff from the composter, landfill(s) and landfarm quarterly	Quarterly
Seepage and runoff from waste rock storage facilities quarterly	Quarterly
Seepage at pit walls, and pit walls freeze/thaw and permafrost aggradation	Quarterly

*= Requires Characterization of the seepage including precise location; discharge rates and volumes; respective hazard(s) and consequences and prescribed mitigative measures

4.2.3.2 Compliance Seepage Monitoring

Closure seepage surveys are a part of overall compliance monitoring and will be conducted during Closure; once in spring freshet after complete melt, and once in late summer (late August or September) before freeze-up, and will be timed to coincide with other water quality monitoring events (e.g., those outlined in Table 4.2-5 and Table 4.2-8). As new seeps are identified, they will be documented via photographs and field notes, and locations will be recorded using a hand-held Global Positioning System (GPS). The seep locations will be named with a unique station identifier per the Water Licence (e.g., ST-S-5).

Field measurements will also be collected during Closure monitoring. Samples will be collected following standard sampling protocols by qualified personnel using clean laboratory-supplied bottles (requirements provided in Table 4.2-7). Water samples for laboratory analysis will be filtered and preserved, when needed, and stored in a cool environment before shipping to the laboratory. Analysis will only be conducted by accredited laboratories using detection limits specified in the laboratory quote for the project. For water quality programs, QC samples will represent a minimum of 10% of the total sample count (field samples plus QC samples) for each program.

4.2.3.3 CREMP Monitoring

To address MDMER and EEM requirements, Agnico Eagle uses the CREMP. MDMER water quality monitoring locations for the discharge of treated effluent into the receiving environment are summarized in Table 4.2-11. Under MDMER, the following sampling requirements must be met:

- Treated effluent monitoring weekly during discharge – Part 2, Division 2; Schedules 3 and 4
- Treated effluent characterization once per quarter and at least one month (i.e., 30 days) apart – Part 2, Division 1; Schedule 5, Section 4
- Water quality monitoring four times per year and at least one month (i.e., 30 days) apart – Part 2, Division 1; Schedule 5, Section 7

The CREMP addresses MDMER and EEM requirements by detecting spatial and temporal changes in water quality, sediment chemistry, or biological communities (phytoplankton and benthos) at the scale of the lake or basin. The CREMP's study designs uses near-field, mid-field, and far-field areas to provide spatial context to interpret potential changes year-over-year. Near-field areas provide the first line of early warning for introductions of stressors into the receiving environment. These areas are situated closest to the development near dikes, dewatering discharge points, and proposed effluent sources. Mid-field and far-field areas are located farther downstream from the near-field monitoring areas and provide insights into the spatial extent of any observed changes in chemistry or biological communities closer to the source (Table 4.2-11). Parameters measured at CREMP stations are presented in Table 4.2-12, with nine sampling areas (Figure 4.2-1; Figure 4.2-2) at Meadowbank Mine and six areas at Whale Tail Mine. QA/QC methods can be found in the CREMP.

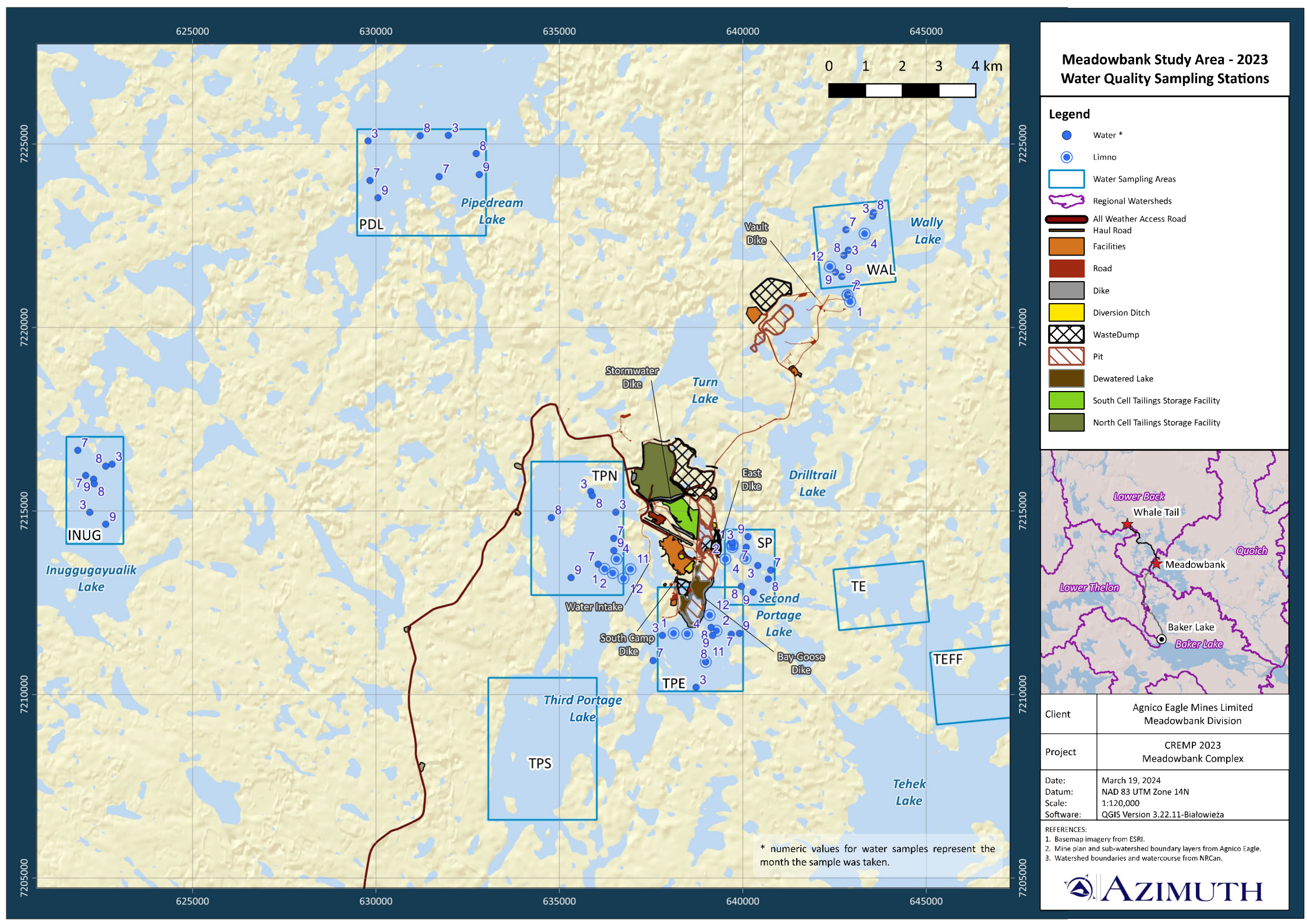
Table 4.2-11: CREMP Water Monitoring Locations

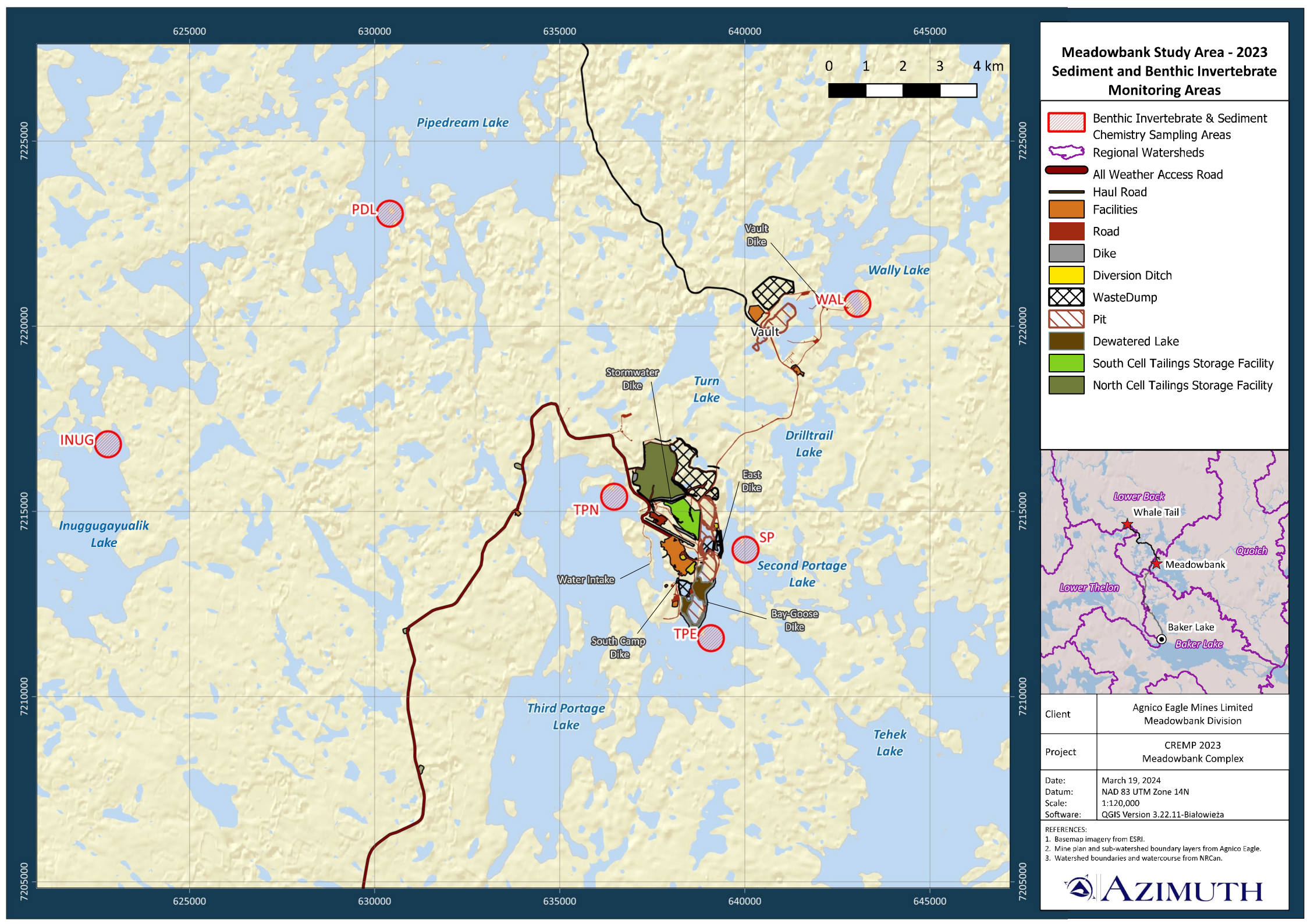
Meadowbank Near-Field	
Third Portage Lake East Basin	Third Portage Lake North Basin
Second Portage Lake	Wally Lake
Meadowbank Mid-Field	
Tehek Lake	Third Portage Lake South Basin
Meadowbank Far-Field	
Tehek Lake far-field	
Reference Locations (Whale Tail and Meadowbank)	
Inuggugayualik Lake	Tasirjuaraajuk Lake (aka Pipedream Lake).
Whale Tail Near Field	
Whale Tail Lake South Basin	Nemo Lake
Kangislulik Lake	
Whale Tail Mid-Field	
Lake A20	Lake 76
Whale Tail Far-Field	
Lake DS1	

Table 4.2-12: CREMP Measured Parameters

Parameter				
Temperature*	Total Kjeldahl Nitrogen	Free Cyanide	Iron†	Strontium†
Dissolved Oxygen*	Ammonia (as N)	Total Cyanide	Lead†	Sulfur†
Specific Conductivity*	Bromide	Aluminum†	Lithium†	Tellurium†
pH*	Chloride	Antimony†	Magnesium†	Thallium†
Conductivity (µS/cm)	Fluoride	Arsenic†	Manganese†	Thorium†
Alkalinity - Total (as $CaCO_3$)	Nitrate (as N)	Barium†	Mercury†	Tin†
Alkalinity - Bicarbonate	Nitrite (as N)	Beryllium†	Molybdenum†	Titanium†
Alkalinity - Carbonate	Orthophosphate (as P)	Bismuth†	Nickel†	Tungsten†
Alkalinity - Hydroxide	Phosphorus (P) - Total	Boron†	Phosphorus†	Uranium†
Hardness (as $CaCO_3$)	Phosphorus (P) - Total Diss.	Cadmium†	Potassium†	Vanadium†
Hardness (as $CaCO_3$), from total Ca/Mg	Reactive Silica (as SiO_2)	Calcium†	Rubidium†	Zinc†
pH (Laboratory)	Sulphate (SO_4)	Cesium†	Selenium†	Zirconium†
TDS	Dissolved Organic Carbon	Chromium†	Silicon†	Arsenate (As V)
TSS	Total Organic Carbon	Cobalt†	Silver†	Arsenite (As III)
NTU	Chlorophyll-a	Copper†	Sodium†	Arsenobetaine (AsB)
Phytoplankton**	Benthic Community**	Sediment Grain Size	Sediment Chemistry‡	Sediment Methylmercury

* = field measurement; **= chlorophyll *a*, biomass, taxa richness, abundance; † = both total and dissolved fractions; ‡ = Same metal parameters as water quality, but only for the total fraction. TSS: Total Suspended Solids; TDS: Total Dissolved Solids; NTU: nephelometric turbidity unit


Meadowbank Study Area - 2023
Water Quality Sampling Stations
Legend
Water *
Limno
Water Sampling Areas
Regional Watersheds
All Weather Access Road
Haul Road
Facilities
Road
Dike
Diversion Ditch
WasteDump
Pit
Dewatered Lake
South Cell Tailings Storage Facility
North Cell Tailings Storage Facility
0 1 2 3 4 km
625000
630000
635000
640000
645000
7225000
7220000
7215000
7210000
7205000
PDL
Pipedream Lake
WAL
Wally Lake
Vault Dike
Stormwater Dike
Turn Lake
East Dike
Drilltrail Lake
TPN
SP
TE
TEFF
INUG
Inuggugayualik Lake
Water Intake
South Camp Dike
Second Portage Lake
Bay-Goose Dike
TPE
Third Portage Lake
TPS
Tehek Lake
* numeric values for water samples represent the month the sample was taken.
Lower Back
Whale Tail
Quoich
Meadowbank
Lower Thelon
Baker Lake
Baker Lake
Client
Agnico Eagle Mines Limited
Meadowbank Division
Project
CREMP 2023
Meadowbank Complex
Date: March 19, 2024
Datum: NAD 83 UTM Zone 14N
Scale: 1:120,000
Software: QGIS Version 3.22.11-Białowieża
REFERENCES:
1. Basemap imagery from ESRI.
2. Mine plan and sub-watershed boundary layers from Agnico Eagle.
3. Watershed boundaries and watercourse from NRCan.
AZIMUTH



Meadowbank Study Area - 2023 Sediment and Benthic Invertebrate Monitoring Areas

- Benthic Invertebrate & Sediment Chemistry Sampling Areas
- Regional Watersheds
- All Weather Access Road
- Haul Road
- Facilities
- Road
- Dike
- Diversion Ditch
- WasteDump
- Pit
- Dewatered Lake
- South Cell Tailings Storage Facility
- North Cell Tailings Storage Facility

Client	Agnico Eagle Mines Limited Meadowbank Division
Project	CREMP 2023 Meadowbank Complex
Date:	March 19, 2024
Datum:	NAD 83 UTM Zone 14N
Scale:	1:120,000
Software:	QGIS Version 3.22.11-Białowieża

REFERENCES:
1. Basemap imagery from ESRI.
2. Mine plan and sub-watershed boundary layers from Agnico Eagle.
3. Watershed boundaries and watercourse from NRCan.

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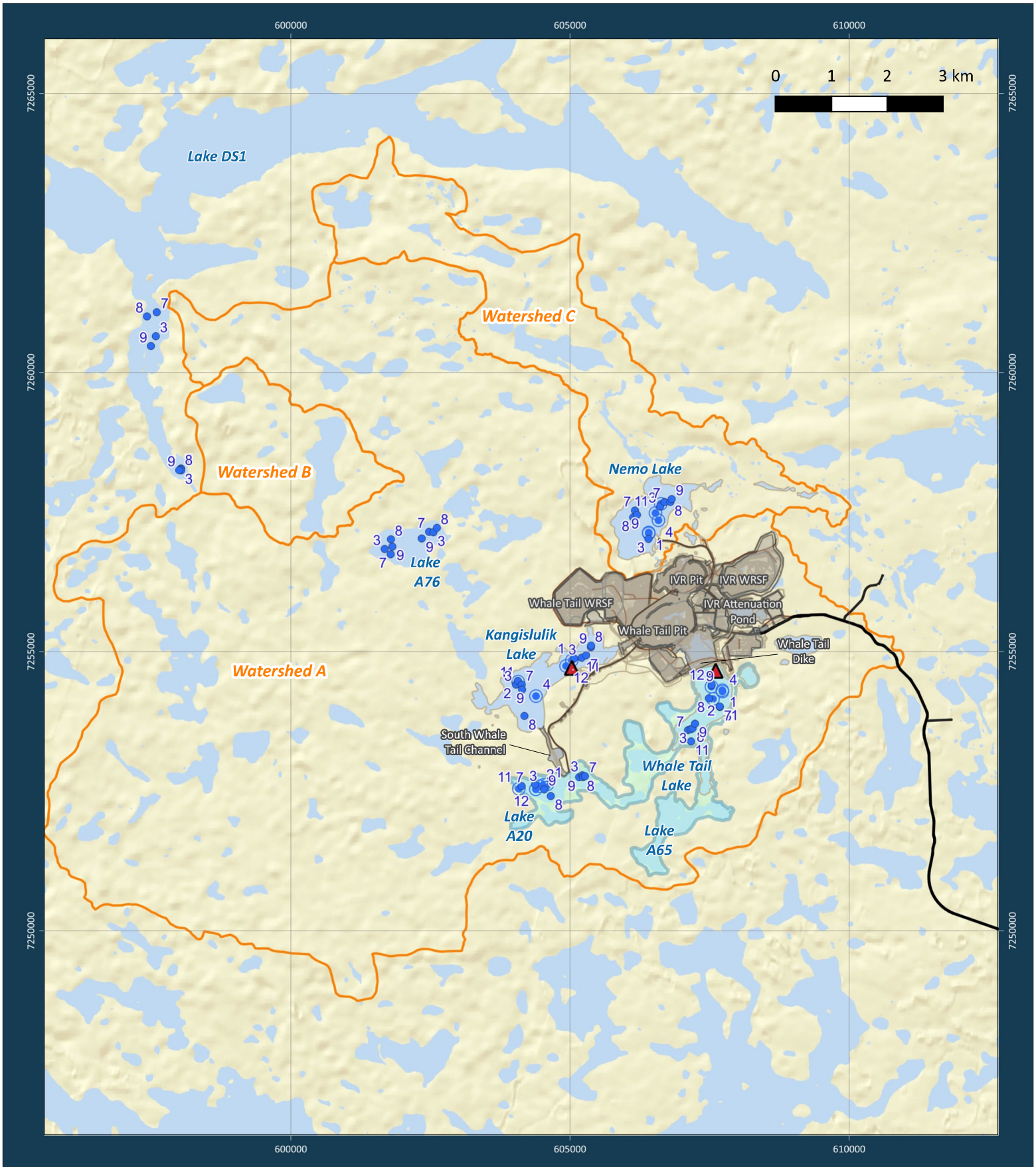


Legend

- Water *
- Limno
- Kangislulik & Whale Tail Lake Diffusers
- Whale Tail Lake (South Basin)
- Amaruq Watersheds
- Regional Watersheds
- Haul Road

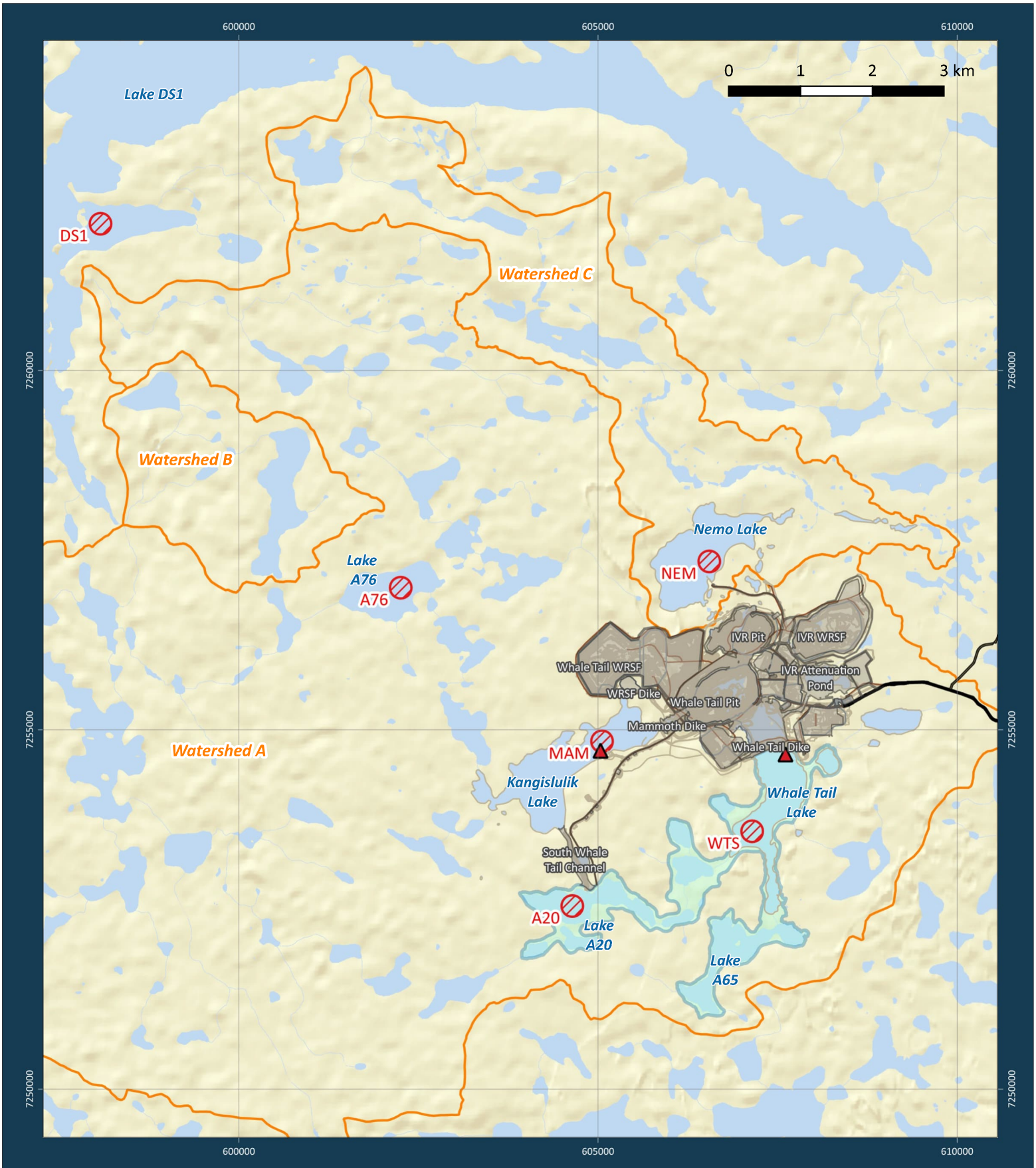
Note:
* Water samples are collected from fixed monitoring locations in the project lakes where the water depth is at least 5 m.

AZIMUTH

Client	Agnico Eagle Mines Limited Meadowbank Division
Figure 5-1	Whale Tail Study Area - 2023 Water Quality Sampling Stations
Project	CREMP 2023 Meadowbank Complex

Date: March 19, 2024
Datum: NAD 83 UTM Zone 14N
Scale: 1:90,000
Software: QGIS Version 3.22.11-Białowieża
By: M. DiMauro, E. Franz, I. McIvor

REFERENCES:
1. Basemap imagery from ESRI.
2. Mine plan and sub-watershed boundary layers from Agnico Eagle.
3. Watershed boundaries and watercourse from NRCan.



Legend

- Benthic Invertebrate & Sediment Chemistry Sampling Areas
- Kangislulik & Whale Tail Lake Diffusers
- Whale Tail Lake (South Basin)
- Amaruq Watersheds
- Regional Watersheds
- Haul Road

AZIMUTH

Client	Agnico Eagle Mines Limited Meadowbank Division
	Whale Tail Study Area - 2023 Sediment and Benthic Invertebrate Monitoring Areas
Project	CREMP 2023 Meadowbank Complex

Date: March 19, 2024
Datum: NAD 83 UTM Zone 14N
Scale: 1:70,000
Software: QGIS Version 3.22.11-Białowieża
By: M. DiMauro, E. Franz, I. McIvor

REFERENCES:
1. Basemap imagery from ESRI.
2. Mine plan and sub-watershed boundary layers from Agnico Eagle.
3. Watershed boundaries and watercourse from NRCan.

4.2.4 Tailings Storage Facility (TSF) Monitoring

The TSF monitoring program is described herein section. Other site components are discussed as they relate to monitoring topics (e.g., water quality).

4.2.4.1 Site Observations and Field Inspections

During Closure, the TSF will be monitored for physical stability and chemical stability (e.g., water quality sampling) using instrumentation downloads and sampling to confirm that Closure is proceeding as expected.

Similar to dewatering dams, the TSF undergoes geotechnical inspections, EOR inspections, and meetings with an independent review board. Given that both dewatering dike inspections and TSF Dam inspections will continue into Closure, until regulatory review indicates that physical stability and chemical stability are achieved.

Inspection activities for the TSF include direct observations by personnel on or adjacent to tailings related infrastructure and may also include observations from a helicopter or photos taken from an unmanned airborne vehicle (drone, satellites). Site observations and inspections will be used to identify and track visible changes in the condition of the tailings management infrastructure and to identify warning signs of the development of potentially adverse conditions that could lead to a failure or some other form of loss of control that would undermine Closure efforts. Items such as changes in seepage, erosion, sinkholes, boils, slope slumping, settlement, displacement, or cracking of structure components will be documented. Any recommendation or action to be taken following a surveillance activity must be assigned a priority and an Owner and be followed up on according to its priority. Table 4.2-13 provides frequencies of monitoring during Closure based on the severity (priority) of the item being monitored. A full list of changes that will be monitored is provided in Table 4.2-14. *A revised Tailings Storage Facility OMS* will provide detailed information on TSF monitoring for Closure.

Table 4.2-13: TSF Monitoring Frequency Based on Priority Ranking

Priority	Description	Timeline to Address
P-1	A high priority or actual structure safety issue considered immediately dangerous to life, health, or the environment; or a significant risk of regulatory enforcement.	Immediately to 1 week
P-2	If not corrected could likely result in structure safety issues leading to injury, environmental impact, or significant regulatory enforcement: or a repetitive deficiency that demonstrates a systemic breakdown of procedures.	1 week to 3 months
P-3	Single occurrences or deficiencies or non-conformance that alone would not be expected to result in structure safety issues.	3 months to 6 months
P-4	Best Management Practice – Further improvements are necessary to meet industry best practices or reduce potential risk.	> 6 months

Table 4.2-14: Changes Possibly Captured via Site Observation and Inspections of the TSF

Changes related to physical risk of dike, pit wall, road, ramp
▪ Change in freeboard. ▪ Deformation or change in condition at the crest, slopes, and toes (i.e., bulges, cracks, sinkholes, sloughing, settlement). ▪ Newly formed or expanding areas of erosion. ▪ Evidence of piping or unexpected water movement through water containment structures. ▪ Changes in the seepage quantity (pumping rate) and quality (turbidity). ▪ Rock falls and other movements in pit walls. ▪ New seepage observed in pit walls.
Changes related to chemical risks
▪ Evidence of newly formed seepage, or changes in seepage and evidence of any changes in seepage characteristics (i.e., coloration, turbidity, TSS).
Changes related to physical risk of ditch
▪ Newly formed or expanding areas of erosion. ▪ Newly formed obstructions to flow (i.e., boulder, sediments, snow). ▪ Newly formed slope instability.
Changes related to water storage and transport
▪ Change in sump level. ▪ Discovering using a staff gauge (when applicable) that the pond is not being operated. ▪ within its normal operating condition. ▪ Changes in the seepage quantity (pumping rate) and quality (turbidity). ▪ Change in the condition of the piping for water or tailings transport. ▪ Sign of leaks from water or tailings line. ▪ Change in the condition of pumps.
Changes related to surveillance instrumentation
▪ Change in the condition of surveillance instruments and associated protection around. ▪ instruments (i.e., cover, barriers to prevent vehicle damage). ▪ Change in condition of power supplies for instruments (i.e., solar panel). ▪ Change in condition of communication infrastructures associated with instruments (i.e., antenna, datalogger).

TSS: Total Suspended Solids

4.2.4.2 Chemical Stability Monitoring

In Closure, chemical stability of the TSF will be monitored via site wide water quality monitoring (Section 4.2.3) with other water quality monitoring efforts listed in the Water Licence (Table 4.2-5, Table 4.2-6). Information collected will be used to confirm previous water quality monitoring predictions. During sampling, the field staff will walk the perimeter of the ponds, looking for areas of active oxidation or seepage. Photos will be taken of any changes from the previous inspection.

4.2.4.3 Instrumentation Monitoring

Unless removed as a part of Closure efforts, the parameters listed in Table 4.2-16 will be measured. Instrument monitoring provides information on parameters or characteristics that cannot be detected through site observation or inspections, cannot be observed with sufficient precision and accuracy, or need to be monitored at high frequency or continuously. The associated information collected and parameters measured are provided in Table 4.2-15 and Table 4.2-16, respectively. Instrument monitoring and inspections work together to create a comprehensive data set that enables assessment of the tailings management infrastructure performance and provides a basis for informed decision making. All are essential, and none of these forms of surveillance can be neglected if risks are to be managed.

Table 4.2-15: Information Collected using Instrument Monitoring

Direct collection of information
• In-situ thermistors to measure temperature profile within the structure and its foundation • In-situ piezometer to measure pore-water pressure providing information about flow of water through the structure and foundation stability • Airborne survey to monitor vertical settlement and deformation • Survey of dike crest to provide validation on settlement and deformation • Flow meters and seepage monitoring stations to inform on volume of water movement • Surveys conducted to measure ice cover, water level, and update height and slope of containment structure
Collection of information from remote sensing
• Data acquired from airborne survey to generate detailed topographic map
Collection of information based on laboratory analyses
• Water quality analysis of seepage and surface runoff reporting to sump • Water quality analysis in groundwater wells in pits • Water quality analysis of water discharged through diffuser to inform on Environmental compliance • Water quality analysis of water stored in the various ponds on site to inform on water movement decisions
Collection of information related to the conduct of OMS activities
• Automatic data collection and transmission system for in-situ instruments (datalogger, solar panel, antenna, battery)

Table 4.2-16: Instrumentation and Parameters Measured in the Meadowbank TSF During Closure

Instrument Monitoring	Location of Monitoring	Parameter Measured	Acquisition Methodology	Standard Acquisition Frequency
Thermistors	SD1, SD2, SD3, SD4, SD5, RF1, RF2, SWD, CD, NCIS, North Cell Pond	Temperature (^{0}C) point for each bead on the chain	In-situ instrument connected to automatic data acquisition and transmission system	New data are acquired and transmitted every 3 hours
Piezometer	CD, SWD	Pressure (kPa) point for each instrument	In-situ instrument connected to automatic data acquisition and transmission system	New data are acquired and transmitted every 3 hours
Flow Meter	CD D/S	Volume of water pumped (m^3)	Flowmeter connected to HMI system (remote data acquisition)	Daily when pump is operating or continuously if connected to HMI
Water Level Elevation	All TSF ponds (including In- Pit)	Elevation of the water level)	Piezometric instrument or GPS	As needed basis.
Airborne Survey	All tailings management infrastructure	Topographic aerial survey made using drone. Measurement of structure settlement	Take a drone survey	Once a year at Central Dike and Stormwater Dike
Water Quality	Refer to Water Management Plan	Parameters indicated within water management plan	Water quality sample taken and sent for laboratory analyses	Acquisition frequency within water management plan
Groundwater Well	Refer to Groundwater Management Plan	Parameters indicated within groundwater management plan	Water quality sample taken and sent for laboratory analyses	Acquisition frequency within groundwater management plan

Note: additional instrumentation may be installed if needed and would be updated in the FCP. RF: SWD: Stormwater Dike; CD: Camp Dike; NCIS: North Cell Internal Structure
0C: Degrees Celsius: TSF = Tailings Storage Facility, kPa: kilopascal; m3: cubic metres; mm: millimetres; HMI: communications interface; RF1/2 = Rock Fill Access Road 1/2

4.2.5 Waste Monitoring

4.2.5.1 Hazardous Waste Monitoring

Visual Inspections

During the Closure, petroleum products, explosives, and miscellaneous hazardous/toxic materials will be monitored. Scheduled inspections of the following hazardous wastes at both sites are provided in Hazardous Waste Management Plan:

- Fuel and lubricant storage areas.
- Explosives equipment and facilities, including the ammonium nitrate storage areas and the magazines for high explosive detonators and blasting caps.
- Miscellaneous chemicals.

Visual inspections are a central component of the Meadowbank and Whale Tail Bulk Fuel Storage Facilities: Environmental Performance Monitoring Plan. Visual inspections of the Meadowbank and Whale Tail secondary containment structures are important because if the integrity of the berm walls or liner is compromised, this presents the greatest potential for leaks or seepage. Currently, visual inspections are conducted by the Environmental Department once per week, and monthly manual or electronic dip tests are conducted for inventory reconciliation by the Procurement Department. In Closure, staff will inspect the bulk fuel storage facilities pad for: tank and piping condition, secondary containment berm structure and integrity, indicators of liner damage, precipitation/ run-off accumulation, evidence of tampering or misuse, any structural abnormalities, and visible sheens on contact water pools and crush material inside the secondary containment.

Contact Water Monitoring

Due to snow accumulation, melting, and precipitation, contact water is unavoidably collected inside the secondary containment area of the Bulk Fuel Storage Facilities. Contact water from inside the secondary containment area is sampled before being discharged in accordance with the Type A Water Licence 2AM-MEA1530, Part F Item 9 to 12, and 2AM-WTP1830, Part F Item 8 to 12 conditions.

During visual inspections in Closure the quantity of contact water collected inside the secondary containment area and sump will be evaluated. If water withdrawal to the environment is deemed necessary at the Bulk Fuel Storage Facilities, water samples will be collected and analyzed for the following parameters as per Water Licence.

In addition, water samples from lakes near the Meadowbank and Whale Tail Pit sites are collected as part of the CREMP and AEMP. These samples are used to evaluate the performance of the overall water management plan for the Meadowbank Complex. The results of these analyses will continue to be included in relevant reports.

Event Monitoring

As in operations, during Closure, the *Spill Contingency Plan* will be implemented and site-specific monitoring will be conducted following any accidental release by a spill or an emergency. As a follow-up to the spill response, the environmental staff will conduct an environmental assessment to determine the extent of impacts of the spill occurrence on the nearby environment. This will include the identification of the potential environmental pathways of concern that may result in impacts to surface water (i.e., Third Portage Lake near-shore surface water or an east channel that drains into Whale Tail Lake [South Basin]), soil, or groundwater. The following sampling and assessment will be conducted in the event monitoring (Agnico Eagle 2022):

- ***Soil sampling:*** following the unlikely event where a spill is not contained within the secondary containment area or on the lined pad, soil sampling may be required to locate and prevent further impact to the terrestrial and aquatic receiving environment. Depending on the quantity of the spill, the organic surface soils and shallow till are a likely sink for hydrocarbons, thus soil samples will be taken at selected locations to delineate the impacted areas horizontally and vertically. The soil samples will provide valuable information used to determine the necessity of installing groundwater wells.
- ***Water sampling:*** Following a spill event escaping secondary containment, an environmental assessment will be conducted. Similar to routine contact water sampling (inside the secondary containment area or on the lined pad), water samples will be collected and analyzed as per Water License 2AM-MEA1530 Part F Item 9 and 2AM-WTP1830 Part F Item 8 for the following parameters: Benzene, Toluene, Ethylbenzene, Lead, and Oil and Grease. Prior to withdrawal, samples will be analyzed at a certified laboratory. As part of the CREMP, receiving environment surface and at-depth water samples will be taken from Third Portage Lake or Whale Tail Lake, and analyzed for the same parameters as listed above.
- ***Assessment of the Need for Groundwater Well Installation:*** Following a spill event escaping secondary containment, if soil sample results identify elevated concentrations of contaminants (i.e., exceeding the CCME Canada-Wide Standard for Petroleum Hydrocarbons [PHC] in Soil) and/or if water samples identify elevated receiving environment water samples (i.e., exceeding licensed limits caused as a result of the spill event), an assessment of the need for groundwater wells will be conducted. The assessment, and if required, design for installation, monitoring and maintenance of vertical ground water monitoring wells will be in accordance with CCME procedures.

4.2.5.2 Non-Hazardous Waste Monitoring

Non-hazardous waste will be disposed in landfills at the Meadowbank Complex. Monitoring for landfills will not be required during the Closure phase since no residual environmental effects to valued environmental components from construction, operation, or Closure of the landfills are anticipated due to (Agnico Eagle 2024i; Agnico Eagle 2024j):

- The leachate from the landfills has a very low strength (dilute) or is simply absent due to controls on materials placed in the landfills, and thus site-specific landfill leachate management is not required. If any leachate is generated due to periods of heavy rainfall or spring freshet, the runoff will be directed to Collection Pond 23 at Meadowbank Mine and the Whale Tail Attenuation Pond at Whale Tail Mine. Since the Portage WRSF and Whale Tail WRSF will cover the landfills at Meadowbank Mine and Whale Tail Mine, respectively, it is not proposed to have a separate water quality monitoring point for leachate.

- Rockfill berms act as a wind shield to reduce the amount of windblown debris.
- Habitat loss is minimized because the landfills are designed and built within the footprint of the Portage WRSF at Meadowbank Mine and Whale Tail WRSF at Whale Tail Mine. With the implementation of terrestrial habitat reclamation strategies, the final surfaces of the landfills are graded to blend into the existing topography and enhance conditions for wildlife.

4.3 Environmental Site Assessment

Remediation is a primary step in successful mine Closure. Without remediation, Agnico Eagle's Closure vision and Closure principles cannot be achieved, nor can the relinquishment of the Meadowbank Complex. To address this, ESA is currently underway at the Meadowbank Complex to prepare for Closure. Following the ESA, remedial work will be completed where applicable, followed by the confirmatory sampling.

The intent of this work is to determine areas of contamination at ancillary locations to reduce effort required for identifying contaminated areas at Closure. Moreover, the current efforts aim to rule out areas for future investigation. A high-level schedule of work planned (i.e., 2024 to 2030) and completed (i.e., 2023) is provided below:

- 2023: Phase I ESA
- 2023: Limited Phase II ESA at Vault Pit and Meadowbank Mine
- 2024: Partial Phase II ESA at Meadowbank Mine
- 2024: Partial Phase II ESA at quarries and eskers
- 2025-2030: Phase II ESA at remainder of areas

Parameters measured depend highly on the area of potential concern (APEC) investigated. Identified parameters as of June 2024 are provided in Table 4.3-1. Currently an excavator or shovel and hand auger are used to collect the samples (depending on accessibility to 3 metres below ground surface (mbgs). Where possible, soil samples will be collected from the test pits every 1.0 m. For vertical characterization, deeper samples from the test pits will be collected when possible. The maximum depth of the test pits will be based on the presence of permafrost and/or bedrock. Future ESA work will use similar methods to sample potentially contaminated areas and/or remove contaminated soil based on Phase II ESA findings.

Table 4.3-1: Parameters Measured for the Environmental Assessment

Parameter				
PHCs/BTEX, F1-F4 PHCs	Alcohols	Glycols	VOCs	Ammonia
Cyanide (free, total, WAD)	PFAs, Dioxins and Furans	Salinity (EC)	Metals	Texture

BETX – benzene, toluene, ethylbenzene, and xylene; EC - Electrical Conductivity; PFAs – perfluoroalkyl substances; PCHs: Petroleum Hydrocarbons; VOC – Volatile Organic Compounds

4.3.1 Field Screening and QA/QC Procedures

Soil samples will be screened for hydrocarbons with an RKI Eagle Portable Gas Monitor. Analytical parameters will include benzene, toluene, ethylbenzene, and xylene (BTEX), PHC Fractions F1 to F4, PAH, cyanide (free, total, and weak acid dissociable), salinity, metals, glycol, PCB, chlorinated VOC, alcohol, and/or PFAs parameters. All samples will be placed in laboratory-supplied containers and submitted in ice-filled coolers under chain-of-custody protocols to an accredited lab.

The current QA/QC program will continue for future ESA work. The QA/QC program uses QC samples to promote data integrity. Field activities are documented in standard field forms. An RKI Eagle Portable Gas Monitor is field bumped daily using a standardized calibration gas. If the results differ by 10% from the known concentration of gas, the gas monitor is calibrated to the set calibration gas concentration. Field tests and calibrations are logged at the start of each day. To limit potential for cross-contamination, stainless steel sampling instruments and a new pair of clean nitrile gloves are used for the collection of each sample, while sampling equipment and meter probes are decontaminated between sampling locations using liquinox and/or distilled water. Field and trip blanks are also submitted in each cooler for volatile parameters, and 10% of the samples are field duplicated.

4.4 Adaptive Reduction in Monitoring Requirements

Agnico Eagle proposes a framework for reducing monitoring and associated security (if warranted) that would apply during Closure and Post-Closure at the Meadowbank Complex. Agnico Eagle's proposed Adaptive Reduction Framework is tailored to the current Closure schedule (Section 10 of the Meadowbank Complex CRP [Agnico Eagle 2025]).

The main premise of Agnico Eagle's proposed Adaptive Reduction Framework is centred around the length of the Closure at the Meadowbank Complex in comparison to the duration of other operating and closed mines in Nunavut. Historically, other Post-Closure Monitoring Plans for mines in Nunavut have incorporated adaptive reduction as part of Post-Closure. However, given the longer duration of the Meadowbank Complex's Closure period, this method is not warranted. Thus, the Adaptive Reduction Framework is geared towards reducing monitoring progressively, with Post-Closure monitoring used to confirm that parameter values established in Closure (e.g., water chemistry concentrations) are not deviating from their established values in meaningful ways.

4.4.1 Reduction in Water Quality/Quantity Monitoring Frequency

Given that one of the primary Closure objectives for the Meadowbank Complex is to manage water until it is suitable for release to the environment (e.g., via dike breach), Agnico Eagle expects water quality to improve over time, as the sources (e.g., WRSFs, the TSF) of water that can result in poor water quality are capped, pits are flooded, and water retained therein is treated during Closure, when needed. Moreover, as Closure will monitor at the same intensities and frequencies of operations, Closure monitoring is expected to result in vast amounts of data that can be used to update or confirm the water modeling predictions, resulting in Post-Closure water quality predictions that are increasingly certain. In this regard, some components of the Meadowbank Complex may achieve suitable water quality faster than other components, resulting in the potential reduction or cessation of water quality monitoring in these areas. In all cases, reduction of monitoring frequency, removal of a monitoring parameter, or removal of a monitoring station will be submitted to NWB. Section 4.4.1 to 4.4.7 detail the proposed adaptive reduction strategy. Finally, while the Adaptive Reduction Framework is intended to reduce monitoring efforts in Closure and may possibly eliminate the need for some Post-Closure monitoring programs, Agnico Eagle is committed to continue monitoring until Closure criteria are met.

4.4.1.1 Removal of a Water Monitoring Parameter

- If a parameter is not applicable to a given location (e.g., total cyanide), then it should not be included as part of the regular laboratory monitoring package and should be removed from general monitoring at that location.

- If a parameter result is consistently less than the analytical detection limit (using an appropriate detection limit) at a particular monitoring station, with “consistently” defined as a three-year period, then the parameter may be removed from general monitoring.
- Following approval of a Licence, if a monitoring and/or management plan has been approved by the Board, and the plan has predefined triggers for the removal or reduction of a parameter, the monitoring/management plan triggers apply.

4.4.1.2 Reduction in Frequency of Water Monitoring at a Station

- If analysis of some parameters or all data collected to date from the station are within water quality predictions, and the station is considered appropriately placed for the designated purpose, then the monitoring frequency of those parameters or the station may be reduced.
- If analysis of all data collected to date from the station show that results are consistently less than the guidelines, and the station is considered appropriately placed for the designated purpose, then the monitoring frequency may be reduced.
- If analysis of all data collected in the most recent five-year[1] period from the station show no increasing or decreasing trend, and the station is considered appropriately placed for the designated purpose, then the monitoring frequency may be reduced. In other words, the monitoring frequency of a station can be reduced when it is expected that monitoring results/conclusions (e.g., the Closure criterion is on a predictable trajectory to be met) from the current monitoring frequency will not be affected by a reduction in monitoring frequency.

4.4.2 Removal of a Water Monitoring Station

- Water monitoring stations, including those identified in Section 4.2.1 and 4.2.3, may be removed once Closure criteria have been met, unless on-going monitoring is required to inform other water or site management aspects.
- If results collected are consistently within water quality predictions (defined as measuring below maximum predicted concentration in 12 or more consecutive samples), and it has been determined that the station is appropriately placed for the purpose, and monitoring of the station is not required to be meet other regulatory requirements (e.g., MDMER), then the station may be removed from regular monitoring.

4.4.3 Reduction in Geotechnical Monitoring Frequency

If analysis of all data collected in the most recent five-year period from the instrument show stability and expected trends, the monitoring frequency may be reduced at the discretion of the EOR. It is recommended that the surveillance and inspection frequency be re-assessed during the Independent Review Board to reflect changing conditions.

[1] Typical five-year period sampling consists of annual sampling for three years, followed by a fourth sampling event within the next two-year interval.

4.4.4 Removal of Geotechnical Instrumentation

Unlike water quality monitoring, geotechnical instrumentation does not monitor a suite of parameters. Geotechnical instrumentation may be removed during Closure or Post-Closure in the scenarios provided below:

- If the instrument becomes inaccessible due to Closure activities (e.g., flooding of the area), the instrument may be removed from regular monitoring.
- If the structure pertaining to an instrument is declassified and no longer contains water, the instrument may be removed from regular monitoring.
- If the instrument is no longer applicable to a given location, the instrument may be removed from regular monitoring.
- If the instrument reaches a pre-determined success indicator criterion, established by the EOR for each instrument type according to CDA (2019), the instrument may be removed from regular monitoring.

4.4.5 Reduction in TSF Monitoring

The TSF's monitoring considers both geotechnical and water quality aspects. Reduction in geotechnical monitoring for the TSF will follow Sections 4.4.2 and 4.4.3 and will also align with the most recent CDA guidelines (Canadian Dam Association 2019), in conjunction with site-specific observations, Agnico Eagle standards for critical infrastructures, and common industry practices. Reduction in water quality associated with the TSF will follow Sections 4.4.1 to 4.4.5. Other monitoring associated with the TSF (e.g., visual inspections, drone surveys, survey shots) may be reduced, but at the discretion of a Qualified Professional, and only once approved by the Board and any other relevant regulatory bodies.

These inspections are expected to continue until full reclamation of the Meadowbank site is completed and satisfies regulatory guidelines.

4.4.6 Reduction in Soil Contaminant Monitoring

Soil contaminant monitoring efforts (e.g., those associated with ESA and remediation) are expected to be highly dependent on the number of areas identified as APECs. Sampling and monitoring protocols will be adhered to as described in Section 4.2.5. Given that soil contaminant monitoring generally does not deal with fluctuating concentrations unless a source is present (e.g., repeated spills), adaptive reduction is not expected as measured levels are either actionable or non-actionable with remediation efforts having pre-determined spatial limits (e.g., the extent of the spill).

4.4.7 Application for a Reduction in Monitoring Requirements

The Water Licence (Part B, Item 16, 2AM-MEA1530; Part B, Item 17, 2AM-WTP1830) requires Agnico Eagle to review plans and modify these documents to reflect changes in operations and/or technology. In this regard, Agnico Eagle will review the CPCMP on an annual basis and will submit proposed revisions to the CPCMP in the form of an addendum to NWB. This addendum will include a list of revisions detailing where significant changes in content have been made to the CPCMP.

A change in the mine lifecycle will occur when Agnico Eagle completes Closure and moves to Post-Closure monitoring of the Meadowbank Complex. It is therefore anticipated that the next major update to the CPCMP will occur as part of the submission of the 2028 Annual Report (submitted by March 31, 2029).

Annual reports themselves will align with the reporting schedule provided in Figure 3.0-1, which is meant to align with major Closure milestones.

Once the objectives of Final Closure are achieved as per the final version of the Meadowbank Complex CRP, and confirmed through supporting evidence, it is anticipated that the application for a reduction in monitoring requirements would not constitute an amendment to the Water Licence. In this case, a revision to the Water Licence schedules would be made at the discretion of the Board consistent with Part B, Item 11 of the Water Licenses (both 2AM-MEA1530 and 2AM-WTP1830).

4.5 Post-Closure Monitoring

The following sections outline the proposed frequency of site inspections and monitoring during Post-Closure. Unless removed via the Adaptive Reduction Framework earlier, monitoring programs will continue into Post-Closure, though at reduced monitoring intervals.

4.5.1 Site Inspections

Monitoring during the Post-Closure period will be undertaken monthly as a series of brief site inspections expected to last approximately four days per month, from June to September each year. Agnico Eagle will aim to schedule the inspections components to coincide, where possible, with any regulatory site inspections. As with Closure, the inspections continue to monitor the following:

- seepage from dams
- water levels (pits, ponds, or other managed reservoirs)
- general surface erosion, tension cracks, and/or anomalies on dams, the TSF, and WRSFs

4.5.2 Geotechnical Monitoring

Annual geotechnical inspections by a Qualified Professional will continue in Post-Closure for items listed under Part I, Item 10 of the 2AM-MEA1530 and 2AM-WTP1830 Water Licenses with findings reported as part of the Annual Report.

A more detailed geotechnical monitoring Post-Closure plan is expected to be developed as Closure operations occur, and conditions evolve. In general, instrumentation monitoring frequency and review will be reduced in Post-Closure, however individual structure or facility requirements may vary based on their TARP level at the onset of Post-Closure. Similarly, some perimeter dikes may be declassified as dam structures in the Post-Closure configuration of the Meadowbank Complex if they are breached to allow for the reconnection of the pit lakes and no longer retain water or have any geotechnical or structural purpose. Some instrumentation installed in these declassified structures would no longer be accessible or required in Post-Closure and will be removed from the monitoring program as described in Section 4.4. Instruments still accessible may continue to be read for site record keeping, but upkeep of these instruments is not required. Similarly, special inspections or data collection may still be required after extreme weather events, depending on the configuration of the earthworks upon entering Post-Closure. Data acquisition and instrumentation needs in Post-Closure will be defined in the FCP.

Monitoring during Post-Closure will conclude when the success criteria, defined for each structure by the EOR, are achieved. Geotechnical success criteria are specific to each structure, but generally aim to achieve steady state across instrumentation readings with no noticeable variations after review by a Qualified Professional. The success criteria will consider data collected during Closure and should be reviewed and updated accordingly during each Independent Review Board and OMS Manual revisions for Closure and Post-Closure OMS activities. Finally, during Closure, the OMS module for Post-Closure will be updated and refined to reflect actual Closure conditions.

4.5.2.1 Piezometers

Several piezometers are expected to remain accessible during Post-Closure. Piezometer datalogger reading frequency will be reduced with a yearly review of the data by a Qualified Professional. The monitoring frequency and continuity will be reassessed after the first three years into Post-Closure, concurrent with the annual geotechnical inspection. Monitoring thereafter is to be aligned with the risk associated with each specific structure. The Post-Closure status and monitoring frequency for the piezometers are detailed in Table 4.5-1.

Table 4.5-1: Post-Closure Piezometer Monitoring Summary

Monitoring Location	Installed Piezometers	Closure Monitoring Frequency	Post-Closure Status	Post-Closure Monitoring Frequency
East Dike	41 (4 damaged)	3 hours (datalogger)	Active	12 hours (datalogger), yearly review of data for three years
Central Dike	65 (9 inactive)	3 hours (datalogger)	Active	12 hours (datalogger), yearly review of data for three years

4.5.2.2 Thermal Regime

Approximately half of the installed thermistors in the dikes and dam structures are expected to remain accessible during Post-Closure. Strings installed in the WRSFs are also expected to remain in place and accessible to monitor long-term permafrost aggradation and freeze-back effectiveness.

Thermistor datalogger reading frequency will be reduced with a yearly review of the data by a Qualified Professional. The monitoring frequency and continuity will be reassessed after the first three years, concurrent with the Independent Review Board. Monitoring thereafter is to be aligned with the risk associated with each specific structure. The Post-Closure status and monitoring frequency for the thermistors are detailed in Table 4.5-2.

Table 4.5-2: Post-Closure Thermistor Monitoring Summary

Monitoring Location	Installed Thermistors	Closure Monitoring Frequency	Post-Closure Status	Post-Closure Monitoring Frequency
East Dike	8 (2 inactive)	3 hours (datalogger)	Active	12 hours (datalogger), yearly review of data for three years
Portage WRSF	22		Active	
Whale Tail WRSF	16		Active	
IVR WRSF	5		Active	

WRSF: Waste Rock Storage Facility.

4.5.2.3 Inclinometers

Inclinometers installed at the Meadowbank Complex, are expected to remain accessible during the Post-Closure period. Inclinometer reading frequency and review will be reduced from quarterly to yearly in Post-Closure, with the monitoring frequency and continuity recommended to be reassessed after the first three years. Monitoring thereafter is to be aligned with the risk associated with the structure. The Post-Closure status and monitoring frequency for the inclinometers are detailed in Table 4.5-3.

Table 4.5-3: Post-Closure Inclinometer Monitoring Summary

Monitoring Location	Installed Inclinometers	Closure Monitoring Frequency	Post-Closure Status	Post-Closure Monitoring Frequency
East Dike	3 (1 inactive)	Quarterly	Active	Yearly, concurrent with site inspection, if possible. Reassess after three years.

4.5.3 Tailings Storage Facility

The following section describes a monitoring framework for passive discharge from the TSF during Post-Closure, assuming the TSF has achieved physical and chemical stability during Closure. Monitoring Post-Closure water quantity and quality is described in Section 4.5.4; TSF runoff will be managed accordingly. Geotechnical monitoring methods discussed in Section 4.5.1 and 4.5.2, will be used to monitor the TSF in Post-Closure, until adaptive reduction requirements (Section 4.4) remove these stations.

4.5.4 Water Quantity and Quality

Currently regulatory water quality guidelines (e.g., those in the Water Licences; MDMER) are used as Post-Closure water quality targets for the Meadowbank Complex, as site-specific Post-Closure targets have not been defined. In this regard, Agnico Eagle is currently considering the development of Site Specific Water Quality Objectives (SSWQOs) to inform risk to aquatic life in the Human Health and Ecological Risk Assessment (HHERA). Ultimately, the efforts of the SSWQOs and HHERA will be used to determine Water Licence water quality requirements for the transition from Closure to the Post-Closure phase of the Meadowbank Complex's lifecycle (e.g., following reconnection of the pits with the surrounding environment).

In general, monitoring efforts during Post-Closure are expected to be similar to those in Closure (Table 4.2-5 to Table 4.2-8), but with reduced locations and frequencies, in accordance with adaptive reduction described in Section 4.4. Agnico Eagle's adaptive reduction framework may result in fewer monitoring stations; however, preliminary anticipated monitoring locations will still align with those in Table 4.2-5 to Table 4.2-8 for those identified as required for Post-Closure, as these have been identified as required locations in the existing Water Licences. It is expected that Post-Closure monitoring will also capture TSF and WRSF runoff water quality at Post-Closure water monitoring stations.

Seepage surveys and applicable sampling will continue into Post-Closure, as required. If no seeps remain in Post-Closure, and locations have been removed through adaptive reduction, then no monitoring other than visual assessments will be conducted. Any new seeps identified will be documented via photographs, and field notes and locations will be recorded using a hand-held GPS. The seep locations will be named with a unique station identifier.

4.5.4.1 MDMER Closed Mine Status

Given that Section 4.2.3.3 indicates that the Meadowbank Complex may achieve '*closed mine status'* under MDMER during Closure, it is not expected that Post-Closure monitoring will be required. Should the Meadowbank Complex not achieve '*closed mine status'* then CREMP monitoring will occur at reduced intervals.

4.5.5 Environmental Site Assessment

During Closure, the Meadowbank Complex's soils will be remediated to Soil Quality Remediation Objectives or will be disposed of in the underground mine workings. GPS coordinates of the disposal locations will be collected in degrees, minutes, and seconds of latitude and longitude as part of soil remediation. As a result, monitoring of contaminated soils during the Post-Closure period will not be required.

5 DATA STORAGE, ANALYSIS AND REPORTING

5.1 Water Licence

The Water Licence (Part I Item 10 of both 2AM-MEA1530 and 2AM-WTP1830) requires Agnico Eagle to submit an annual monitoring report by 31 March for the proceeding year of monitoring, including:

- a description of the sample activities undertaken
- description of the existing conditions at each sampling station tabular summary of analytical results, including the results of the QC samples (travel blank, field blank, duplicate samples)
- interpretation of the analytical lab results including comparison of the results with Water Licence criteria and assessment of the reliability of the results in addition, the Nunavut Waters Regulations, Section 13 states that a licensee must:

    a. maintain accurate and detailed books and records of:
        i. the quantity of water, in cubic metres, used each day,
        ii. the quantity of waste, in cubic metres, deposited each day,
        iii. the type of waste deposited each day,
        iv. the concentration of the substance, or substances, in the deposited solid or liquid that has the effect of making the deposit waste, and
        v. the methodology used to calculate or determine the information referred to in subparagraphs (i) to (iv).
    b. retention of the books and records on the Site of the appurtenant undertaking during the period of its operation or until the expiry or cancellation of the licence; and
    c. retention of the books and records for a period of at least five years after the expiry or cancellation of the licence[2]

5.2 Metal and Diamond Mining Effluent Regulations

Under the MDMER, the reporting of treated effluent characterization and surface water quality monitoring results will be carried out as required under Part 2, Division 1 and Schedule 5 of the MDMER as follows:

- Quarterly reporting of treated effluent and water quality data in the electronic Single Window Information Management system of Environment and Climate Change Canada (ECCC) within 45 days after the end of each calendar quarter.
- Annual reporting of treated effluent and water quality monitoring for the previous calendar year, submitted to the ECCC Authorization Officer via the electronic Single Window Information Management system by March 31 of the following year.

Until the Meadowbank Complex attains '*closed mine*' status under the MDMER, quarterly and annual submissions are required, even if there was no discharge from the site. In these cases, a '*no discharge*' submission will be provided to the regulator. In addition, EEM studies are required every three years (at a minimum, an EEM study design is required if there has been no effluent discharge in the preceding three years).

[2] NIRB Project Certificate 004 requires monitoring records to be kept for the life of the project, until the end of post-closure monitoring – Term & Condition 7.

5.3 Geotechnical

To maintain data integrity during monitoring, site inspections will photo-document conditions using an app that records GPS location and the direction of the photo taken. Similar photos will be taken at each critical location of each dam over the inspection period to observe and compare any physical changes. The data from the instruments will be compiled with previous readings and reviewed by a Qualified Professional. It is also anticipated that any new instruments would require a few seasons to establish equilibrium after installation.

Annual geotechnical reporting will be included in the existing annual Independent Review Board. A more comprehensive Independent Review Board will be conducted every 5 years in accordance with the CDA guidelines. For Post-Closure monitoring, reporting will be completed annually in a similar format for the first 3 years, then every 5 years for the next 15 years, then every decade as deemed necessary. The format for the Post-Closure report will be as needed.

5.4 Tailings Storage Facility

Agnico Eagle proposes compilation and summary of water quality monitoring and observational results. Reporting will be completed if either of the following applies:

1) trigger limits are exceeded in the TSF
2) a request is being made for reduced monitoring frequency or TSF discharge

6 REFERENCES

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NWB (Nunavut Water Board). 2018. AMENDED WATER LICENCE NO: 2AM-WTP1830.

APPENDIX A. REGULATORY REQUIREMENTS

The regulatory requirements for the reclamation and Closure of the Meadowbank Complex are outlined primarily in the Project Certificates issued by NIRB (Certificates 004 and 008 for Meadowbank Mine and Whale Tail, respectively), Water Licenses issued by NWB (2AM-MEA1530 and 2AM-WTP1830) and federal land leases.

1.1 Territorial Lands Act and Regulations

Agnico Eagle holds several surface leases under the *Territorial Land Act* for mining on crown lands administered by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). A list of the surface land leases, including those administered by the Kivalliq Inuit Association (KivIA), pertaining to the Meadowbank Complex is presented in Table A-0-1.

Table A-0-1: Crown and Innuit Surface Leases

Licence Number	Issued By	Details	Project	Expiry
66A/8-71-3	CIRNAC	AWAR Land Lease	Meadowbank	December 31, 2032
66H/8-02-1	CIRNAC	WTHR Land Use Lease	Whale Tail	December 30, 2026
BL14-001-PL Vault	NTI	Subsurface Production Lease (Amendment #1): Vault/Phaser area	Meadowbank	June 30, 2027
BL43-001-PL	NTI	Subsurface Production Lease	Whale Tail	May 1, 2029
KVPL08D280	KivIA	Surface Production Lease (IOL BL-14) (Amendment #1, #2, #3 and #4)	Meadowbank	December 31, 2027
KVPL17D01	KivIA	Production Lease	Whale Tail	November 9, 2028
KVRW15F01	KivIA	WTHR Land Use Permit	Whale Tail	November 29, 2028

CIRNAC: Crown-Indigenous Relations and Northern Affairs Canada; AWAR: All-weather haul road; WTHR: Whale Tail Haul Road; NTI: Nunavut Tunngavik Incorporated; KivIA: Kivalliq Innuit Association.

1.2 Inuit Owned Lands and Water Rights

As required in Chapter 7 of Agnico Eagle's Innuit Impact Benefit Agreement (IIBA) recommendations will be made as to what amendments should be applied to the IIBA to adapt it to Closure and Post-Closure. In this regard, details on the monitoring under IIBA will be discussed with Kivalliq Inuit Association prior to entering the Closure phase, where "Closure:" is defined in the IIBA as the termination of the operational phase.

1.3 Nunavut Waters and Nunavut Surface Rights Tribunal Act and Nunavut Waters Regulations

The Meadowbank Complex is currently licenced in accordance with the legislative requirement of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and Nunavut Waters Regulations by the NWB under separate Type A Water Licences: 2AM-MEA1530 and 2AM-WTP1830. The Licences both expire on and March 27, 2030. Agnico Eagle has maintained the Water Licences in good standing and complies with the terms and conditions set out therein.

1.3.1 Water Licence Monitoring Requirements

Water Licence monitoring locations are shown on **Figure A-0-1** to **Figure A-0-3**. The discharge of effluent from licenced monitoring stations shall not exceed the values presented in Table A-1 and A-2.

1.4 Federal Regulations

ECCC is responsible for the *Canadian Environmental Protection Act* and the *Fisheries Act*, including the pollution prevention measures and MDMER. MDMER monitoring requirements are provided in Section 1.4.1.

1.4.1 MDMER Monitoring Requirements

The MDMER under the *Fisheries Act* (Government of Canada 2022) stipulates the conditions under which deleterious substances may be discharged to the aquatic environment by metal and diamond mines. Specifically, these regulations impose limits on the release of deleterious substances, which include: pH, cyanide, arsenic, copper, lead, nickel, and zinc, radium-226, total suspended solids, and un-ionized ammonia (Government of Canada 2022), as well as prohibiting the discharge of effluent that is acutely lethal to Rainbow Trout and *Daphnia magna.* To monitor these parameters, the MDMER also requires mines to conduct an Environmental Effects Monitoring (EEM) Program every three years. The objective of the EEM program, as defined in the Metal Mining Technical Guidance for the EEM document, is to evaluate the effects of mine effluent on fish, fish habitat, and use of fisheries resources by humans.

1.4.2 MDMER Closed Mine Status

As the Meadowbank Complex is currently in operation, it does not have a "*closed mine status*" under the MDMER. To achieve closed mine status under the MDMER, Agnico Eagle must meet the requirements summarized in Table A.

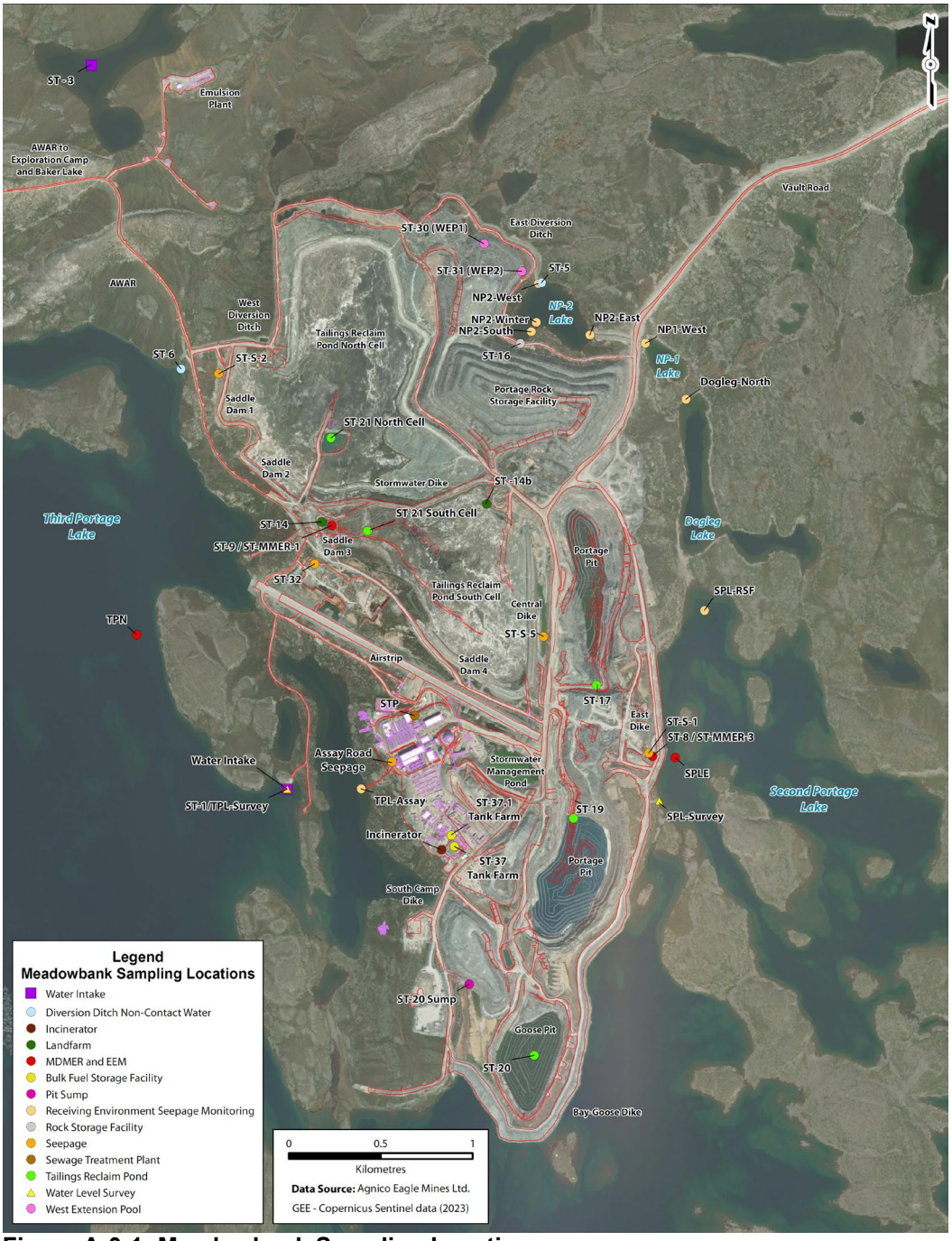

Figure A-0-1: Meadowbank Sampling Locations

Figure A-0-2: Vault Pit Sampling Locations

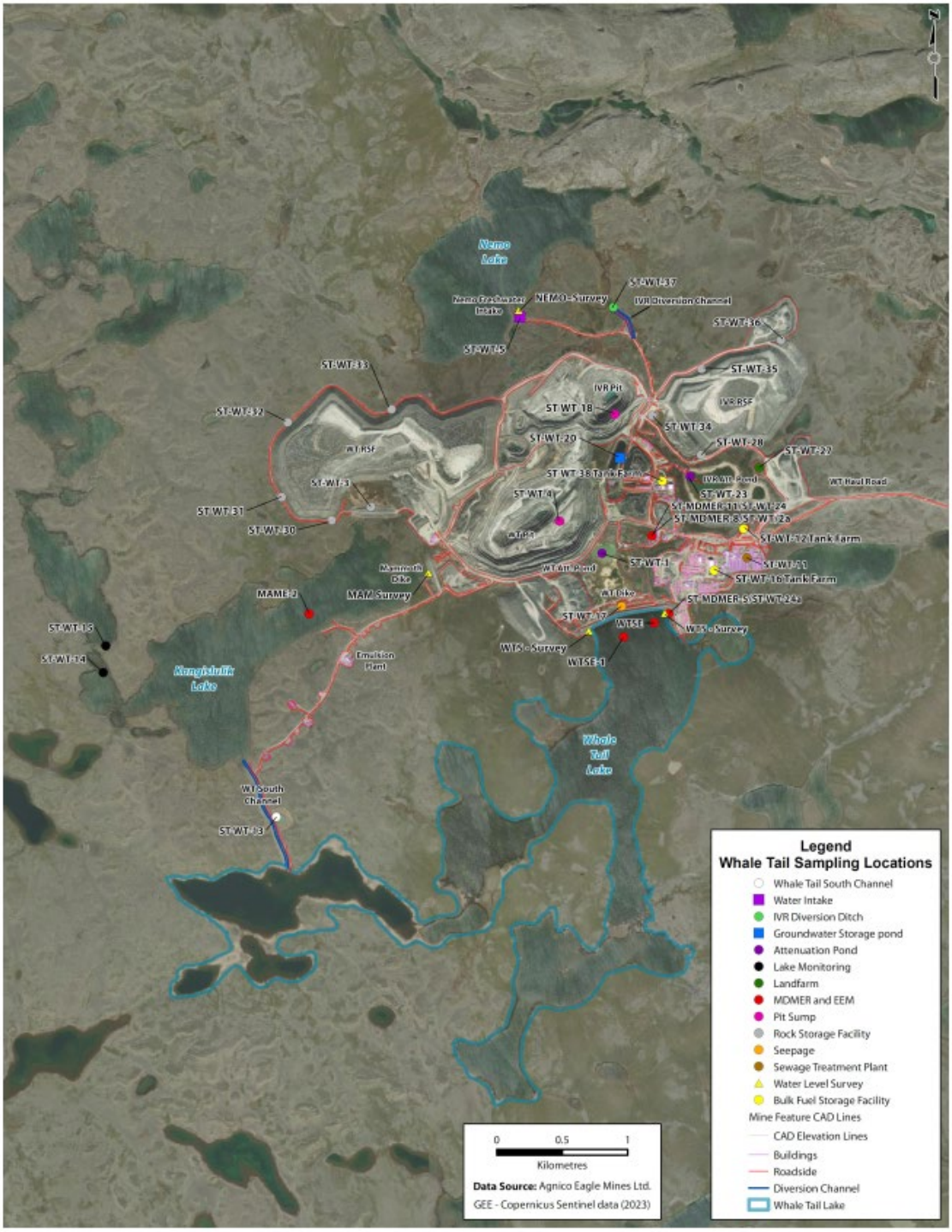

Figure A-0-3: Whale Tail Mine Sampling Locations

Table A-0-1: 2AM-MEA1530 Water Licence Authorized Concentrations

Parameter	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab Sample
ST-5, ST-6, and ST-8			
TSS	mg/L	15	30
ST-9			
pH		6.0 to 9.0	6.0 to 9.0
TDS	mg/L	1400	1400
TSS	mg/L	15	30
Turbidity	NTU	15	15
Total Aluminum (Al)	mg/L	1.5	1.5
Dissolved Aluminum (Al)	mg/L	1.0	1.0
Total Arsenic (As)	mg/L	0.3	0.6
Total Cadmium (Cd)	mg/L	0.002	0.004
Total Cyanide (CN)	mg/L	0.5	1.0
Total Copper (Cu)	mg/L	0.1	0.2
Total Mercury (Hg)	mg/L	0.0004	0.0004
Total Ammonia (NH3-N)	mg/L	16	32
Total Nickel (Ni)	mg/L	0.2	0.4
Total Nitrate (NO3-N)	mg/L	20	40
Total Lead (Pb)	mg/L	0.1	0.2
Total Phosphorus (P)	mg/L	1.0	2.0
Total Zinc (Zn)	mg/L	0.4	0.8
Total Chloride (Cl-)	mg/L	1000	2000
TPH	mg/L	3	6
ST-10			
pH		6.0 to 9.0	6.0 to 9.0
TSS	mg/L	15	30
Turbidity	NTU	15	15
Total Aluminum (Al)	mg/L	1.5	3.0
Dissolved Aluminum (Al)	mg/L	1.0	2.0
Total Arsenic (As)	mg/L	0.1	0.2
Total Cadmium (Cd)	mg/L	0.002	0.004
Total Copper (Cu)	mg/L	0.1	0.2
Total Mercury (Hg)	mg/L	0.004	0.008
Total Ammonia (NH3-N)	mg/L	20	40
Total Nickel (Ni)	mg/L	0.2	0.4
Total Nitrate (NO3-N)	mg/L	50	100
Total Lead (Pb)	mg/L	0.1	0.2
Total Phosphorus (P)	mg/L	1.5	3.0
Total Zinc (Zn)	mg/L	0.2	0.4
Total Chloride (Cl-)	mg/L	500	1000
ST-37 to ST-40			
pH		6.0 to 9.5	6.0 to 9.5
Total Arsenic (As)	mg/L	**0.5	1.0
Total Copper (Cu)	mg/L	**0.3	0.6
Total Nickel (Ni)	mg/L	**0.5	1.0
Total Zinc (Zn)	mg/L	*0.5	1.0
TSS	mg/L	*15	30
Ammonia	mg/L	6.0	6.0
Benzene	µg/L	370	370
Toluene	µg/L	2	2
Ethylbenzene	µg/L	90	90
Lead	mg/L	0.1	0.1
Oil and Grease	mg/L	5 and no visible sheen	5 and no visible sheen

* Environmental Guideline for Industrial Waste Discharges in the NWT, 2004

** Metal and Diamond Mines Effluent Regulations (MDMER)

TSS: Total Suspended Solids; TDS: Total Dissolved Solids; TPH: Total Petroleum Hydrocarbons; mg/L: milligrams per litre; NTU: Nephelometric Turbidity unit; µg/L: micrograms per litre

Table A-0-2: **2AM-WTP1830 Water Licence Authorized Concentrations**

Parameter	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab Sample
ST-WT-2/ST-WT-24 and Lake D1/D5			
pH		6.0 to 9.5	6.0 to 9.5
TSS	mg/L	15	30
Nutrients			
Total Ammonia (NH3-N)	mg-N/L	16	32
Total Phosphorous (P)	mg-P/L	0.3	0.6
Total Metals			
Aluminum (Al)	mg/L	0.5	1.0
Arsenic (As)	mg/L	0.1	0.2
Cadmium (Cd)	mg/L	0.002	0.004
Chromium (Cr)	mg/L	0.02	0.04
Copper (Cu)	mg/L	0.1	0.2
Iron (Fe)	mg/L	1.0	2.0
Lead (Pb)	mg/L	0.05	0.1
Mercury (Hg)	mg/L	0.004	0.008
Nickel (Ni)	mg/L	0.25	0.5
Zinc (Zn)	mg/L	0.1	0.2
Other			
TPH	mg/L	3.0	6.0
ST-WT-7, ST-WT-13 and ST-WT-17			
TSS	mg/L	15	30
ST-WT-12, ST-WT-16, and ST-WT-27			
pH		6.0 to 9.5	6.0 to 9.5
Total Arsenic (As)	mg/L	*0.5	1.0
Total Copper (Cu)	mg/L	*0.3	0.6
Total Nickel (Ni)	mg/L	*0.5	1.0
Total Zinc (Zn)	mg/L	*0.5	1.0
TSS	mg/L	*15	30
Ammonia	mg/L	6.0	6.0
Benzene	µg/L	370	370
Toluene	µg/L	2	2
Ethylbenzene	µg/L	90	90
Lead	mg/L	0.2	0.4

* Metal and Diamond Mining Effluent Regulations

TSS: Total Suspended Solids; TDS: Total Dissolved Solids; TPH: Total Petroleum Hydrocarbons; mg/L: milligrams per litre; NTU: Nephelometric Turbidity unit; µg/L: micrograms per litre

Table A-0-3: MDMER Authorized Limits of Deleterious Substances in Treated Effluent

Parameter[(a)]	Unit	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Grab Sample
Total Arsenic	mg/L	0.30	0.60
Total Copper	mg/L	0.30	0.60
Total Cyanide	mg/L	0.50	1.00
Total Lead	mg/L	0.10	0.20
Total Nickel	mg/L	0.50	1.00
Total Zinc	mg/L	0.50	1.00
TSS	mg/L	15.00	30.00
Radium-226	Bq/L	0.37	1.11
Un-ionized ammonia (as N)	mg/L	0.50	1.00
pH	-	The Effluent discharged shall have a pH between 6.0 and 9.5	

Field pH and temperature must be recorded at the time of sample collection. Methods for calculation of un-ionized ammonia are as per Section 12(3) of the MDMER. - = no unit.

TSS: Total Suspended Solids; mg/L: milligrams per litre; NTU: Nephelometric Turbidity unit; µg/L: micrograms per litre; Bq/L: becquerels per liter

Table A-0-4: Requirements for Recognized Closed Mine Status Under the MDMER

Section	Requirement
32(1)	An owner or operator who intends to close a mine shall:
32(1)(a)	provide written notice of that intention to the Minister of the Environment;
32(1)(b)	maintain the mine's rate of production at less than 10% of its design-rated capacity for a continuous period of three years starting on the day on which the written notice is received by the Minister of the Environment; and
32(1)(c)	conduct a biological monitoring study during the three-year period referred to in paragraph (b) in accordance with Division 3 of Part 2 of Schedule 5.
32(2)	If the owner or operator has complied with all of the requirements set out in paragraphs (1)(a) to (c), the mine becomes a recognized closed mine after the expiry of the three-year period referred to in subsection (1).
32(3)	The owner or operator shall notify the Minister of the Environment in writing at least 60 days before reopening the recognized closed mine.
32(4)	The owner or operator referred to in this section shall keep at any place in Canada all records, books of account or other documents required by these Regulations for a period of not less than five years beginning on the day they are made and shall notify the Minister of the Environment in writing of their location.